

USING THE DUAL CONTROL MODEL TO UNDERSTAND CHINESE AND WESTERN
CULTURAL INFLUENCES IN SEXUALITY FOR UNIVERSITY WOMEN AND MEN

by

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

in

The Faculty of Graduate and Postdoctoral Studies

(Psychology)

THE UNIVERSITY OF BRITISH COLUMBIA

(Vancouver)

April 2021

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Using the dual control model to understand Chinese and Western cultural influences in sexuality for university women and men

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Abstract

Young Chinese men and women living in Canada frequently report lower levels of sexual response and behaviour compared to their Euro-Caucasian peers. These differences are likely related to cultural factors and acculturation, but has not been well-integrated into more general models of sexual response regulation. The current investigation used the dual control model to organize and better understand these patterns in three studies in university men and women of Chinese and Euro-Caucasian descent. The first study examined whether dual control processes of sexual excitation and inhibition were applicable to between-group ethnic differences in sexual response and behaviour. Lower sexual excitation explained a significant proportion of the difference in mean sexual response and activity between Chinese and Euro-Caucasian women, and this effect was mediated by sexual attitudes. Sexual attitudes was separately associated with higher sexual inhibition and lower dyadic sexual response and activity in Chinese compared to Euro-Caucasian men. The second study examined the association of heritage and mainstream acculturation with sexual excitation, inhibition, attitudes, response, and activity among the Chinese individuals. For heterosexual men and women, mainstream acculturation was the primary predictor of sexuality variables, while heritage acculturation had a moderating role. Exploratory analyses for non-heterosexual Chinese men and women were also conducted; each sexual orientation group displayed different patterns of associations between acculturation factors and sexuality variables. The third study examined whether between-group differences in sexual excitation and inhibition were associated with sexual dysfunctions, asexuality, or sexual abstinence. The results did not conclusively suggest more dysfunction in Chinese women, but did suggest more dysfunction in Chinese men. Abstinence versus engagement in partnered sex had a moderation role on other outcomes. Theoretical implications for understanding the role of

Chinese culture, and culture in general, in regulating sexual response and behaviours were discussed for all three studies. Clinical implications for treatment of sexual concerns in young Chinese men and women were also discussed.

Lay Summary

Chinese men and women living in Canada seem less sexually active than their Euro-Caucasian peers, likely because of differences in Chinese and Western culture. This dissertation describes three studies looking at how culture impacts sexuality. Chinese women seemed less easily sexually excited than Euro-Caucasian women. Chinese men seemed more inhibited than Euro-Caucasian men when it comes to partnered sex. Chinese men and women who identified more strongly with mainstream Canadian culture appeared more similar to Euro-Caucasian men and women, while identifying with traditional Chinese culture did not seem to have as strong of an impact. Chinese women appeared somewhat more likely to identify with being asexual than Euro-Caucasian women. Chinese men appeared more likely to experience sexual difficulties during partnered sex than Euro-Caucasian men. These findings can help researchers understand how culture relates to sexuality in general, and inform psychotherapists in providing treatment for Chinese men and women's sexual concerns.

Preface

All of the work presented henceforth was conducted at the Department of Psychology at the University of British Columbia, Point Grey campus. All projects and associated methods were approved by the University of British Columbia's Research Ethics Board (certificate IDs H15-02886, H16-03026, H17-03138).

A version of Chapter 2 has been published: Dang, S.S., Gorzalka, B.B., & Brotto, L.A. (2019). Dual control model in a cross-cultural context: Role of sexual excitation mediates in sexual function response and behavior differences between Chinese and Euro-Caucasian women in Canada. *Archives of Sexual Behavior*, 48(8), 2519-2535. I was the lead investigator, responsible for all major areas of concept formation, data collection and analysis, and manuscript composition. Gorzalka, B.B. provided access to participant recruitment and contributed to manuscript edits. Brotto, L.A. was the supervisory author on this project and was involved throughout the project in concept formation and manuscript composition.

A version of Chapter 4 has been published: Dang, S.S., Hewitt, P. L., & Brotto, L. A. (2019). Heritage and mainstream acculturation's association with sexual response in young Chinese men and women in Canada. *The Canadian Journal of Human Sexuality*, 28(2), 159-176. I was the lead investigator, responsible for all major areas of concept formation, data collection and analysis, and manuscript composition. Hewitt, P.L. provided access to participant recruitment and contributed to manuscript edits. Brotto, L.A. was the supervisory author on this project and was involved throughout the project in concept formation and manuscript composition.

I was the lead investigator for the projects described in Chapters 2, 3, 4, 5, and 6, where I was responsible for all major areas of concept formation, data collection and analysis, and manuscript composition. Brotto, L.A. was the primary supervisor on these projects, and was involved throughout the project in concept formation and manuscript edits. Hewitt, P.L. and Gorzalka, B.B. were involved in concept early formation, assisted in participant recruitment, and contributed to manuscript edits. Schaller, M. provided contributed to manuscript edits.

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Acknowledgments

Much gratitude and ‘thank-you’s to the following folks for making everything possible:

Dr. Lori Brotto, for your limitless knowledge, guidance, and patience in teaching me about the research world and making space for both my ideas and my mistakes. Dr. Paul Hewitt, for your immeasurable insights on clinical psychology, human nature, myself, and the relationship between all three. Dr. Mark Schaller, for being so accommodating and engaged despite the last-minute circumstances. Dr. Boris Gorzalka, for opening these doors and advocating for me when I was just a neophyte at the start of this journey all those years ago.

SSRHC and UBC, for having so much faith in my abilities they were willing to put money on it (I hope your investment paid off). All the participants who put their time, energy, and experiences into my studies (I hope the bonus credit bumped you up a letter grade).

Tiffany Lee, Carolin Klein, Ryan McLaughlin, Matthew Hill, and Heather Morton for leading me through the trenches of learning how to do research. Cara Dunkley, Klint Fung, Lisa Zhang, and so many other friends and peers, for being amazing collaborators, sounding boards, and fellow travellers on this dusty road. Richard Rigby, Amanda Lee, Alex Dodd, Katie Cullen, and all the other RAs who put up with my aimless neuroticism over the years. All my clinical supervisors throughout my training, who shaped this dissertation in subtle but powerful ways.

My parents, for being so brave to come to this new land, and then being so brave to support my career choices even though you had no idea what clinical psychology is. My cats, Prozac and Wow, for allowing me to re-enact my object relations and making my life the way it is meow. And my wife Nicolle, my soul mate, rambunctious lemon thief, and infinite font of wisdom, for loving and believing in me all those times when I struggled to do that for myself. *Sic itur ad astra.*

For our struggle is not against flesh and blood, but against the rulers, against the authorities, against the powers of this dark world and against the spiritual forces of evil in the heavenly realms (New International Version Bible, 1973/2011, Ephesians 6:12).

Chapter 1: Review of the Existing Literature and Overview of the Current Investigation

Sexual behaviours are crucial biological functions for many organisms in the animal kingdom, and similarly are a crucial aspect of the human experience. Copulation represents vital steps in allowing for the recombination of alleles, formation of offspring, and ultimately propagation of genes and species. Mating and associated courtship behaviours are major expenditures of metabolic resources for many animals. Psychologically, many people experience sex as a fundamental aspect of relationship functioning (Byers, 2005), and it is also closely tied to self-esteem (Althof, 2002). Sexual pleasure and satisfaction are important values and sources of positive experience for many. However, sexual difficulties and dissatisfaction are also common, with problems in sexual response being reported to be as high as 51% for women and 42% for men in some samples (Mitchell et al., 2017). These issues can be distressing in and of themselves, and are often associated with relationship difficulties (Byers, 2005) and reduced psychological health (Althof, 2002; Field et al., 2016). Like almost all important psychological phenomena, sexuality is regulated by a complex interaction between biological and psychosocial factors. Sexual behaviours and responses are also intimately tied to culture, and cultural norms, values, and beliefs impact how individuals conceptualize and experience sexuality (Bhavsar & Bhugra, 2013). Although much progress has been made in understanding these processes, the role of the broader social context of culture, as well as the mechanism through which culture impacts other variables, remains to be fully elucidated.

Understanding the role of culture in sexuality is a particularly pertinent issue for the current social context. Canada, the United States, and other Western nations are becoming increasingly ethnically and culturally diverse. According to the 2016 Census, visible minorities

comprised 22.3% of the Canadian population (Statistics Canada, 2017). People of Chinese descent represent 5.1% of people in Canada, and are one of the fastest growing ethnic groups and one of the largest contributors to immigration in North America. At a more microscopic level, at the University of British Columbia (UBC), students who identify as being of Chinese ethnicity comprised 36% of incoming direct entry students in 2013, representing the largest ethnic group among students. For comparison, Caucasian individuals represented 29% of incoming direct entry students that year (Farrar, 2014). More recently, UBC reported that 26% of new students in 2018 were international students with 36% of those students being from China (Mukherjee-Reed & Szeri, 2019), while a voluntary student society survey from 2019 found that 28% of UBC undergraduates identified as ethnically Chinese (Burnham et al., 2019). As such, understanding their unique psychological condition is appropriate given the relative size of this population and their contribution to university finances and productivity. As these Chinese students graduate and enter the workforce, they will also stand to be new payers and consumers for psychological services, provided such services are able to reflect their experiences and address their needs. The current ethnic makeup of the student population at the university also represents a theoretically interesting testbed for evaluating how culture interact with other factors in shaping sexual behaviours and attitudes.

A multitude of studies across the past two decades have attempted to characterize the sexuality of Chinese people in Western nations. These studies have converged upon the finding that Chinese, compared to Caucasian, African-American, and Hispanic, individuals appear to demonstrate lower levels of sexual activities, less sexual experience, higher age of onset of sexual intercourse, more conservative sexual attitudes, less sexual knowledge, and lower sexual response (discussed later in this chapter). However, the literature has been generally descriptive

in nature and is limited in being able to provide a theoretical understanding of why these patterns are seen in this population. This has been hampered by how few studies have sought to connect the findings from the cultural and ethnic domain to more general models on the regulation of sexual response and behaviour, which impede the ability for research to elucidate the specific mechanisms of how cultural factors impinge upon sexuality. Connecting observed between-group and within-group variability to existing frameworks for understanding sexuality would also allow for a greater contextualization of the meaning of these patterns. This would have implications for which observations represent dysfunctions and inequities requiring treatment and outreach, and which observations represent individual and group diversity requiring tolerance and celebration.

This chapter will first review the existing literature on the sexuality of Chinese individuals, with a focus on Chinese individuals living in Western nations. It will then briefly summarize the Chinese historical cultural context of attitudes and norms about sexuality. Next, it will discuss the dual control model, an influential theoretical framework regarding the regulation of sexual response and behaviour. Finally, it will present the series of the studies that make up the remainder of this line of investigation, which seeks to connect the existing literature on Chinese culture and sexuality with the dual control model.

Sex and Gender

“Sex” (e.g., “male”, “female”) and “gender” (e.g., “men”, “women”) are related but distinct conceptual constructs important to the discussion of research in sexuality. Within an academic context, sex is most commonly used to refer to biological and physiological attributes, such as chromosomes, gonads, and reproductive organs, which exist in humans and animals (Canadian Institutes of Health Research, 2020). Gender is most commonly used to refer to

socially constructed roles, expressions, and identities that impact the lived experiences of individuals and peoples. Sex and gender interact in complex ways to influence other aspects of psychological experience and behaviour, including sexual behaviours. This is further complicated by individuals maintaining different lay-definitions of sex and gender (including using these terms interchangeably), and that these lay-definitions potentially may be understood and used differently across cultures.

The current study sought to collect and analyze data separately in male and female participants. This was most prominently due to several existing questionnaires having been developed specifically to examine male versus female sexual response and functioning (e.g., the Female Sexual Function Index versus the International Inventory of Erectile Function for female versus male sexual function respectively); these questionnaires at times inquire about genital responses that would only be applicable to one sex. Therefore, participants in the current series of studies were grouped on the basis of a self-report question inquiring about “sex”. In the subsequent chapters, when discussing the methods and results of the current investigation only, references of “men” and “women” should be understood specifically as a shorthand for “participants who self-reported their sex as ‘male’/‘female’ on the demographics survey”.

Despite the emphasis of sex on the methodology of the study, culturally-bound understandings about gender likely also had a substantial influence on the findings and theories presented in the current investigation. Strictly and empirically delineating the influence of sex differences versus gender differences, and how these constructs are conceptualized by Chinese (and Euro-Caucasian) individuals, is beyond the scope of the current study. However, given the importance of gendered cultural norms and messages on sexuality, an exclusive focus on biological sex would present an incomplete picture of the interaction between culture and

sexuality. This manuscript will therefore also discuss theoretical perspectives on gender differences when contextualizing differential patterns seen in male versus female participants.

The linking of sex and gender in the current investigation is not intended to reflect a perspective that sex and gender are always matched in the same way (e.g., male sex to masculine gender, female sex to feminine gender). Given the recruitment procedures of the current series of studies (see subsequent chapters for more details), the majority of participants would likely be cisgender individuals and the findings would likely be representative of cisgender experiences. Unfortunately, the experiences of transgender, non-binary, and intersex individuals, and how these experiences intersect with Chinese and Western cultural factors, were not directly examined in this series of studies. This is an important limitation of the current investigation and an important area of further research.

Previous Research on the Sexuality of Chinese Individuals

One of the most consistent findings of the sexuality of Chinese and East Asian individuals is the presence of more conservative sexual attitudes in this population. Meston, Trapnell, and Gorzalka (1998) found that in a sample of Canadian undergraduate students, East Asian individuals reported more conservative sexual attitudes (acceptability of same-sex oriented sexual activity, casual sex, non-traditional gender roles, and extramarital sex) and lower sexual knowledge compared to their Caucasian peers on the Derogatis Sexual Functioning Inventory (DSFI). A gender difference was also noted, with men of both ethnicities being more likely to hold conservative attitudes about same-sex sexual activities, while women of both ethnicities being more likely to endorse conservative attitudes against uncommitted sexual activities. Recent East Asian immigrants were more likely to endorse conservative attitudes compared to East Asian individuals who have been living in Canada for a longer time. Leiblum, Wiegel, and

Brickle (2003) similarly found, among medical students in the US, East Asian individuals reported significantly more conservative values (such as on sexual health, sexual comfort, and gender roles) than Caucasian individuals on the Cross-Cultural Sexual Attitudes Scale; though notably all non-Caucasian ethnicities reported the same pattern. Ethnic background and acculturation together accounted for a significant proportion of the variance in attitudes.

Using the bi-dimensional model of acculturation (i.e., differentiating the adoption of the mainstream Canadian/Western culture from adherence to the heritage Chinese/East Asian culture), Brotto, Chik, Ryder, Gorzalka, and Seal (2005) similarly found that East Asian university women reported more conservative sexual attitudes and less sexual knowledge than their Euro-Caucasian counterparts on the DSFI. They found that acculturation accounted for a greater portion of variance on attitudes and knowledge among the East Asian women than a singular measure of length of residency in Canada. As well, an interaction between heritage and mainstream acculturation was noted, where higher mainstream acculturation was more strongly associated with more liberal sexual attitudes, but only among individuals low in heritage acculturation. Similarly, Brotto, Woo, and Ryder (2007) reported in a university sample that East Asian men also endorsed more conservative attitudes and lower knowledge than their Euro-Caucasian counterparts. In this case, only mainstream acculturation was associated with knowledge and attitudes, with no association with heritage acculturation. In another university sample of men and women, Ahrold and Meston (2010) also reported similar patterns as previous for sexual attitudes on the DSFI. Notably, they also compared their East Asian subsample to another Hispanic ethnic minority subsample. East Asian individuals were also more conservative than Hispanic individuals, and differences in acculturation accounted for some but not all of these differences. In particular, attitudes towards casual sex and same-sex sexual activities were

not attenuated by controlling for acculturation. They also found a similar moderation effect as Brotto et al. (2005) in East Asian women; higher heritage acculturation was associated with more conservative sexual attitudes, but only in women low in mainstream acculturation. Likewise, findings have also been identified using alternative instruments, such as the Sexual Dysfunctional Beliefs Questionnaire (SDBQ) (Morton & Gorzalka, 2013). East Asian university women scored higher not only on endorsement of sexual conservatism beliefs, but also beliefs about sexual pleasure being sinful, youth and physical attractiveness being central to women's sexuality, and procreation being the main goal of sex.

East Asian individuals also appear to show lower levels of sexual activity than Euro-Caucasian individuals. Meston, Trapnell, and Gorzalka (1996) reported that East Asian university students reported lower levels of interpersonal/partnered (e.g., intercourse) and intrapersonal (e.g., masturbation) sexual behaviour, and had greater sociosexual restrictiveness (e.g., lifetime number of partners, number of "one night stands"). East Asian participants also reported slightly lower levels of sexual fantasy. However, most behaviours were not moderated by length of residency in Canada, such that East Asian individuals appeared to have lower sexual behaviours which were not substantially attenuated when accounting for length of residency. Regan, Durvasula, Howell, Ureño, and Rea (2004) found that compared to other ethnicities, East Asian adolescents on average were less sexually experienced and less romantically experienced. They also tended to have a later age of first sexual intercourse, but the same age as Euro-Caucasians for age of first romantic experience. In an intriguing study of American youths, Feldman, Turner, and Araujo (1999) examined the personal and perceived normative timetables for the initiation of sexual intercourse with a partner in a romantic relationship. East Asian individuals were found to have more restrictive timetables than Euro-Caucasian, African

American, and Hispanic individuals. Further connecting sexual attitudes and sexual behaviour, Gao et al. (2012) found a potential link between greater entrenchment of traditional Confucian values and lower prevalence of adolescent sexual intercourse when examining regional differences within Asia.

Ethnic differences in sexual function have also been noted. The large Study of Women's Health Across the Nation in the United States found that in middle-aged women, those of Chinese ethnicity were less likely to view sex as important and had lower motivation to engage in sexual activities (Cain et al., 2003). The Global Study of Sexual Attitudes and Behaviors found that men and women living in East Asian countries reported more sexual difficulties compared to those living in Western nations (Laumann et al., 2005). Erectile dysfunctions and premature ejaculation for men, and lack of sexual interest, lubrication, and orgasm were the most elevated in East Asian residents. The same global dataset also revealed that only 45% of men and women in East Asian countries with periodic or frequent sexual problems sought some sort of help or advice, and 21% talked to a physician (Nicolosi et al., 2005). Help-seeking was less common among East Asian residents than Southeast Asian residents, and participants most commonly cited not perceiving that sexual concerns were medical issues as the reason for not discussing the problems with a physician. Embarrassment and issues with access to services were also common reasons.

Somewhat similar patterns in sexual response have been found in Canadian university samples. In Brotto et al.'s (2005) sample of university women, East Asian students, compared to Euro-Caucasian students, reported lower levels of sexual desire, arousal, receptivity, and pleasure/orgasm on the Brief Inventory of Sexual Functioning (BISF); mental arousal and pleasure from genital stimulation on the Detailed Assessment of Sexual Arousal (DASA); and

aversion/anxiety to sexual arousal on the Sexual Arousalability Inventory – Expanded (SAI-E). Relationship satisfaction and perceived sexual problems on the BISF and genital arousal on the DASA did not differ significantly by ethnicity. Among the East Asian women, higher mainstream acculturation was associated with higher desire and arousal (but not other subscales) on the BISF, higher arousal on the DASA, and less aversion to arousal. In Brotto et al.'s (2007) sample of university men, East Asian students, compared to Euro-Caucasian students, reported higher levels of impotence and avoidance of sex, but not premature ejaculation, non-sensuality, dissatisfaction, sexual infrequency, or sexual non-communication on the Golombok-Rusk Inventory of Sexual Satisfaction. Among the East Asian individuals, mainstream but not heritage acculturation significantly predicted less impotence and avoidance of sex.

A few studies have examined the mechanisms of these ethnic differences beyond the impact of acculturation. Woo, Brotto, and Gorzalka (2011) replicated previous findings on lower sexual desire and more conservative sexual attitudes, and also found higher levels of sexual guilt, as measured by the Revised Mosher Guilt Inventory. As well, both sexual guilt and conservative sexual attitudes separately were significant partial mediators of the difference between East Asian and Euro-Caucasian women on sexual desire. Among East Asian women only, guilt was a significant mediator of the association between mainstream acculturation and sexual desire. Similar findings were found among a community sample (Woo et al., 2012). In a recent qualitative study, (Dang et al., 2017) used qualitative interviews to examine the narratives and experience of sexual desire among Chinese men and women. Many aspects of the experience of desire was similar to previous findings in Euro-Caucasian women (Brotto et al., 2009); however, a focus on physical experiences over cognitive ones, particularly in women, were noted. As well, participants discussed pressure to hide or inhibit their sexual desire to avoid social condemnation

and due to Chinese cultural prohibitions. At same time, most men and women were able to discuss pleasurable aspects of desire, and that desire felt like a natural “hunger”. Sexual and romantic targets of desire were heavily entwined in both men and women, and some women described only ever experiencing desire within the context of committed relationships. These findings echo that of Wright & Reise (1997), who found significantly lower interest and tendency to have sex outside of committed relationships among Asian college students.

History of Chinese Discourse on Sexuality

The Chinese cultural understanding of sexuality is a complex integration of both traditional and modern attitudes. Confucianism represents one of the dominant moral philosophies that has shaped Chinese culture through much of its history. Some interpretations suggested that Confucius himself was generally pragmatic in matters of sexuality as long as they did not impede social stability or interpersonal relationships (Liu, 1956). Regardless, Neo-Confucian philosophy during the Song Dynasty (960-1276 CE) promoted a sexually restrictive doctrine, with strict moral and social codes (Bond, 1991). These include the prohibition of sexual activity except for reproduction within a marriage and condemnation towards expressions of sexuality (Gao et al., 2012). Similarly, the Yin-Yang doctrine was also influential (Humana & Wu, 1971). In this philosophy, masculinity was associated with the essence of “Yang” and seen as strong and active. In opposition was femininity, associated with “Yin” and seen as yielding and submissive. Sexual intercourse was viewed as an exchange of Yang and Yin between the partners, and a balance of these essences was necessary to maintain health. This doctrine saw activities including masturbation and same-sex intercourse, particularly among men, as unhealthy and dangerous (Ng & Lau, 1990). Women traditionally were prescribed to be housebound and submissive (Higgins et al., 2002). Since female children were traditionally

married off to other families and could not pass on the family name to their offspring, sons were highly favoured over daughters. Women were judged on the bases of chastity, fertility, and housekeeping ability, and were expected to be devoted to their fathers, husbands, and sons.

Restrictive attitudes towards sexuality continued when the People's Republic of China (PRC) was founded in 1949. Overt sexuality was seen as shameful, counter-revolutionary, and symbols of the bourgeois class (Evans, 1995). During the Cultural Revolution, men and women alike were seen as equal contributors to the Communist state and were expected to be fully devoted to revolutionary ideals as opposed to romantic love or sexuality. Official government publications often warned of the dangers and immorality of homosexuality, extramarital sex, and prostitution. Although this period led to abolishing arranged marriages and more egalitarian roles for women in Chinese society, other important issues such as women's sexual health and overall empowerment in society were often not substantively addressed (Higgins et al., 2002). At the same time, regions like Hong Kong and Taiwan received greater influences from the United Kingdom and the United States through colonialism and Western hegemony in the 19th and 20th centuries, which resulted in a confluence of traditional Western and Christian sexual prohibitions (Ng & Lau, 1990). Traditional Confucian values also persisted amongst laypeople in both the PRC and other Chinese regions during this time.

Since the 1980s, changes in government policies have allowed for rapid increase in Western influences, which has led to a wave of liberalization in sexual practices and attitudes (Pan, 1994; Xiao et al., 2011). These changes have led some scholars to characterize China as being in the midst of a sexual revolution, with greater emphasis on romantic love and sexual enjoyment particularly amongst the young, urban population. Many Chinese individuals today appear to embrace aspects that are often associated with Western culture, such as the importance

of emotional expression and personal fulfillment, as well as aspects of Chinese culture like the importance of social obligation and conformity. For example, a cross-cultural study found that young adults in China were substantially less likely to oppose premarital sex than participants from Chinese studies done in previous decades (Higgins et al., 2002). However, opposition to premarital sex among Chinese participants remained higher than British participants, particularly if sex was between partners who do not intend to marry.

However, Chinese culture is not alone in existing within a historical context of prohibitive ideas about sexuality. Restrictive attitudes about experiencing and expressing one's sexuality has a prominent place in both the past and present of Western culture. Previous research in ethnic differences between Chinese and Euro-Caucasian individuals on restrictive sexual attitudes and dysfunctional sexual beliefs (Ahrold & Meston, 2010; Brotto et al., 2005, 2007; Morton & Gorzalka, 2013) examined cognitive themes developed from largely Western contexts. One of the dominant ideological frameworks of Western culture, Christianity, frequently describes sexual desires as sinful and corrupt (Runkel, 1998). Sexuality was often associated with guilt and moralistic anxiety, while asceticism and sexual prohibition were seen as virtues. In contemporary times, ambivalence about sexuality, and in particular female sexuality, continues. For example, young women must navigate mixed messages and double standards through ostensibly prohibitive moral panic over teenage sex, social denigration of expressions of their sexuality (e.g., "slut-shaming"), and expectations of being active and performative sexual partners (Ringrose & Renold, 2012). Similarly, young men must also navigate an ambivalent cultural context wherein male sexuality is both seen as the basis of self-esteem, but also of dangerous aggression (Philaretou & Allen, 2001). Both Chinese and Western cultures contain mechanisms that may influence an individual's regulation of sexual response.

Dual Control Model

The dual control model was one of the first theoretical models that attempted to explain the central nervous system regulation of male sexual response in animals and humans (Bancroft, 1999; Bancroft et al., 2009; Bancroft & Janssen, 2000). The model has since been expanded to also include female sexual response. The importance of mechanisms involved in sexual excitation have long been recognized, likely due to the more discrete structures involved in the neurophysiological mechanisms of sexual excitation than inhibition which made them amenable to manipulation through lesion studies (Bancroft, 1999). However, a focus on the inhibitory mechanisms has proven useful for understanding what “normal” sexuality is, how individuals vary in their sexual responses, and how sexual problems can arise. The core idea of the dual control model is that there are two distinct but interconnected mechanisms involved in the regulation of sexual responses – an excitatory system promotes increasing sexual responding, and an inhibitory system that reins in sexual responding. In more detail, other fundamental aspects of the model are that (Bancroft, 1999; Bancroft et al., 2009; Bancroft & Janssen, 2000):

- 1) Inhibition of sexual responses, which can be represented at the level of neurophysiological activity, is an adaptive pattern which can be observed across species. Such inhibition reduces the likelihood of sexual arousal and behaviours. Sexual arousal and behaviours in some contexts would be wasteful or dangerous, and distract the individual organism from attending to other demands of the situation.
- 2) There is individual variability in an organism’s propensity for both sexual inhibition and excitation. In many individuals, these variations are generally adaptive or non-problematic. However, in some individuals, a disproportionately high propensity for sexual excitation or disproportionately low propensity for sexual inhibition leads to

engagement in high-risk sexual behaviours. Conversely, in other individuals, a disproportionately low propensity for sexual excitation or disproportionately high propensity for sexual inhibition leads to impairment in sexual responding (conditions we recognize in humans as sexual dysfunctions).

- 3) Stimuli which trigger sexual response occurs often through interactions between multiple individual organisms, and the contextual and cultural scripts and meanings attributed to these interactions are important aspects of these stimuli. The effects of these stimuli must also be mediated by internal characteristics of the organism, which can be represented both at the level of neurophysiological activity and psychological experience and are influenced by heritable and learned factors.

Neuroscience research has highlighted key neuronal and hormonal signaling pathways involved in the physiological mechanism of sexual excitation (Pfaus, 2009). Gonadal (and adrenal) steroid hormones, and in particular androgens like testosterone, have long been recognized as crucial in the development of sexual desire and motivation in men and women (Goldstein et al., 2004; Pfaff, 1999). Estrogens and progestins are also known to play important roles in the central nervous system and peripheral tissues. One major function of these hormones is in potentiating sexual response; hormone action at the hypothalamus and limbic system trigger the synthesis of other neurotransmitters and their associated receptors, priming the brain to respond to sexual stimuli. Dopamine is the primary neurotransmitter in the proximate mechanism of sexual excitation (Hull et al., 1999). Dopaminergic signaling along mesolimbic, nigrostriatal, and hypothalamic pathways respectively mediate attention to rewarding stimuli, motor action towards those stimuli, and peripheral activation of sympathetic and parasympathetic nervous system processes (e.g., genital perfusion). Norepinephrine (España et al., 2016) has also been

implicated in sexual motivation and excitation via its role in activating and maintaining general physiological arousal, while oxytocin (Carter et al., 1992) has been shown to link sexual rewards to pair bonding and is involved in genital blood flow during arousal.

The function of sexual excitation is relatively apparent in mobilizing resources to facilitate mating, allowing access to the evolutionary advantages which sexual reproduction conveys. Adaptive functions of sexual inhibition are less immediately obvious. The following five functions for inhibition have been suggested (Bancroft, 1999; Bancroft et al., 2009):

- 1) Sexual activity may be dangerous or disadvantageous in some situations; such dangers can include threats of physical harm, but can also include negative impacts to emotional states or interpersonal standing. For example, an organism may decline to engage in sexual activity if it puts them at risk of contracting a disease, if it may incur the wrath of a stronger same-sex competitor, or if it may lead to social ostracism due to being seen as a philanderer.
- 2) A nonsexual challenge or threat occurs, and other distracting response patterns, including sexual responding, needs to be inhibited in order to engage in appropriate coping strategies. For example, an organism may decline to engage in sexual activity when they are being pursued by a predator.
- 3) Excessive pursuit of sexual pleasure would distract the organism from being able to dedicate resources to other adaptive functions. For example, an organism may decline to engage in sexual activity when they have a more pressing need to find food.
- 4) When there is high population density, social or environmental pressures may cause an inhibition of sexual responding to curtail reproductive behaviours. Bancroft et al. (2009) suggested that this function is less clearly relevant for humans. Interestingly,

one possible example is the One-Child Policy in the PRC from 1978 to 2015, a government population-control program which required parents, by law, to only give birth to a single offspring (Potts, 2006). A PRC citizen who did not have access to contraception but believed in the goals of the policy may therefore inhibit their sexual behaviours to comply with the social pressure to reduce population density.

- 5) Excessive sexual behaviours may have negative consequences for fertility. For example, repeated ejaculations in men will result in the depletion of stored sperm and less chances of fertilizing the ovum if not given time to replenish.

This model is consistent with Bjorkland and Kipp's (1996) conceptualization on the increased importance of inhibiting sexual and aggressive behaviours as ancestors to modern humans began to live in more complex and stratified social groups. Inhibition of sexual and aggressive urges needed to be suppressed in many social contexts in order to reduce intragroup conflict, particularly if one is not at the top of the social hierarchy (e.g., not attacking a more powerful group member, not mating with the partner of a more powerful group member). Developments in the neocortical control of emotional limbic regions allowed this to occur; once these circuits were in place, more complex cognitive tasks were possible, such as maintaining intricate rules about when and with whom mating can occur.

Several neurotransmitter systems have been investigated in the physiology of sexual inhibition. Serotonergic signaling pathways arising from the Raphé nuclei in the midbrain and projecting into the hypothalamus, limbic structures, hippocampus, cerebral cortex, and spinal cord have been implicated in sexual satiety and suppression of sexual desire and arousal via direct suppression of dopaminergic signaling (Hull et al., 2004). Opioid signaling has also been implicated in sexual satiety, especially the satiety and associated decrease in sexual arousal that

may follow a large reward such as orgasm (Pfaus, 2009). However, opioid signaling is also important in the experience of sexual rewards, and thus conditioning of approach-oriented sexual behaviours. As such, the opioid system may also be involved in long-term reduction in sexual activity via its under-activation and hence lack of positive experiences necessary to generate a robust sexual response. The endocannabinoid system has been linked to suppression of sexual behaviours, including via inhibitory cross-talk with central neurotransmitter signaling and via tonic negative feedback loops with steroid hormone function and the hypothalamic-pituitary-gonadal axis (Gorzalka et al., 2010; Gorzalka & Dang, 2012).

At the psychological level, Redouté et al. (2005) argued for three components of sexual inhibition. The first is an inhibitory tone operating in the resting state, which needs to be lowered for sexual response to occur. These processes appear to be mediated by temporal lobe activity, and may serve as a “gatekeeper” mechanism for arousal. The second are processes which restrain or deactivate the development of sexual excitation once such excitation has been initiated. The process is suggested to be mediated by the caudate nucleus and putamen, and may serve as the “brake” mechanism for arousal. The third are processes involved in the cognitive devaluation of sexual partners and behaviours. The process is suggested to be mediated by lack of deactivation in the orbito-frontal cortex, and is most relevant to difficulties of low desire. Perelman’s sexual tipping point concept (Perelman, 2006) further described that, for any organism or individual, the range of excitatory and inhibitory processes are held in dynamic balance. In order for sexual behaviours or response to occur in any context, excitatory factors must outweigh inhibitory factors, or else the behaviour or response would be suppressed.

Janssen, Vorst, Finn, and Bancroft (2002), in a factor analysis of their Sexual Inhibition/Sexual Excitation Scales (SISSES), a self-report questionnaire for men, identified a

single excitation factor and two inhibition factors. The first inhibition factor (SIS1) was labeled inhibition due to threat of performance failure (e.g., performance anxiety), and the second (SIS2) was labeled inhibition due to threat of performance consequences (e.g., unwanted pregnancy). This questionnaire and factorial model also have been shown to have reasonable fit in women (Carpenter et al., 2008). Graham, Sanders, and Milhausen (2006) developed a novel instrument, the Sexual Excitation/Sexual Inhibition Inventory for Women (SESII-W), designed to capture factors more relevant to women's sexual response. They identified five lower order factors within one higher order excitation factor, and three lower order factors within one higher order inhibition factor; the three inhibition factors were relationship importance, concerns about sexual function, and arousal contingency (i.e., feeling that sexual responses are easily disrupted). This instrument, with some modification, has also been shown to be adequate for use in men as well (Milhausen et al., 2010).

Research into the evolution of mating behaviours suggest that male and female organisms (and by extension women and men) may differ in their experiences of sexual excitation and inhibition. Parental investment theory (Buss & Schmitt, 1993; Daly & Wilson, 1983) hypothesized that males and females engage in differential mating strategies. Males, on account of the relative metabolic ease of sperm production, invest less in each offspring than females and can gain a reproductive advantage by impregnating as many females as possible. On the other hand, given the relatively metabolic difficulty of ova production and gestation, females invest more into each offspring and can gain a reproductive advantage by selectively mating with males who will maximize the chances of reproductive success of her own offspring. Therefore, while males are more able to benefit from somewhat indiscriminate mating, it is advantageous for females to limit their sexual responses and behaviours in more contexts. Based on the dual

control model, this would suggest that men may have on average higher levels of sexual excitation and/or lower levels of sexual inhibition than women. By extension, the potential role of cultural factors on excitation and inhibition might also differ between women and men to the extent that social norms between genders are influenced by biological differences between sexes.

However, female and male humans also have many shared features in evolutionary selection pressures in mating and reproductive behaviours. Fertility attachment theory (Miller et al., 2005) highlights that reproductive fitness not only requires the generation of offspring, but also that those offspring themselves become reproductively successful. Human children, due to their lengthy developmental trajectories, benefit from the ongoing resource investment of both the female and male parents in childrearing. This has been hypothesized to form the evolutionary basis of long-term romantic attachments and stable family structures. Therefore, there may be many evolutionary pressures on the regulation of sexual response that would be shared between men and women, including ongoing sexual activity with the co-parent to facilitate attachment and restriction of sexual behaviours with other potential sexual partners. More generally, there is substantial within-group diversity among both men and women's sexual behaviours and significant overlap between genders (Archer, 2019). Both men and women have processes for sexual excitation and inhibition as per the dual control model. Sociocultural processes can also have similar prescriptive values for both men and women in the sexual domain.

The biological basis for similarities and differences between sexes may interact in a complex way with similarities and differences in cultural norms and expectations between genders. Bancroft et al. (2009) also suggested that sociocultural suppression of sexuality may be more salient and pronounced for women than men on the basis of evolutionary sex differences between females and males. This would also be consistent with findings of sexual dysfunctions

being more common in women than men (e.g., Laumann et al., 2005, 1999). Cultural norms similarly may show differences, as well as similarities, in how they influence the sexualities of men and women. Cultural and biological similarities and differences between genders and sexes may intersect in a complex confluence of interactions. For example, Chinese culturally-bound sexual prohibitions appear to be directed to some degree to both men and women. At the same time, men may on average have higher levels of intrinsic sexual excitation, due to evolutionary pressures resulting in higher levels of baseline androgen signalling compared to women. Therefore, their dynamic balance, from the sexual tipping point perspective (Perelman, 2006), may require a greater concomitant level of sexual inhibition in order to suppress sexual expression to a socially-appropriate degree. Women, in contrast, may be more likely to experience a reduction in contextually-mediated sexual excitation to reach the same level of reduction in sexual expression. This suggests that the link between cultural factors and sexual inhibition or excitation may potentially display a different pattern in men and women.

Current Investigation

The current line of investigation included three studies focusing on applying the dual control model to understanding the sexualities of young Chinese men and women, and the ethnic and cultural difference in sexual response and behaviours in Chinese individuals compared to Euro-Caucasian individuals. This series of studies examined specifically an undergraduate university population of Chinese and Euro-Caucasian individuals, which was selected for several reasons. College has often been characterized as a context where young adults explore and experiment with sexuality (Dworkin, 2005; Paul, McManus, & Hayes, 2000; Welsh, Grello, & Harper, 2006), and coincides with a developmentally important period for the emergence of an adult sense of self as a sexual being within a social context (Shoveller, Johnson, Langille, &

Mitchell, 2004). University is also a context where individuals often become exposed to a more diverse range of ideas and perspectives about sexuality and culture, including through peer interactions and educational experiences. This may be particularly salient for students who grew up in non-Canadian cultural contexts, such as some international students potentially living in Canada for the first time. Finally, existing literature examining Chinese or East Asian sexualities (e.g., Ahrold & Meston, 2010; Brotto et al., 2005; 2007) have often focused on this population, thus allowing the findings from the current study to be more easily integrated with past research.

The first study (Chapters 2 for women and Chapter 3 for men) sought to examine whether Chinese women and men differed from their Euro-Caucasian peers on the dual control processes of sexual excitation and inhibition, and whether specific differences in sexual response (e.g., desire, arousal) and sexual activities (e.g., experience, current level of activity, interest in casual sex) could be understood as reflecting differences in excitation and/or inhibition. It also investigated whether sexual attitudes mediated any ethnic differences in dual control processes. The second study (Chapter 4) sought to examine how acculturation to mainstream Canadian/Western and heritage Chinese cultures may have contributed to the within-group variability in sexual excitation, inhibition, attitudes, response, and experiences of Chinese men and women. The third study (Chapters 5 and 6) sought to understand what meaning would be most appropriate for clinicians and researchers to ascribe to the between-group differences in sexual excitation and inhibition when comparing Chinese and Euro-Caucasian individuals. Ethnic differences were examined from the perspectives of higher rates of sexual dysfunctions, asexual sexual orientation, and sexual decision-making about abstinence versus engagement in partnered sex. Each of the following chapters will provide details about the methods, results, and implications of their respective studies, as well as further relevant background information.

Chapter 2: Examining Differences between Chinese and Euro-Caucasian Women using the Dual Control Model

A version of this chapter has been previously published: Dang, S.S., Gorzalka, B.B., & Brotto, L.A. (2019). Dual control model in a cross-cultural context: Role of sexual excitation mediates in sexual function response and behavior differences between Chinese and Euro-Caucasian women in Canada. *Archives of Sexual Behavior*, 48(8), 2519-2535.

This chapter describes an investigation into whether the dual control model was applicable to understanding the between-group differences on sexual response and behaviour in a sample of Chinese and Euro-Caucasian young women at a large Canadian university. Previous studies have characterized the lower, on average, levels of sexual response (e.g., desire, arousal) in Chinese women compared to their Euro-Caucasian peers (Brotto et al., 2005; Woo et al., 2011), as well as lower levels of engagement in sexual activities (Meston et al., 1996). These ethnic differences have generally been understood to be related to the contrast in contemporary Chinese versus Western cultural restrictiveness and permissiveness in the expression and experience of sexuality (Ahrold & Meston, 2010; Meston et al., 1998; Morton & Gorzalka, 2013). Few previous studies have organized the range of findings in different domains of sexuality into an existing theoretical framework, or provided elucidation for how Chinese or Western cultural factors may directly impinge upon the regulation of sexual response and behaviour. Integrating the research on the ethnic and cultural differences observed between Chinese and Euro-Caucasian women into more general models of female sexual response may lay the groundwork for future research on the impact of culture on sexuality, and provide insights into how to effectively intervene in sexual concerns for Chinese women in a culturally-informed way. The dual control model, a well-established model which posits the presence of separate

sexual excitation and sexual inhibition mechanisms in the regulation of an individual's sexual response and behaviours (Bancroft et al., 2009), was used in this study.

Sexual excitation was expected to be especially important in understanding the sexuality of Chinese women. In a qualitative study (Dang, Chang, & Brotto, 2017), Chinese women often reported not noticing or experiencing sexual desire and arousal except in very specific contexts, such as only experiencing desire when being intimate with a committed romantic partner. Chinese women also often had difficulty describing or elaborating upon their experiences of sexual desire, as well as how explicit mentions of sexuality are often seen as stigmatizing and “un-ladylike” by traditional Chinese culture. Furthermore, research on sexual communication has found that Asian American youth are less likely to receive information on sex-related topics from their parents, compared to Euro-Caucasian, African, and Latin American parents (Kim & Ward, 2007). The most commonly reported theme by Asian American youth was that sexuality was a taboo topic, either absent or actively avoided, in their families. Other common themes of parental discussion involved directing their children to focus on other matters, such as deferring dating to focus on academic/career achievements and restricting sexual activity until marriage. These themes were particularly prominent for parental communication targeted towards girls. Avoidance of and restrictions on sexuality thus appear to be a commonly-seen element of Chinese culture. This pattern potentially de-emphasizes the importance of sexual excitation for young Chinese women, reduces their opportunity to learn about or explore their own sexuality, and removes the social rewards and incentives for engaging in sexual behaviours.

Bancroft and Janssen's (2000) original model leaves fairly open the types of factors that could impact the excitatory (and inhibitory) systems, including genetic predisposition, learned experience, and situational context. One potential relevant factor is sexual conservatism.

Conservatism in this context is generally conceptualized as self- and socially-imposed restrictions on various areas of sexuality, such as who are appropriate sexual partners, what sexual activities are acceptable, and under what contexts sex is allowed to occur (Burt, 1980). Previous research has demonstrated that Chinese samples, on average, tend to be more sexually conservative or restrictive compared to Western standards. Chinese and East Asian individuals in Western nations have consistently been found to report higher levels of sexually conservative attitudes and beliefs (Ahrold & Meston, 2010; Brotto et al., 2005, 2007; Kennedy & Gorzalka, 2002; Leiblum et al., 2003; Meston et al., 1998; Morton & Gorzalka, 2013). Conservative attitudes have also been found to be a significant mediator of the mean group difference in sexual desire between East Asian and Euro-Caucasian women, as well as the within-group association between mainstream acculturation and sexual desire (Woo et al., 2011, 2012). Therefore, restrictive sexual attitudes likely reflect one way in which cultural differences between Chinese and Euro-Caucasian women may act upon dual control processes, and were investigated as a mediator of ethnic differences between Chinese and Euro-Caucasian women on sexual excitation, response, and behaviours.

Current Study

The current study investigated the potential role of sexual excitation in the impact of ethnicity on sexual responding and behaviour in Chinese and Euro-Caucasian women. This was the first study to date which examined how Chinese ethnicity interacts with excitation and inhibition within the dual control model. The putative mechanism was that high levels of sexual restrictiveness discourage women from attending to and valuing their experiences of excitation, hence reducing the opportunity for many Chinese women to notice and become aware of their internal sexual responses. This reduction in awareness of one's own sexual responses may then

have a broad range of consequences for observed sexual outcomes, such as reduced desire and arousal and less motivation for sexual activity. The study sought to show that many observed differences on sexual responding between Chinese and Euro-Caucasian women can be conceptualized as a group difference in a latent sexual excitation factor. It also sought to show that the group difference in latent sexual excitation is mediated by restrictive sexual attitudes.

Specifically, Chinese women were predicted to score significantly lower than Euro-Caucasian women on a self-report measure of sexual excitation, the Sexual Excitation/Sexual Inhibition Inventory for Women (SESI-W; Graham et al., 2006), as well as have higher conservative and lower liberal attitudes about sexuality. Based on previous research, it was also expected that Chinese women would score lower than their Euro-Caucasian peers on various sexual outcome variables: sexual desire (dyadic and solitary), sexual arousal, current frequency of sexual activity, prior experience of sexual activity, sexual fantasies, and sociosexual orientation (interest/engagement in casual sex), and higher on sexual anxiety. These variables were selected as they are important aspects of the female sexual response cycle (e.g., sexual desire and arousal), and solitary and dyadic sexual behaviours that are common in young adults. These measures were also interpretable in individuals who are not currently engaging in regular partnered sexual intercourse, as young Chinese women have been found to be less likely to be sexually active. As well, based on the existing conceptualization of the dual control model, it was predicted that higher sexual excitation would be positively correlated with greater levels of sexual response and behaviour among both Chinese and Euro-Caucasian women.

Given the established role of restrictive sexual attitudes among Chinese women, the current study anticipated that there would be notable indirect effects from ethnicity to sexual excitation through conservative and liberal sexual attitudes. Structural equation models (SEMs)

were therefore constructed to examine the hypothesized mediation, as well as the validity of conceptualizing an overarching sexual excitation factor for the measured sexual response variables among Chinese women. We expected to find that group differences between Chinese and Euro-Caucasian women on manifest sexual response variables, including sexual excitation measured by the SESII-W, could be adequately modeled by group differences on an underlying latent sexual excitation factor. Three putative models were thus examined. Model 1 (Figure 2.1a) reflected the most parsimonious representation, wherein ethnicity directly impacts latent sexual excitation, which is then manifest in all the observed sexuality variables. Model 2 (Figure 2.1b) showed a mediational process, wherein ethnicity directly predicts a latent sexual attitudes variable, which then impacts latent sexual excitation. Model 3 (Figure 2.1c) further broke down the latent excitation factor into a second latent sexual activity factor, to examine whether deviating from a one-factor model of excitation improves fit for the patterns seen among the outcome variables. Model 3 showed the direct impact of ethnicity on each of the latent attitudes, excitation, and activity factors, along with a mediated pathway among latent factors from attitudes to excitation to activity.

Methods

Participants

Chinese ($n = 270$) and Euro-Caucasian ($n = 201$) undergraduate women were recruited from a large Canadian university, completed online questionnaires, and were included in the data analysis. Ethnic category (Chinese or Euro-Caucasian) was based on participant self-report. Individuals who self-identified as being women of Chinese or Euro-Caucasian ethnic descent, who had sufficient English reading skills to understand the survey materials, and who were over the age of 18 were invited to participate in the study. Individuals under the age of 18 or those

who reported difficulties with English comprehension were excluded from the study. Further demographic variables for participants are reported in Table 2.1. All participants were living in Canada during the study.

Procedure

Participants were recruited through online ads at the university's psychology human subject pool system, from September 2015 to April 2016. The study was advertised as involving ethnicity, culture, and sexuality. Interested participants were directed to an online questionnaire hosted on the website www.fluidsurveys.com. Upon accessing the survey, participants had the opportunity to review consent documents, which explained their rights as participants, data confidentiality and security, and the sexual nature of some of the study questions. If they gave consent to participate, they then completed a series of online questionnaires. After completing the questionnaire, participants attended an online debriefing session, where they were informed about the intent of the study and invited to contact or meet with the researchers should they have further concerns and questions. Participants received one bonus mark towards an undergraduate psychology class in compensation for their participation. All procedures and methods were reviewed and approved by the university's behavioural research ethics board, and consistent with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Measures

Sexual excitation and inhibition. The Sexual Excitation/Sexual Inhibition Inventory for Women (SESII-W) (Graham et al., 2006) was administered to assess sexual excitation and inhibition. The SESII-W is a self-report inventory consisting of 36 statements about factors that might influence sexual responding, which participants rate on a 5-point scale of their endorsement. The instrument contains eight factors, five of which form a higher order excitation

factor and three of which form a higher order inhibition factor. Higher scores on the excitation factor (range of scores from 1 to 4) indicate higher levels of sexual excitation, and higher scores on the inhibition factor (range of scores from 1 to 4) indicate higher levels of sexual inhibition. In this sample, the Cronbach's α for the excitation factor was .88 and for the inhibition factor was .75.

Sexual attitudes. The Attitudes scale of the Derogatis Sexual Functioning Inventory (DSFI Attitudes) (Derogatis & Melisaratos, 1979) was administered to assess sexual attitudes. The DSFI Attitudes scale is a self-report inventory consisting of 30 statements, which participants rate on a 5-point scale of their endorsement. The scale has two subscales: liberal attitudes (range of scores from 15 to 75) and conservative attitudes (range of scores from 15 to 75). Higher scores on each subscales indicate greater endorsement of those respective beliefs. In this sample, the Cronbach's α for the conservative and liberal attitudes subscales were .84 and .82, respectively.

Sexual desire. The Sexual Desire Inventory (SDI) (Spector et al., 1996) was administered to assess sexual desire. The SDI is a self-report instrument consisting of 11 items, some of which inquire about the frequency of sexual desire (on an 8-point scale) and others about the intensity of desire (on a 9-point scale). The instrument contains two subscales: solitary desire (range of scores from 0 to 35) and dyadic desire (range of scores from 0 to 56). Higher scores indicate higher levels of sexual desire. In this sample, the Cronbach's α for the solitary desire subscale was .87, and for the dyadic desire subscale was .88.

Sexual arousal and sexual anxiety. The Sexual Arousability Inventory – Expanded (SAI-E) (Hoon et al., 1976) was administered to assess sexual arousability and sexual anxiety in response to arousal. The SAI-E is a self-report instrument consisting of 28 items describing

various situations. For each item, participants rate on a 7-point scale about how aroused they would feel when engaged in such a situation. The instrument has an arousability and an anxiety in response to arousal scale (range of -28 to 140 for each). Higher scores indicated higher arousability or higher anxiety. In this sample, the Cronbach's α of the arousability scale was .96 and of the anxiety scale was .97. Note that arousability represents a trait-level propensity towards arousal and activation of sexual response when appropriate contextual factors are in place, rather than sexual arousal per se; this was thought to be more conceptually similar to sexual excitation as conceptualized by the dual control model, rather than arousal which may be more dependent on transient circumstances or availability of sexual stimuli in one's immediate environment.

Sexual experience. The Experience scale of the Derogatis Sexual Functioning Inventory (DSFI Experience) (Derogatis & Melisaratos, 1979) was administered to assess prior sexual experience. The DSFI Experience scale is a self-report instrument consisting of 24 sexual behaviours and activities, which participants indicate if they have ever engaged in that behaviour in their lifetime. Higher scores (range of scores from 0 to 24) in this scale indicate greater diversity of sexual experience. In this sample, the Cronbach's α for this scale was .97.

Sexual drive. The Drive scale of the Derogatis Sexual Functioning Inventory (DSFI Drive) (Derogatis & Melisaratos, 1979) was administered to assess sexual drive (i.e., frequency of current sexual activities). The DSFI Drive scale is a self-report instrument consisting of 4 sexual activity domains, which participants indicate the frequency of which they engage in such activity. Higher scores (range of scores from 5 to 45) in this scale indicate greater frequency of sexual activity. In this sample, the Cronbach's α for this scale was .76.

Sexual fantasies. The Fantasy scale of the Derogatis Sexual Functioning Inventory (DSFI Fantasy) (Derogatis & Melisaratos, 1979) was administered to assess diversity or range of

sexual fantasy topics the person experiences. The DSFI Fantasy scale is a self-report instrument consisting of 20 sexual fantasy themes, which participants indicate if they have ever experienced each fantasy. Higher scores (range of scores from 0 to 20) in this scale indicate greater diversity of sexual fantasies. In this sample, the Cronbach's α for this scale was .87.

Sociosexual orientation. The Revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorpf, 2008) was administered to assess sociosexual orientation (i.e., interest and engagement in casual sex). The SOI-R is a self-report instrument consisting of 9 items that inquire about previous sexual partners, interest in sex without emotional commitment, and beliefs about casual sex. Participants respond along 9-point scales. Higher scores (range of scores from 0 to 9) indicate greater willingness and interest in casual sex. In this sample, Cronbach's α for this scale was .86.

Social desirability responding. The short form of the Marlow-Crowne Social Desirability Scale (MCSDS) was used to general social desirability responding. The instrument contains 13 true or false items about negative but common experiences that individuals highly concerned about social perception have been found to be reluctant to admit to. Higher scores (range of scores from 0 to 13) indicate greater levels of socially conscious responding. In this sample, the Cronbach's α for the instrument was .65.

Data Analysis

Comparisons of mean differences between Chinese and Euro-Caucasian participants were conducted using *t*-tests. Pearson's *r* correlations were used to examine zero-order associations between study variables. Bonferroni correction was used to control for type I error inflation, setting the alpha level at $p = .002$. Effect sizes of approximately Cohen's $d = .20$ or $r = .10$ were

considered small, approximately Cohen's $d = .50$ or $r = .30$ were considered medium, and approximately Cohen's $d = .80$ or $r = .50$ or greater were considered large (Cohen, 1988).

Indirect effects of ethnic category on sexual excitation through sexual attitudes, and the overall pattern of associations between all variables, were analyzed using SEM. Model fits were considered adequate if they showed Comparative Fit Index (CFI) $> .90$, Root Mean Square Error of Approximation (RMSEA) $< .10$, and Standardized Root Mean Square Residual (SRMR) $< .08$ (Hu & Bentler, 1998). Comparison between the models were examined with the Akaike Information Criterion (AIC) (Akaike, 1987).

Some missing data was observed in the dataset, but no variable was missing in more than 10% of cases. As the pattern could not be shown to be missing completely at random, full information maximum likelihood was used for SEM (Allison, 2003) and multiple imputation with 20 resamples was used for other analyses.

Analyses were conducted using SPSS Statistics 20 (IBM) and the lavaan package 0.5-12 (Rosseel, 2012) for R (R Foundation for Statistical Computing).

Results

Mean differences and correlations

Mean-difference comparisons showed that Chinese women had significantly lower mean sexual excitation (SESII-W Excitation) scores with a large effect size compared to Euro-Caucasian women (see Table 2.2). However, no significant mean differences were seen between Chinese and Euro-Caucasian women for sexual inhibition (SESII-W Inhibition). Chinese women also showed significantly lower mean dyadic sexual desire (SDI Dyadic Desire), solitary sexual desire (SDI Solitary Desire), sexual arousability (SAI-E Arousal), sexual experience (DSFI Experience), frequency of sexual behaviour (DSFI Drive), permissive sexual attitudes (DSFI

Liberal Attitudes), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R). Similarly, Chinese women showed significantly higher restrictive sexual attitudes (DSFI Conservative Attitudes) and anxiety in response to sexual arousal (SAI-E Anxiety). These significant mean differences also showed medium to large effect sizes. For social desirability, Chinese and Euro-Caucasian women did not differ significantly on mean MCSDS scores.

Pearson's r correlations were conducted separately among Chinese and Euro-Caucasian women (see Table 2.3). Sexual excitation (SESII-W Excitation) and inhibition (SESII-W Inhibition) was not significantly correlated. In Euro-Caucasian women, sexual excitation was significantly positively correlated at a large effect size with permissive sexual attitudes (DSFI Liberal Attitudes), dyadic sexual desire (SDI Dyadic Desire), sexual arousability (SAI-E Arousal), frequency of sexual behaviour (DSFI Drive), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R); at a medium-to-large effect size with solitary desire (SDI Solitary Desire), and at a small-to-medium effect size with sexual experience (DSFI Experience). Meanwhile, sexual inhibition (SESII-W Inhibition) was significantly negatively correlated with interest/engagement in casual sex (SOI-R) and positively correlated with anxiety in response to arousal (SAI-E) with medium effect sizes, but not other sexuality variables.

In Chinese women (Table 2.3), sexual excitation (SESII-W Excitation) was not significantly correlated with sexual inhibition (SESII-W Inhibition). Sexual excitation (SESII-W Excitation) was significantly positively correlated at a large effect size with dyadic sexual desire (SDI Dyadic), sexual arousability (SAI-E Arousal), sexual experience (DSFI Experience), and diversity of sexual fantasies (DSFI Fantasy); and at a medium-to-large effect size with

permissive sexual attitudes (DSFI Liberal Attitudes), solitary sexual desire (SDI Solitary), frequency of sexual behaviour (DSFI Drive), and interest/engagement in casual sex (SOI-R). Sexual excitation (SESII-W Excitation) was also similarly negatively correlated with restrictive sexual attitudes (DSFI Conservative Attitudes) at a medium-to-large effect size and anxiety in response to arousability (SAI-E Anxiety) at a small-to-medium effect size. Sexual inhibition (SESII-W Inhibition) was significantly negatively correlated with interest/engagement in casual sex (SOI-R) at a small-to-medium effect size but not other sexuality variables.

Structural Equation Models

SEMs were used to examine the hypothesized models (Models 1, 2, and 3) shown in Figure 2.1a-2.1c. Figure 2.2 shows the best fitting version of Model 1, wherein a latent sexual excitation factor explains the impact of ethnicity on all observed sexuality variables. A good fit for this model would have suggested that all observed between-group differences on sexuality variables could be subsumed under a general sexual excitation construct. This model did not pass the chi-square test of fit ($\chi^2(39) = 209.47, p < .001$), but showed adequate fit (CFI = .94; RMSEA = .09; SRMR = .05). However, anxiety in response to sexual arousal (SAI-E Anxiety) had to be excluded in order to achieve good model fit. This model showed significant residual correlations between some manifest variables, most notably between restrictive sexual attitudes (DSFI Conservative Attitudes) and permissive sexual attitudes (DSFI Liberal Attitudes). Significant residual correlations were also seen between observed sexual excitation (SESII-W Excitation), sexual arousability (SAI-E Arousal), interest/engagement in casual sex (SOI-R), frequency of sexual behaviour (DSFI Drive), and sexual experience (DSFI Experience). For relative model fit, AIC = 10777.93.

Figure 2.3 shows the best fitting version of Model 2, wherein a latent sexual attitudes factor partially mediates the association between ethnicity and latent sexual excitation. Effects on latent sexual excitation are manifest through the variability seen in the other observed sexual behaviour and response variables. A good fit for this model would have suggested that all observed between-group differences on sexuality variables other than sexual attitudes could be subsumed under a general sexual excitation construct, while sexual attitudes represented the cultural mechanism by which ethnicity impacts excitation. This model did not pass the chi-square test of fit ($\chi^2(37) = 153.33, p < .001$), but showed adequate fit (CFI = .95; RMSEA = .09; SRMR = .04). Notably, diversity of sexual fantasies (DSFI Fantasy) loaded onto both the latent excitation and latent attitudes factors, and anxiety in response to sexual arousal (SAI-E Anxiety) had to be excluded in order to achieve good model fit. Significant residual correlations were seen between observed sexual excitation (SESII-W Excitation), sexual arousability (SAI-E Arousal), interest/engagement in causal sex (SOI-R), frequency of sexual activities (DSFI Drive), and sexual experience (DSFI Experience). No models depicting full mediation (i.e., without any direct paths from ethnicity to latent excitation) or no mediation (i.e., without any indirect paths from ethnicity to latent excitation through latent attitudes) displayed acceptable fit. For relative model fit, AIC = 10735.79; Model 2 had the lowest AIC and thus best fit of all three models.

Figure 2.4 shows the best fitting version of Model 3, wherein a latent sexual activity factor is associated with but distinguished from latent sexual excitation. Ethnicity has an impact on latent attitudes, which then impacts latent excitation. Latent excitation is directly associated with latent activity, and ethnicity also separately directly acts on activity. A good fit for this model would have suggested a similar attitudes-based cultural mechanism of ethnic differences as in Model 2, except that sexual excitation and sexual behaviours would be conceptually

distinct. This model did not pass the chi-square test of fit ($\chi^2(37) = 172.68, p < .001$), but showed adequate fit (CFI = .94; RMSEA = .09; SRMR = .05). Anxiety in response to sexual arousal (SAI-E Anxiety) had to be excluded in order to achieve good model fit. Significant residual correlations were seen between observed sexual excitation (SESII-W Excitation), sexual arousability (SAI-E Arousal), interest/engagement in casual sex (SOI-R), frequency of sexual behaviours (DSFI Drive), and sexual experience (DSFI Experience). Adding a direct path from ethnicity to latent excitation did not improve the model fit, and models without direct paths between latent variables did not display acceptable fit. For relative model fit, AIC = 10745.14; Model 3 had better fit than Model 1 but worse fit than Model 2.

Discussion

The current study sought to apply the dual control model to understand the ethnic difference between reported levels of sexual response and behaviours among young Chinese and Euro-Caucasian women in Canada. We expected Chinese women to score lower on sexual excitation and related variables than their Euro-Caucasian peers. The study also examined three models (Figure 2.1) of how Chinese ethnicity, sexual attitudes, sexual excitation, and sexual responses and behaviours might interact. Chinese women reported lower levels of sexual excitation, response, and behaviours than their Euro-Caucasian peers. Examination of SEMs suggested that group differences between Chinese and Euro-Caucasian women on sexual response and behaviours can be explained by differences in a latent sexual excitation factor.

In support of the hypotheses, Chinese participants reported on average lower sexual desire, arousability, experience, current activity, fantasies, and interest in casual sex. Chinese participants also reported more conservative and less liberal sexual attitudes. These effects replicated prior research in this area (e.g., Brotto et al., 2005; Meston et al., 1996). The greater

numbers of participants that reported being sexually active among Euro-Caucasian women, compared to Chinese women, were also consistent with past findings contrasting these two groups (e.g., Ahrold & Meston, 2010; Cain et al., 2003). As expected, Chinese participants reported significantly lower levels of sexual excitation on the SESII-W than Euro-Caucasian participants. Sexual excitation was significantly associated with all sexual outcome variables, even after controlling for sexual inhibition, among both groups. Controlling for age did not notably influence these patterns.

Role of Sexual Excitation

Examination of SEMs provided further elaboration of these relationships. The more parsimonious Model 1 was shown to have adequate fit for the data, but the more complex Models 2 and 3 had somewhat better fit. These models suggested that the observed differences on sexual desire, arousability, and SESII-W Excitation between Chinese and Euro-Caucasian women could be conceptualized broadly as reflecting group mean differences on an underlying latent excitation factor. Latent excitation was seemingly distinct from conservative and liberal attitudes, which emerged as a separate but linked latent sexual attitudes factor. Observed variables related to sexual behaviours or activities, such as sexual experience and drive, produced marginally better model fit when incorporated into the latent excitation factor as well, but could also be seen as reflective of a separate more behaviourally-oriented latent factor while still producing acceptable model fit. The relation between experiential aspects of sexual excitation (i.e., desire and arousal) with sexual activities and behaviour thus appeared consistent with the reciprocal and cyclical association between sexual arousal, desire, and behaviours seen in most current conceptualizations of female sexual response (e.g., Basson, 2000). All models revealed residual correlations between the measured sexuality variables beyond the ones

predicted, suggesting that our hypothesized inter-relation between the observed variables is a supported but incomplete representation of the interactions present.

This investigation represented the first application of the dual control model to the examination of sexual behaviours and response in Chinese young women. The findings suggested that it may be appropriate to consolidate past findings in this area as being related to group differences in an underlying sexual excitation factor. This was somewhat consistent with the limited information in the literature. Among Euro-Caucasian women, awareness and enjoyment of sexual excitation often must be developed through motivated attention to internal experiences and external contextual cues (Basson, 2000; Brotto et al., 2009; Tolman, 1994). Chinese individuals in Canada often reflected they rarely ever had the opportunity to address sexuality with others (Dang et al., 2017), and Asian youth frequently reported receiving little communication about sexuality from their families (Kim & Ward, 2007). For Chinese women, any discussion about sexuality, as positive or negative, may often be restricted by an avoidance due to social taboo. This avoidance may then have impeded opportunities to cultivate and gain awareness of their own signs of excitation.

Another mechanism by which culture and ethnicity may impact sexual excitation was through the interaction of sexual activity with romantic relationships. The Chinese women were less likely to report being currently in a romantic relationship or currently sexually active. It was possible the lower rates of sexually active Chinese women reflected the lower levels of sexual excitation. However, it was also possible that lower levels of sexual excitation were the result of lower levels of romantic and sexual relationships, as relational factors and previous sexual experiences can have an impact on arousal and desire (Basson, 2000). This was consistent with traditional prohibitions against non-marital sexual activity common in East Asian cultures (e.g.,

Okazaki, 2002; Higgins, Zheng, Liu, & Sun, 2002). Indeed, the lower frequency of sexual activity and romantic relationships in this population may have represented the sociocultural environmental context wherein lower levels of sexual excitation are maintained.

Interaction of Excitation and Attitudes

The current results showed that sexual attitudes partially, but not fully, mediated the association between ethnicity and latent sexual excitation, and between ethnicity and sexual behaviours and responding. Examination of Model 3 suggests alternate mechanisms beyond attitudes may be particularly important for behavioural elements such as sexual experience, sexual drive, and sociosexual orientation. These variables all prominently involve partnered sex to some degree, suggesting a possible role of cultural differences in aspects of interpersonal functioning, such as self-construal (e.g., Markus & Kitayama, 1991) and attachment style (e.g., Dunkley, Dang, Chang, & Gorzalka, 2015; Hazan & Shaver, 1987). These factors may be another way in which the interaction between romantic relationships and sexual excitation described above manifests cross-culturally. It would be useful for future research to provide additional elaboration on these potential mediators.

This was consistent with past research on how reportable attitudes often correlate with but do not entirely explain motivated behaviours in a variety of sexual and non-sexual domains (e.g., Albarracin, Johnson, Fishbein, & Muellerleile, 2001; Kraus, 1995); other trait and environmental factors are also often important. For young Chinese and Euro-Caucasian women, this demonstrated that sexual conservatism and liberalism, at least on the level of overt reportable attitudes about sexual topics, were not sufficient to entirely explain the ethnic and cultural difference. Kim and Ward (2007) also found that communication about sexual topics by Asian parents often involved nonverbal and implicit signalling; these messages may facilitate

less sexual activity without translating into overtly reportable sexual attitudes. This cultural norm around sexuality may also interact with low sexual excitation to result in sex being experienced as less important by Chinese women (Cain et al., 2003). Circumstantial factors related to migration, such as international students leaving partners in their home countries when studying abroad, may have also played a role regardless of individual differences in attitudes or excitation.

Role of Sexual Inhibition

We did not find a significant difference between Chinese and Euro-Caucasian women on sexual inhibition. Sexual inhibition was not reliably associated with most sexual outcome variables. The exception was sociosexual orientation, where sexual inhibition may be particularly important in facilitating conscious decisions to avoid casual sex in order to meet social demands or personal goals. Conversely, many sexual outcome variables, such as desire or arousal, overlap conceptually with sexual excitation as they all directly address activation of the sexual response cycle (Bancroft & Janssen, 2000; Graham et al., 2006). As previously discussed, facilitation of sexual excitation, and especially the motivation to seek excitatory stimuli and attend to internal experiences of desire and arousal, appear particularly important for high sexual response in women; the current findings are consistent with this and suggest that this same process is highly relevant to both Western and Chinese cultural contexts.

Anxiety to sexual arousal may have been the one factor representative of sexual inhibition in the current study. It was significantly associated with sexual inhibition in Euro-Caucasian women (but not Chinese women), and this factor was higher in Chinese than Euro-Caucasian women. Sexual anxiety also did not fit with other response variables and could not be fit into the current SEM model, which emphasized the role of excitation. Therefore, there may be an additional potential role for inhibition in understanding ethnic differences. Alternatively,

higher levels of anxiety may fit with previous studies finding that East Asian individuals generally prefer less arousing positive valence emotions compared to Western individuals (Tsai et al., 2006). This may have meant that sexual arousal was more likely to be perceived as distressingly activating. From a neurobiological perspective, noradrenergic signaling has been shown to have a U-shaped association with arousal (Pfaus, 2009). Very high levels of norepinephrine activity and resulting physiological arousal was associated with anxiety and impairment of sexual behaviours. For this sample, it was possible that cultural differences in preference for more or less arousing positive valence emotions may have caused Chinese women to be more likely to interpret the same level of arousal as anxiety-provoking.

Therefore, it was possible that sexual inhibition plays a larger role on sexual response than was observed among other sexuality variables. Beyond anxiety, other factors related to avoidance or disengagement from sex may be involved in inhibitory processes, such as sexual guilt (Woo et al., 2011) or other distressing emotions such as shame. Distressing negative emotions associated with sexuality may have led to avoidance of sexual excitement and activity, which may have reflected a pathway towards inhibition via cognitive devaluation of sexual incentives (Redouté et al., 2005) resulting in reduced motivation towards sexual behaviours (Cain et al., 2003). However, devaluation of sexual incentives may have also been better captured by a reduction excitement. A more detailed examination about the types of inhibition (e.g., concerns about sexual performance versus concerns about social appropriateness) may reveal more subtle differences between Chinese and Euro-Caucasian women in this domain.

Cross-Cultural Generalizability of Sexuality Constructs

One important consideration for the current study was the cross-cultural generalizability of the constructs of sexual response, excitement, and inhibition. Chinese individuals may have

reported lower levels of sexual responding and behaviours due to not identifying with Western culturally bound sexuality concepts. Malavige et al. (2013) reported several concepts of the SISSES did not have a clear semantic translation into various (non-Chinese) Asian languages. In our study, the SESII-W correlated similarly with other sexual response variables among Chinese and Euro-Caucasian participants, providing some evidence of concurrent validity of this scale among the Chinese women. Exploratory factor analysis of the SESII-W (see Appendix 1) showed that most items did load onto the appropriate excitation or inhibition factors in both subsamples. However, only the Euro-Caucasian women replicated the eight factor model described in Graham et al. (2006). This suggested that the SESII-W may have had a somewhat different factorial structure or semantic meaning for Chinese participants, which may limit the comparability of the two subsamples. The current sample of Chinese women were also exposed to both Chinese and Canadian cultural conceptualizations of sexuality, and their experiences might fit neither with a purely Chinese nor a purely Western model.

Limitations

Our models describe a causal process wherein ethnicity and culture impacts attitudes, which impacts latent sexual excitation, which is then reflected in other aspects of sexual responding. The hypothesized directionality of the relationship between our latent factors is unknown due to the correlational approach. It was possible that higher levels of sexual activity and experience could instead have motivated adoption of less restrictive and more liberal sexual attitudes, and contributed to an overall sense of increased sexual excitation. For example, individuals who are intrinsically more prone to experiencing sexual excitation may be more inclined to seek out and identify with sexually liberal perspectives. Similarly, although we modeled experience and frequency of engagement in partnered sexual behaviour as dependent

variables (via DSFI Experience and Drive scales), it may be that engagement in partnered sex may lead to a significant change in an individual's experience of sexual excitation or moderate the relationship between sexual excitation and other aspects of sexual response; this association will be examined more closely in Chapter 5. The pattern of associations between these complex variables may indeed be multifaceted, reciprocal, and interactive.

Another limitation was the use of ethnicity as a proxy for culture, and the lack of well-accepted quantitative measures of the content of cultural themes and attitudes that are applicable for cross-group comparisons. Unfortunately, this limits our ability to contrast specific elements of Chinese and Western cultures that could contribute to the patterns seen in sexual responding and behaviours, as well as definitively examine whether between-group differences are due to entirely cultural (versus potential biological) factors. This is particularly important given the dual control model's original emphasis on evolutionary context and nervous system-level conceptualizations (Bancroft & Janssen, 2000).

The current study was also limited to focus on a particular cohort of young adults currently residing in Canada. We used a self-selected sample of Chinese and Euro-Caucasian university women, who may be on average younger and have higher education compared to the general population. Therefore, our results may not generalize to other groups of Chinese or Euro-Caucasian women, especially with regards to age, education level, or generation. Notably, the findings should not be interpreted as a cross-country study. Cohort effects also influence the interpretations within the current sample; specifically, the DSFI Experience scale, although well-validated and frequently used in past studies on this topic, notably was created before the advent of prominent internet and smartphone use among young adults.

Response bias with reporting sexual responding, activities, and problems presented another barrier to interpretability, particularly among individuals who may have had more conservative and less liberal sexual attitudes. The presence of response and selection biases are prominent issues in all self-report studies in voluntary samples. Though we did not detect a significant difference in general social desirability responding between the two ethnic groups, it is still possible that Chinese individuals could be less likely to disclose specific sexuality-related experiences due to cultural factors. Differential patterns of volunteer bias between Chinese and Euro-Caucasian women may have also impacted the patterns seen (Woo, Brotto, & Yule, 2010).

Clinical Implications

The results highlighted the role of low sexual excitation as a potential clinical treatment target for sexual difficulties among young Chinese women. In this population, helping patients enhance their experiences of excitation may be a credible focus when the presenting concern relates to low desire and arousal, even when the difficulties are partially maintained by cultural factors. This approach could take place alongside challenging restrictive sexual attitudes. A role for sexual inhibition also could not be ruled out by the current findings, especially given that anxiety in response to sexual arousal did not fit with the other variables in the tested models. Potential interventions may include cognitive-behavioural and mindfulness-based psychotherapy that have previously been shown to be efficacious in treating low sexual desire in primarily Euro-Caucasian samples (Brotto, 2017). However, it was not established in the current study whether Chinese women, in comparison to their Euro-Caucasian peers, were more distressed about low sexual excitation, especially if it was culturally normative. Therefore, even though Chinese women on average reported markedly lower levels of sexual activity and experience

than their Euro-Caucasian peers, it did not necessarily represent the presence of sexual dysfunction in an individual woman if it did not cause clinically significant distress.

Conclusion

The current study connected previous findings on differences between Chinese and Euro-Caucasian young women in sexual response and behaviours to a well-established model of sexual response, the dual control model. Our findings replicated existing literature on this topic, wherein Chinese women reported lower levels of sexual responding and behaviours. Chinese women reported lower levels of sexual excitation but similar levels of sexual inhibition as their Euro-Caucasian peers. Various mean differences were adequately explained by differences in an underlying latent sexual excitation variable. Differences in levels of sexual excitation may be a primary component of the previously observed group differences in sexual response and behaviours between Chinese and Euro-Caucasian women. Restrictive sexual attitudes were important mediators, but likely not the sole cause, of differences in sexual response and excitation. The current results demonstrated the role of sexual excitation as an area of future research and intervention for female sexual difficulties among Chinese individuals.

Table 2.1

Demographic characteristics of Euro-Caucasian (n = 201) and Chinese (n = 270) women.

Ethnic Category	Age	Years in Canada	# Prev. Rel. Part.	# Prev. Sex Part.
Euro-Caucasian	21.5 (4.3)	17.2 (8.7)	2.4 (2.4)	5.5 (8.6)
Chinese	20.2 (2.1)	10.5 (7.8)	1.4 (1.5)	1.1 (2.6)

		Euro-Caucasian	Chinese
Sexual Orientation	Exclusively heterosexual oriented	75.1%	74.4%
	Mostly heterosexual oriented	8.0%	5.9%
	Bisexual oriented	5.0%	6.3%
	Mostly same-sex oriented	3.5%	3.3%
	Exclusively same-sex oriented	4.5%	3.7%
	Asexual oriented	1.0%	4.4%
	Other or did not respond	3.0%	1.9%
Relationship Status	Monogamous	58.2%	38.9%
	Open relationship	3.0%	0.4%
	Single	38.8%	60.7%
Sexually Active	Yes	71.1%	32.6%
	No	28.9%	67.4%

Table 2.2

Means and t-test results for sexual excitation, sexual inhibition, conservative and liberal sexual attitudes, sexual desire, arousability, experiences, drive, fantasy, sociosexual orientation, and social desirability responding in Euro-Caucasian (n = 201) and Chinese (n = 270) women.

	Euro-Caucasian <i>M</i> ± <i>SD</i>	Chinese <i>M</i> ± <i>SD</i>	<i>t</i> -value	Cohen's <i>d</i>
SESII Excitation	2.77 (.41)	2.48 (.44)	6.96***	.69
SESII Inhibition	2.68 (.43)	2.71 (.39)	-0.66	.07
DSFI Att. Con.	28.68 (6.41)	35.49 (7.74)	-10.12***	-.96
DSFI Att. Lib.	57.99 (6.41)	52.14 (7.47)	8.86***	.82
SDI Dyadic	27.56 (9.14)	16.94 (10.01)	9.34***	1.08
SDI Solitary	12.10 (7.27)	8.73 (7.24)	4.60***	.46
SAI-E Arousal	84.65 (25.17)	72.70 (31.28)	4.31***	.42
SAI-E Anxiety	10.79 (28.29)	24.08 (34.09)	-4.28***	-.42
DSFI Experience	16.91 (7.56)	9.93 (8.68)	9.30***	.86
DSFI Drive	23.04 (6.48)	17.29 (7.31)	8.76***	.83
DSFI Fantasy	7.07 (3.91)	4.77 (4.32)	6.04***	.56
SOI-R	3.53 (1.57)	1.97 (1.29)	11.07***	1.08
MCSDS	5.49 (2.82)	5.52 (2.66)	-0.09	.01

SESII = Sexual Excitation Sexual Inhibition Inventory for Women; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; DSFI = Derogatis Sexual Function Inventory; Att. = Attitudes; Con. = Conservative; Lib. = Liberal; SOI-R = Sociosexual Orientation Inventory-Revised; MCSDS = Marlow-Crowne Social Desirability Scale

*** $p < .002$; Bonferroni correction used to control for type 1 error inflation

Table 2.3

Correlations for sexual excitation and sexual inhibition with conservative and liberal sexual attitudes, sexual desire, arousability, experiences, drive, fantasy, sociosexual orientation in Euro-Caucasian (n = 201) and Chinese (n = 270) women.

Euro-Caucasian		
	Excitation	Inhibition
SESII Inhibition	$r = -.20^*$	
DSFI Attitudes Con.	$r = -.35^{***}$	$r = .18$
DSFI Attitudes Lib.	$r = .48^{***}$	$r = -.16$
SDI Dyadic	$r = .55^{***}$	$r = -.18$
SDI Solitary	$r = .42^{***}$	$r = -.18$
SAI-E Arousal	$r = .64^{***}$	$r = -.11$
SAI-E Anxiety	$r = -.41^{***}$	$r = .29^{***}$
DSFI Drive	$r = .50^{***}$	$r = -.13$
DSFI Experience	$r = .24^{***}$	$r = -.06$
DSFI Fantasy	$r = .49^{***}$	$r = -.10$
SOI-R	$r = .45^{***}$	$r = -.31^{***}$

Chinese		
	Excitation	Inhibition
SESII Inhibition	$r = .01$	
DSFI Attitudes Con.	$r = -.40^{***}$	$r = .01$
DSFI Attitudes Lib.	$r = .43^{***}$	$r = .09$
SDI Dyadic	$r = .61^{***}$	$r = -.02$
SDI Solitary	$r = .37^{***}$	$r = -.06$
SAI-E Arousal	$r = .70^{***}$	$r = .01$
SAI-E Anxiety	$r = -.23^{***}$	$r = .13$
DSFI Drive	$r = .42^{***}$	$r = -.08$
DSFI Experience	$r = .61^{***}$	$r = -.07$
DSFI Fantasy	$r = .46^{***}$	$r = -.03$
SOI-R	$r = .40^{***}$	$r = -.22^{***}$

SESII = Sexual Excitation Sexual Inhibition Inventory for Women; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; DSFI = Derogatis Sexual Function Inventory; Con. = Conservative; Lib. = Liberal; SOI-R = Sociosexual Orientation Inventory-Revised

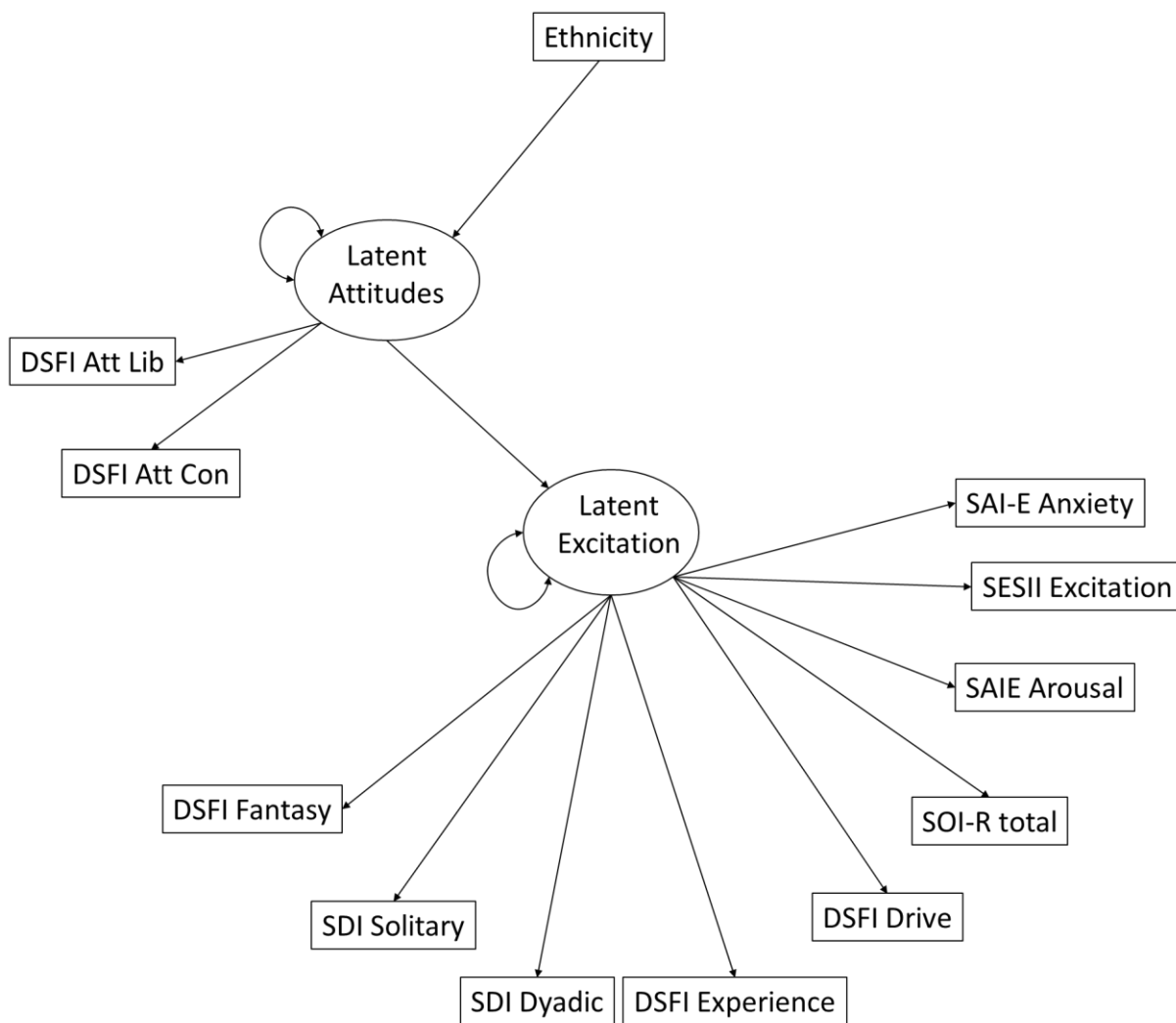
*** $p < .002$; Bonferroni correction used to control for type 1 error inflation

Hypothetical Model 1 in women for the association between ethnicity (Chinese and Euro-Caucasian) and sexuality variables. In Model 1, all observed sexuality variables are associated with a single latent sexual excitation factor, which is impacted by ethnicity. DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousability Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.



Figure 2.1b.

Hypothetical Model 2 in women for the association between ethnicity (Chinese and Euro-Caucasian) and sexuality variables. In Model 2, ethnicity directly impinges upon a latent sexual attitudes factor, which then impacts latent excitation. DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousalability Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.



Hypothetical Model 3 in women for the association between ethnicity (Chinese and Euro-Caucasian) and sexuality variables. Model 3 is similar to Model 2, but the latent sexual excitation factor is broken into a latent excitation factor (associated with desire and arousal variables) and a second latent sexual activity factor (associated with drive, experience, and sociosexuality). DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousability Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.



Figure 2.2.

SEM of hypothetical Model 1 (see Figure 2.1a) in Chinese ($n = 271$; coded as 1) and Euro-Caucasian ($n = 201$; coded as 0) women. Model displays adequate fit: $\chi^2(39) = 209.47, p < .001$; CFI = .93; RMSEA = .10; SRMR = .05; AIC = 10777.93. DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousal Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.

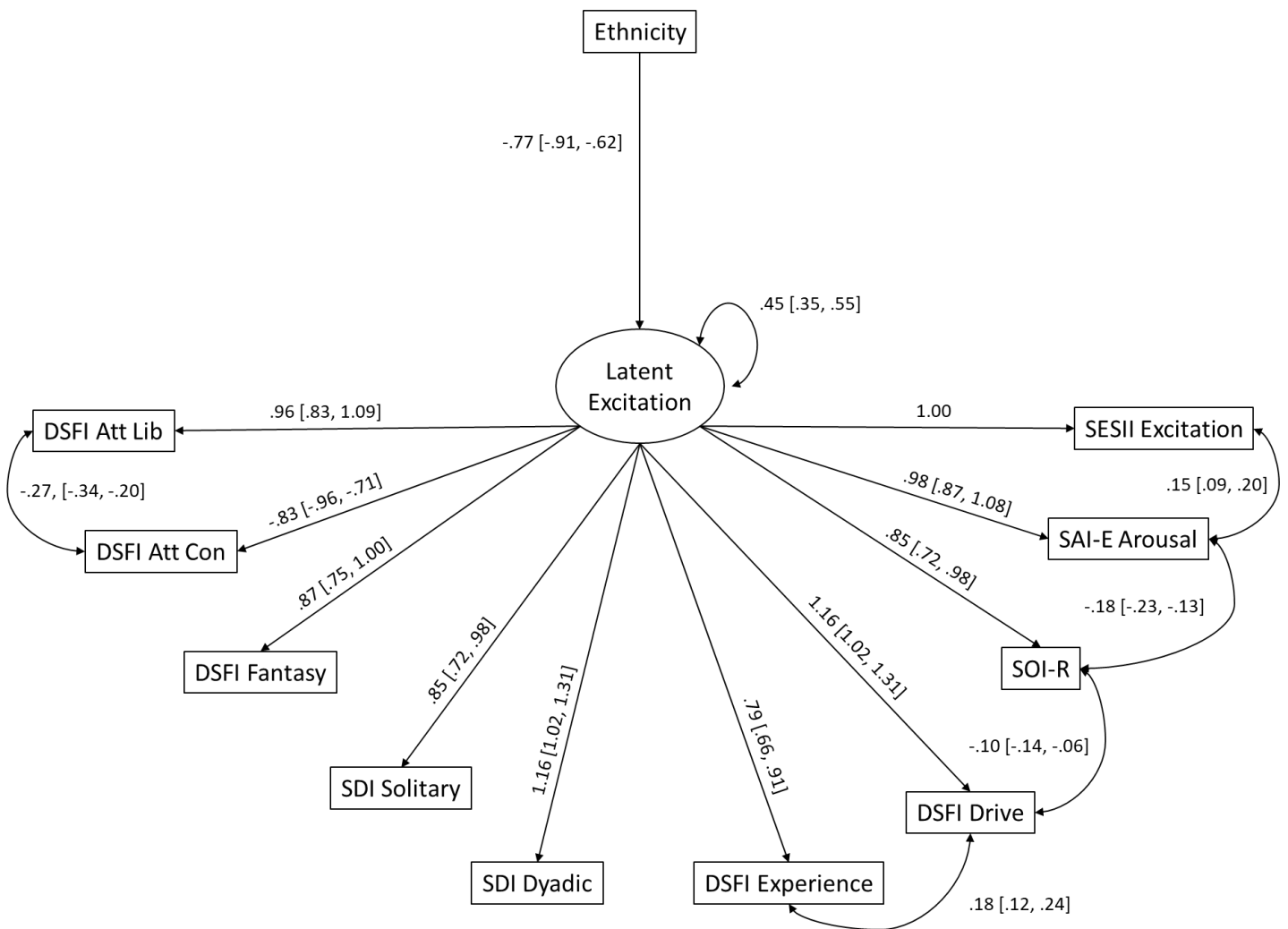


Figure 2.3.

SEM of hypothetical Model 2 (see Figure 2.1b) in Chinese ($n = 271$; coded as 1) and Euro-Caucasian ($n = 201$; coded as 0) women. Model displays adequate fit: $\chi^2(37) = 153.33, p < .001$; CFI = .95; RMSEA = .09; SRMR = .04; AIC = 10735.79. DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousability Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.

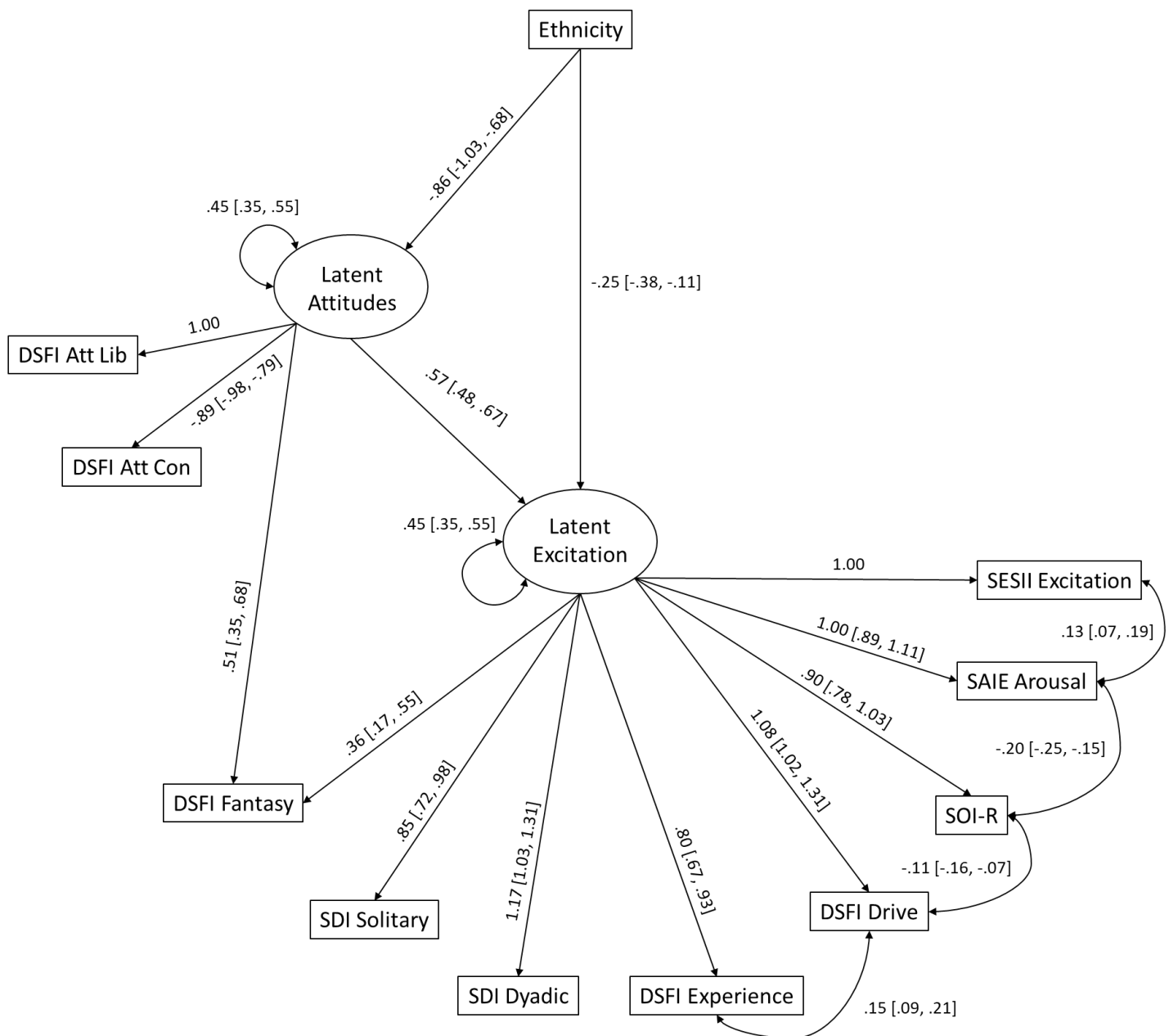
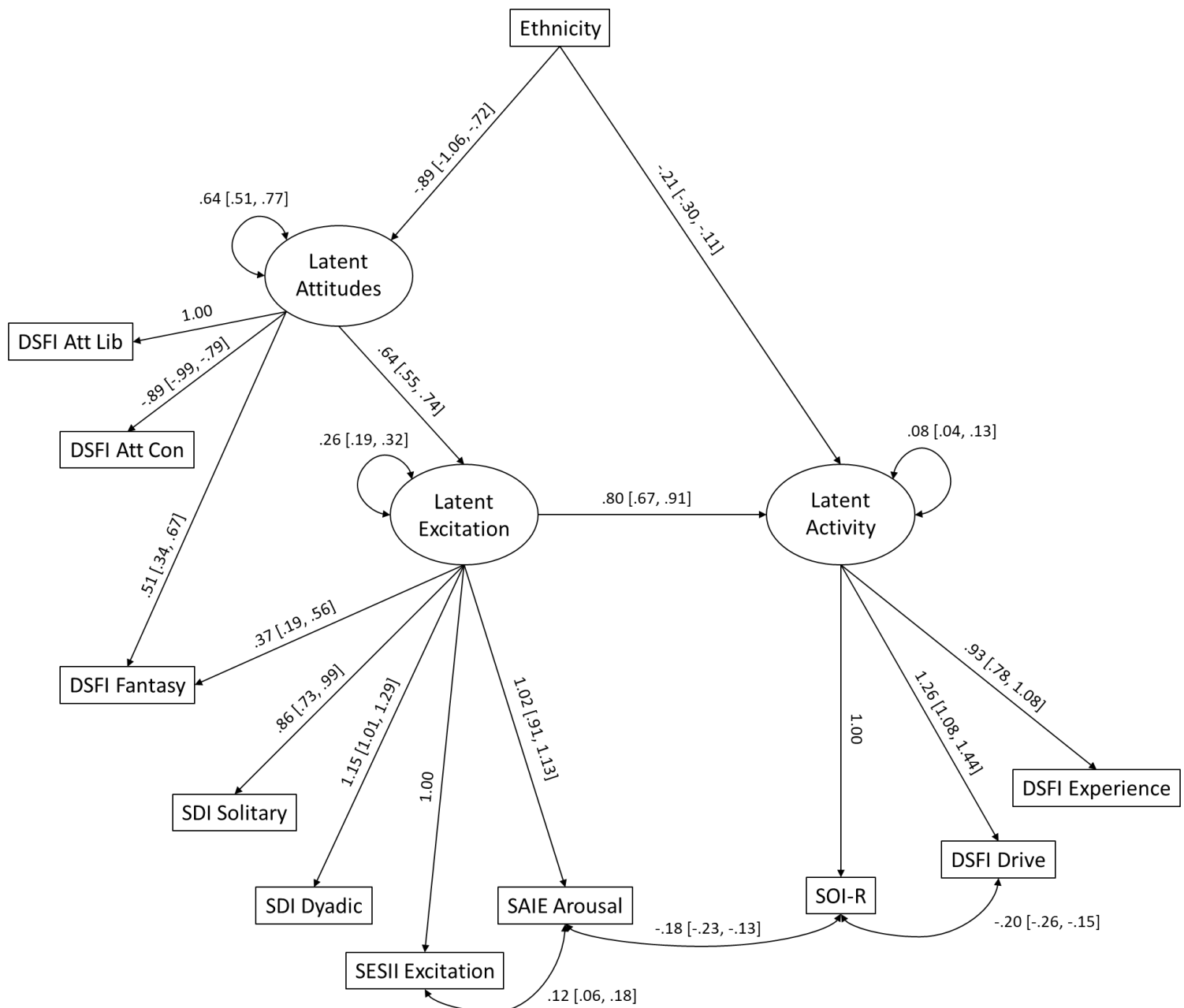


Figure 2.4.

SEM of hypothetical Model 3 (see Figure 2.1c) in Chinese ($n = 271$; coded as 1) and Euro-Caucasian ($n = 201$; coded as 0) women. Model displays adequate fit: $\chi^2(37) = 172.68$, $p < .001$; CFI = .94; RMSEA = .09; SRMR = .05; AIC = 10745.14. DSFI = Derogatis Sexual Functioning Inventory; SESII = Sexual Excitation and Inhibition Inventory for Women; SAI-E = Sexual Arousability Inventory-Expanded; SDI = Sexual Desire Inventory; SOI-R = Sociosexual Orientation Inventory Revised; Att = Attitudes; Lib = Liberal; Con = Conservative.



Chapter 3: Examining Differences between Chinese and Euro-Caucasian Men using the Dual Control Model

The previous investigation in Chapter 2 explored a model of interrelation between sexual excitation and attitudes with sexual response and activities to account for ethnic differences between Chinese and Euro-Caucasian women. This chapter describes an extension of that research into a sample of Chinese and Euro-Caucasian men at a large Canadian university. Like in women, previous studies have shown that Chinese men reported lower levels of average sexual response and partnered sexual activities compared to their Euro-Caucasian peers (Brotto et al., 2007; Meston et al., 1996). Similar to Chinese women, Chinese men have been shown to value romantic and emotional closeness as part of their experiences of sexual response and desire (and particularly partnered sexual response) (Dang et al., 2017; Higgins et al., 2002), and often receive little overt communication or education on sex-related topics from their parents (Kim & Ward, 2007; Trinh & Kim, 2020). The current study thus focused on exploring whether there may be a role for the dual control model in explaining the ethnic difference between Chinese and Euro-Caucasian men's sexual response and behaviours. Previous research has also identified greater endorsement of restrictive sexual attitudes in Chinese men compared to Euro-Caucasian men (Ahrold & Meston, 2010; Brotto et al., 2007; Meston et al., 1998). Among Chinese men, acculturation to mainstream Canadian culture has been found to be associated with reduced endorsement of restrictive attitudes and greater endorsement of permissive attitudes (Ahrold & Meston, 2010; Brotto et al., 2007). As such, the current study also investigated whether sexual attitudes mediate the association between ethnicity, dual control processes, and other sexuality variables.

Previous research in primarily Euro-Caucasian populations have demonstrated the prominent role of sexual inhibition, and related processes such as anxiety, in male sexual difficulties (Bancroft & Janssen, 2000; Barlow, 1986; Janssen et al., 2002). Therefore, it was hypothesized that sexual inhibition would be higher in Chinese men than Euro-Caucasian men in the current sample. It was also expected Chinese men would score lower than their Euro-Caucasian peers on various sexual outcome variables: sexual desire (dyadic and solitary), sexual arousal, current frequency of sexual activity, prior experience of sexual activity, sexual fantasies, and sociosexual orientation (interest in casual sex), and higher on anxiety in response to sexual arousal. As well, based on the theoretical conceptualization of the dual control model, it was predicted that higher excitation and lower inhibition would be associated with greater levels of sexual response and behaviour among both Chinese and Euro-Caucasian men.

Given the established role of restrictive sexual attitudes, we anticipated that there would be indirect effects from ethnicity to sexual inhibition through conservative and liberal sexual attitudes. SEM was constructed to examine the hypothesized mediation, as well as the validity of conceptualizing an overarching sexual inhibition factor to explain ethnic differences in the measured sexual response variables. We expected to find that group differences between Chinese and Euro-Caucasian men on manifest sexual response variables, including the sexual inhibition subscales of the SISSES, could be adequately modeled by group differences on an underlying latent sexual inhibition factor. The putative model (Figure 3.1) showed a mediational process, wherein ethnicity directly predicts a latent sexual attitudes variable, which then impacts latent sexual inhibition, which then impacts other aspects of sexual activity and response. The model also hypothesized a direct link between sexual attitudes with sexual activity and response, to

account for potential other mechanisms that may link restrictive attitudes with reduced sexual behaviours and response.

Methods

Participants

Chinese ($n = 207$) and Euro-Caucasian ($n = 127$) undergraduate men were recruited from a large Canadian university, completed online questionnaires, and were included in the data analysis. Ethnic category (Chinese or Euro-Caucasian) was based on participant self-report. Individuals who self-identified as being men of Chinese or Euro-Caucasian ethnic descent, who had sufficient English reading skills to understand the survey materials, and who were over the age of 18 were invited to participate in the study. Individuals under the age of 18 or those who reported difficulties with English comprehension were excluded from the study. All participants were attending university classes in Canada during the study. Further demographic variables for participants are reported in Table 3.1.

Procedure

Participants were recruited through online ads at the university's psychology human subject pool system, from September 2015 to December 2016. The study was advertised as involving ethnicity, culture, and sexuality. Interested participants were directed to an online questionnaire hosted on the website www.fluidsurveys.com. Upon accessing the survey, participants had the opportunity to review consent documents, which explained their rights as participants, data confidentiality and security, and the sexual nature of some of the study questions. If they gave consent to participate, they then completed a series of online questionnaires. After completing the questionnaire, participants attended an online debriefing session, where they were informed about the intent of the study and invited to contact or meet

with the researchers should they have further concerns and questions. Participants received one bonus mark towards an undergraduate psychology class in compensation for their participation. All procedures and methods were reviewed and approved by the university's behavioural research ethics board, and consistent with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Measures

Sexual excitation and inhibition. The Sexual Inhibition/Sexual Excitation Scales (SISSES) (Bancroft & Janssen, 2000) was administered to assess sexual inhibition and sexual excitation. The self-report instrument consists of 45 statements, most of which are in “if-then” format, which the participants rate on a 4-point scale of their endorsement. The instrument contains three subscales: excitation (range of scores from 20 to 80), inhibition from fear of performance failure (inhibition 1; range of scores from 14 to 56), and inhibition from fear of consequences of sex (inhibition 2; range of scores from 11 to 44). Higher scores on each subscale indicate higher levels of excitation or inhibition. In this sample, the Cronbach's α of the excitation, inhibition 1, and inhibition 2 subscales were .88, .78, and .75, respectively.

Sexual attitudes. The Attitudes scale of the Derogatis Sexual Functioning Inventory (DSFI Attitudes) (Derogatis & Melisaratos, 1979) was administered to assess sexual attitudes. The DSFI Attitudes scale is a self-report inventory consisting of 30 statements, which participants rate on a 5-point scale of their endorsement. The scale has two subscales: liberal attitudes (range of scores from 15 to 75) and conservative attitudes (range of scores from 15 to 75). Higher scores on each subscale indicate greater endorsement of those respective beliefs. In this sample, the Cronbach's α for the conservative and liberal attitudes subscales were .84 and .82, respectively.

Sexual desire. The Sexual Desire Inventory (SDI) (Spector et al., 1996) was administered to assess sexual desire. The SDI is a self-report instrument consisting of 11 items, some of which inquire about the frequency of sexual desire (on an 8-point scale) and others about the intensity of desire (on a 9-point scale). The instrument contains two subscales: solitary desire (range of scores from 0 to 35) and dyadic desire (range of scores from 0 to 56). Higher scores indicate higher levels of sexual desire. In this sample, the Cronbach's α for the solitary desire subscale was .87 and for the dyadic desire subscale was .88.

Sexual arousal and sexual anxiety. The Sexual Arousalability Inventory – Expanded (SAI-E) (Hoon et al., 1976) was administered to assess sexual arousalability and sexual anxiety in response to arousal. The SAI-E is a self-report instrument consisting of 28 items describing various situations. For each item, participants rate on a 7-point scale about how aroused they would feel when engaged in such a situation. The instrument has an arousalability and an anxiety in response to arousal scale (range of -28 to 140 for each). Higher scores indicated higher arousalability or higher anxiety. In this sample, the Cronbach's α of the arousalability scale was .96 and of the anxiety scale was .98. Note that arousalability represents a trait-level propensity towards arousal and activation of sexual response when appropriate contextual factors are in place, rather than sexual arousal per se; this was thought to be more conceptually similar to sexual excitation as conceptualized by the dual control model, rather than arousal which may be more dependent on transient circumstances or availability of sexual stimuli in one's immediate environment.

Sexual experience. The Experience scale of the Derogatis Sexual Functioning Inventory (DSFI Experience) (Derogatis & Melisaratos, 1979) was administered to assess sexual attitudes. The DSFI Experience scale is a self-report instrument consisting of 24 sexual behaviours, which participants indicate with they have ever engaged in that behaviour in their lifetime. Higher

scores (range of scores from 0 to 24) in this scale indicate greater diversity of sexual experience. In this sample, the Cronbach's α for this scale was .97.

Sexual drive. The Drive scale of the Derogatis Sexual Functioning Inventory (DSFI Drive) (Derogatis & Melisaratos, 1979) was administered to assess sexual drive (i.e., frequency of current sexual activities). The DSFI Drive scale is a self-report instrument consisting of 4 sexual activity domains, which participants indicate the frequency of which they engage in such activity. Higher scores (range of scores from 5 to 45) in this scale indicate greater frequency of sexual activity. In this sample, the Cronbach's α for this scale was .76.

Sexual fantasies. The Fantasy scale of the Derogatis Sexual Functioning Inventory (DSFI Fantasy) (Derogatis & Melisaratos, 1979) was administered to assess diversity of sexual fantasies. The DSFI Fantasy scale is a self-report instrument consisting of 20 sexual fantasy themes, which participants indicate if they have ever experienced each fantasy. Higher scores (range of scores from 0 to 20) in this scale indicate greater diversity of sexual fantasies. In this sample, the Cronbach's α for this scale was .87.

Sociosexual orientation. The Revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorpf, 2008) was administered to assess sociosexual orientation (i.e., interest and engagement in casual sex). The SOI-R is a self-report instrument consisting of 9 items that inquire about previous sexual partners, interest in sex without emotional commitment, and beliefs about casual sex. Participants respond along 9-point scales. Higher scores (range of scores from 0 to 9) indicate greater willingness and interest in casual sex. In this sample, Cronbach's α for this scale was .86.

Social desirability responding. The short form of the Marlow-Crowne Social Desirability Scale (MCSDS) (Reynolds, 1982) was used to general social desirability

responding. The instrument contains 13 true or false items about negative but common experiences that individuals highly concerned about social perception have been found to be reluctant to admit to. Higher scores (range of scores from 0 to 13) indicate greater levels of socially conscious responding. In this sample, the Cronbach's α for the instrument was .65.

Data Analysis

Comparisons of means differences between Chinese and Euro-Caucasian participants were conducted using *t*-tests. Pearson's *r* correlations were used to examine zero-order associations between study variables. Bonferroni correction was used to control for type I error inflation, setting the alpha level at $p = .002$. Effect sizes of approximately Cohen's $d = .20$ or $r = .10$ were considered small, approximately Cohen's $d = .50$ or $r = .30$ were considered medium, and approximately Cohen's $d = .80$ or $r = .50$ or greater were considered large (Cohen, 1988).

The hypothesized relationship between variables were further evaluated using SEM. Model fits were considered adequate if they showed Comparative Fit Index (CFI) $> .90$, Root Mean Square Error of Approximation (RMSEA) $< .10$, and Standardized Root Mean Square Residual (SRMR) $< .08$ (Hu & Bentler, 1998). Comparison between the models were examined with the Akaike Information Criterion (AIC) (Akaike, 1987).

Some missing data were observed in the dataset, but no variable was missing more than 10% of cases. As the pattern could not be shown to be missing completely at random, As the pattern could not be shown to be missing completely at random, full information maximum likelihood was used for SEM (Allison, 2003) and multiple imputation with 20 resamples was used for other analyses.

Analyses were conducted using SPSS Statistics 20 (IBM) and the lavaan package 0.5-12 (Rosseel, 2012) for R (R Foundation for Statistical Computing).

Results

Mean differences and correlations

T-test comparisons showed that mean sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) was significantly higher among Chinese compared to Euro-Caucasian men at a medium effect size (see Table 3.2). Mean sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) did not differ significantly between Chinese men and Euro-Caucasian men, though Chinese men showed a higher mean at a small effect size. Mean sexual excitation (SISSES Excitation) was not significantly different between Chinese and Euro-Caucasian men. Chinese men, compared to Euro-Caucasian men, showed significantly higher mean restrictive sexual attitudes (DSFI Conservative Attitudes) at a medium-to-large effect size, and mean anxiety in response to sexual arousal (SAI-E Anxiety) at a small-to-medium effect size. Chinese men on average, compared to Euro-Caucasian men, also displayed lower sexual experience (DSFI Experience) and interest/engagement in casual sex (SOI-R) at a medium-to-large effect size; lower permissive sexual attitudes (DSFI Liberal Attitudes) and diversity of sexual fantasies (DSFI Fantasy) at a medium effect size; and lower dyadic sexual desire (SDI Dyadic) and frequency of sexual activities (DSFI Drive) at a small-to-medium effect size. Solitary sexual desire (SDI Solitary) and sexual arousability (SAI-E Arousability) were not significantly different between Chinese and Euro-Caucasian men. Chinese and Euro-Caucasian men did not differ significantly on mean social desirability (MCSDS).

Pearson's *r* correlations (see Table 3.3) showed that, among Euro-Caucasian men, sexual excitation (SISSES Excitation) was significantly positively correlated with sexual arousability (SAI-E Arousability) and solitary desire (SDI Solitary) at a large effect size; dyadic sexual desire

(SDI Dyadic) and frequency of sexual activities (DSFI Drive) at a medium-to-large effect size; and permissive sexual attitudes (DSFI Liberal Attitudes) and diversity of sexual fantasies (DSFI Fantasy) at a medium effect size. Sexual excitation (SISSES Excitation) also displayed positive associations with sexual experience (DSFI Experience) and interest/engagement in casual sex (SOI-R) at a medium effect size, though these did not reach statistical significance. Sexual excitation (SISSES Excitation) displayed a small-to-medium negative association with restrictive sexual attitudes (DSFI Conservative Attitudes) and anxiety in response to sexual arousal (SAI-E Anxiety), though these did not reach statistical significance. Sexual inhibition subscales did not show significant associations with any other variables. There was a non-significant small-to-medium association between sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) with anxiety in response to sexual arousal (SAI-E Anxiety). There were non-significant small-to-medium associations between sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) with sexual experience (DSFI Experience), frequency of sexual activity (DSFI Drive), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R). No statistically significant correlations were observed between SISSES subscales with each other.

Pearson's r correlations (see Table 3.3) showed that, among Chinese men, sexual excitation (SISSES Excitation) was significantly positively correlated with sexual arousability (SAI-E Arousability) at a large effect size; dyadic sexual desire (SDI Dyadic), solitary sexual desire (SDI Solitary), frequency of sexual activities (DSFI Drive), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R) at a medium-to-large effect size; and permissive sexual attitudes (DSFI Liberal Attitudes) and sexual experience (DSFI Experience) at a medium effect size. Sexual excitation (SISSES Excitation) was not significantly

correlated with restrictive sexual attitudes (DSFI Conservative Attitudes) or anxiety in response to sexual arousal (SAI-E Anxiety). Sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) was significantly negatively correlated with restrictive sexual attitudes (DSFI Conservative Attitudes) at a medium-to-large effect size, and with anxiety in response to sexual arousal (SAI-E Anxiety) at a medium effect size. Sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) was significantly negatively associated with permissive sexual attitudes (DSFI Liberal Attitudes) at a medium effect size. Sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) was significantly negatively correlated with interest/engagement in casual sex (SOI-R) at a medium effect size, and showed a non-significant small-to-medium negative association with diversity of sexual fantasies (DSFI Fantasy). Sexual inhibition subscales were not significantly associated with other sexual outcome variables. No statistically significant correlations were observed between SISSES subscales with each other.

Structural Equation Models

SEMs were used to examine the hypothesized model shown in Figure 2.1. Sexuality variables which did not show a significant mean difference by ethnicity were not included in the analysis, as they did not appear to be directly impacted by ethnicity. Figure 2.2 shows one well-fitting version of the model. Ethnicity had an impact on latent sexual attitudes and latent sexual activity. Latent sexual attitudes then also impacted latent sexual activity and latent sexual inhibition. A good fit for this model would indicate that sexual attitudes represent a cultural mechanism that separately results in the ethnic differences seen in sexual inhibition and the ethnic differences seen in sexual activity, while also maintaining a direct mechanism of ethnicity through sexual activity separate from sexual attitudes. This model did not pass the chi-square test

of fit ($\chi^2(38) = 78.05, p < .001$), but showed adequate fit (CFI = .96; RMSEA = .06; SRMR = .04). Significant residue associations were seen between SISSES Inhibition 2 with SOI-R, and between DSFI Drive with DSFI Experience and DSFI Dyadic. Including a direct path from latent inhibition to latent activity did not substantially improve model fit. For relative model fit, AIC = 8378.95.

Figure 2.3 shows another well-fitting version of the above model. This model did not include a direct link between ethnicity and latent sexual activity. A good fit for this model would be similar to the interpretation of Model 1, except that the cultural mechanism represented by sexual attitudes is alone sufficient to explain the ethnic difference in sexual activity. This model did not pass the chi-square test of fit ($\chi^2(39) = 84.80, p < .001$), but showed adequate fit (CFI = .96; RMSEA = .06; SRMR = .04). Significant residue associations were seen between SISSES Inhibition 2 with SOI-R, and between DSFI Drive with DSFI Experience and DSFI Dyadic. For relative model fit, AIC = 8383.70; this version of the model had marginally worse fit than the version of the model that included a direct path from ethnicity to latent sexual activity.

Discussion

In the current sample of Chinese men, sexual inhibition was higher compared to their Euro-Caucasian peers. Inhibitions due to concerns of performance difficulties in particular showed a large mean difference, while the mean difference for inhibitions due to fear of performance consequences was comparatively smaller and did not reach statistical significance. Similarly, average anxiety about sexual arousal was significantly higher in Chinese men compared to Euro-Caucasian men. These findings were generally consistent with our predictions based on the existing literature on the role of sexual inhibition in male sexual dysfunctions (Bancroft, 1999; Barlow, 1986), and suggested that the difference in Chinese and Western

cultures potentially impinge upon individual men's sexual behaviour and response along an inhibitory pathway. This inhibition was particularly characterized by concerns about sexual performance difficulties and anxiety in response to arousal.

Consistent with previous findings, Chinese men in our sample also showed significantly lower average sexual experience, sexual drive, dyadic sexual desire, and interest/engagement in casual sex compared to their Euro-Caucasian peers (Brotto et al., 2007; Meston et al., 1998). In our sample, variables which showed an ethnic mean difference were focused on interpersonal and partnered aspects of sexual response and behaviour. Similarly, sexual inhibition due to performance concerns, the SISSES subscale with the most notable between-group mean difference, also suggested a partnered component. In contrast, sexual excitation, solitary desire, and arousability, which do not depend on the presence of a sexual partner, did not show a significant ethnic mean difference. This would be consistent with Chinese cultural prohibitions being most strongly directed against casual partnered sexual activity (Higgins et al., 2002), and suggested that Chinese men did not necessarily differ from their Euro-Caucasian peers in sexual response in solitary contexts (e.g., during masturbation). Chinese men also showed significantly higher mean conservative (restrictive) sexual attitudes and lower mean liberal (permissive) sexual attitudes compared to their Euro-Caucasian peers. These findings were largely consistent with the study hypotheses and with previous findings in Chinese and Euro-Caucasian men (Ahrold & Meston, 2010; Brotto et al., 2007).

Role of Sexual Inhibition

The current results were somewhat consistent with our hypothesized SEM (Figure 3.1). As predicted, there was an indirect effect of ethnicity on sexual inhibition and activity through sexual attitudes. This is generally consistent with previous findings showing higher endorsement

of conservative sexual attitudes, lower endorsement of liberal sexual attitudes, and lower levels of sexual behaviours among Chinese young men compared to their Euro-Caucasian peers (Ahrold & Meston, 2010; Brotto et al., 2007; Meston et al., 1998). In contrast to our hypothesis, adding a direct path from sexual inhibition to sexual activity did not substantively increase model fit. Thus, sexual attitudes appeared to separately influence sexual inhibition and sexual behaviours. This suggested that differences between Chinese and Euro-Caucasian men on willingness and opportunity to engage in sexual activities is not directly linked to the level of inhibition of sexual arousal in this population, other than a residual link between inhibition due to concern about negative consequences of sexual activity with interest in having sexual activity with multiple partners. Instead, when contrasting Chinese to Euro-Caucasian men, higher sexual inhibition was associated with lower levels of sexual activity via their shared association with greater endorsement of conservative and lower endorsement of liberal sexual attitudes.

There were several potential mechanisms for how sexual attitudes may have directly or indirectly impacted sexual inhibition and sexual activity. Conservative sexual attitudes represented a greater level of restrictiveness about which sexual motivations, activities, experiences, and partners are morally or socially acceptable. As such, individuals with higher conservative attitudes may have placed more limitations on the range of sexual activities they would be willing to engage in or partners they would be willing to engage with. Among young Chinese men in particular, they may be more inclined to restrict sexual activities and interests to the context of committed romantic relationships (Dang et al., 2017; Higgins et al., 2002; Wright & Reise, 1997). Conservative sexual attitudes, with its emphasis on the impropriety or risk related to sexuality, including sexual pleasure and sex for non-reproductive reasons, may also have been more likely to engender guilt, shame, and anxiety related to sexual expression. As

well, previous studies have highlighted the potential role of guilt and shame as important mediator of Chinese individuals' sexual experiences (Woo et al., 2012). These past findings were consistent with the current study's results of the association between sexual inhibition and anxiety in response to arousal.

There are also multiple potential mechanisms by which culture and ethnicity may impact endorsement of sexual attitudes. Although Chinese-majority nations (and Chinese culture) have become more open about sexuality in recent years, comprehensive sex education and sex-positive messages continue to be less consistently available compared to Western nations (Zhang, 2011). Attitudes may have been communicated to individuals overtly, such as messaging from parents about avoiding sexual behaviour, or through abstinence-based sex education. These attitudes may also have been communicated covertly, such as parents and authority figures responding with silence or dismissal when children ask about sexual matters (Kim & Ward, 2007). This could also include lack of positive representations of sexuality in the media, reluctance for health care professionals to discuss sexual health, and many other aspects of society at large. Silently dismissing or ignoring sex privately and publicly may have conveyed to many Chinese men that sexuality represents a taboo topic, and perhaps is too shameful and improper even for direct rebuke.

The current model and the use of a correlational study design does not preclude the possibility of an indirect association between sexual attitudes with sexual activity and inhibition in explaining the ethnic difference between Chinese and Euro-Caucasian men. Sexual attitudes, instead of directly impacting sexual inhibition and activity, may have instead been associated with a causally related third variable. For example, it was possible that an absence of positive messaging (or any messaging) about sex in the upbringing of many Chinese men results in

limited opportunities for exposure to sexuality. This may have resulted in increased anxiety and avoidance, decreased exploration of personal preferences, fewer opportunities for partnered sexual activity, and thus fewer chances to critically evaluate socially normative restrictive beliefs or encounter alternative perspectives. Therefore, the observations of ethnic differences in sexual attitudes may have presented a proxy for an underlying differences in the level of exposure to sexuality among Chinese versus Euro-Caucasian men. The specific mechanism by which broader social and cultural norms impinged upon individual beliefs, behaviours, and sexual response represents an important area for future investigation.

From the current model, ethnicity appeared to separately impact sexual inhibition and sexual activity through sexual attitudes. Sexual inhibition and sexual activity were not directly related except for a residual association between sexual inhibition due to concern about of consequences of sex with sociosexual orientation. Instead, they displayed a shared association with sexual attitudes. Therefore, reduced sexual activity among Chinese men compared to their Euro-Caucasian peers did not appear to have been caused by elevated inhibition of sexual response. This was further supported by the results from part one, wherein sexual excitation and not sexual inhibition was correlated with sexual activity variables. This suggested that restrictive sexual attitudes may have suppressed sexual activity by limiting the range of acceptable partners or situations for sex, or shift attention away from engaging with sexual relationships. When sexual activity did occur, restrictive sexual attitudes may separately have enhanced sexual inhibition and potentially led to greater levels of sexual difficulties. Sexual function and dysfunction, as clinical outcomes potentially associated with reduced sexual activity and inhibited sexual response, were not directly measured in this study, but will be an important outcome in future studies to help interpret the meaning of the current findings.

Role of Sexual Excitation

Mean sexual excitation was not significantly different between Chinese and Euro-Caucasian men in the current sample, suggesting that it was not directly impacted by ethnic (and cultural) differences in the current sample. Similarly, mean solitary sexual desire and sexual arousability were not significantly different between the two groups. These results, taken together with the results from Chapter 2 in young women, suggested that cultural and ethnic differences in sexual response (between Chinese and Euro-Caucasian young adults) may present differently in men and women. This pattern was largely consistent with previous research on sexual response and sexual dysfunction in primarily Euro-Caucasian men and women. Although Bancroft and Janssen's (2000) conceptualization suggested that low excitation or high inhibition can lead to sexual difficulties, their data suggested that high sexual inhibition, rather than low sexual excitation, was most consistently associated with erectile dysfunction in men. Similarly, psychological treatment for male sexual dysfunctions in young adults (where no hormonal or anatomical problems are expected) generally emphasize targeting inhibitory factors, such as anxiety (Barlow, 1986). In contrast, eliciting and enhancing awareness of sexual excitation often take a more central role in clinical research and treatment for women's sexual difficulties (Basson, 2000; Brotto, 2017).

The differential patterns seen in the findings from Chapter 2 and the current study may have suggested that cultural factors display gender differences in how they impact sexuality in men and women. This may be explained by sociocultural models that highlight the differential messages and scripts for men and women's expressions of sexuality in Western culture. Although Chinese traditional narratives about sex differ at times from Western narratives, Chinese culture is similar to Western culture in being traditionally patriarchal (Santos & Harrell,

2017). This includes, for example, traditional double standards about how having many sexual partners is presented as desirable for men but shameful for women (Ringrose & Renold, 2012). In a qualitative study, although both male and female participants reported concern about the social propriety of showing sexual arousal, some women described sexual desire as “unladylike” in Chinese culture but none of the men described arousal as being inconsistent with norms about Chinese (or Western) masculine gender roles (Dang et al., 2017).

The different patterns seen in this and the preceding chapter may also be consistent with biological and evolutionary understanding sex differences between males and females in mating behaviour. For example, sexual strategies theory (Buss & Schmitt, 1993) describes differential evolutionary selection pressures on mating strategies between sexes, wherein male organisms are more likely to be promiscuous and female organisms are more likely to be selective in their partnered sexual activities. This implies that men might be more likely to experience high intrinsic sexual excitation that then is subject to social and cultural systems that influence learning of inhibition. In contrast, women may be more likely to experience low intrinsic sexual excitation that then is augmented by social and cultural systems that influence cultivation of responsive excitation. If there is a role for biological sex differences, it would suggest that the presently observed patterns between men and women may also be more broadly applicable to understanding cross-cultural differences in sexual response and activity in general; however, further investigation in other cultural groups would be important to test this hypothesis.

Despite the more pronounced role of sexual inhibition in understanding cross-cultural differences in the current sample, the role of sexual excitation in understanding the sexuality of Chinese men cannot be discounted. Within each subgroup investigated in this and the previous chapter (Chinese men, Euro-Caucasian men, Chinese women, or Euro-Caucasian women),

sexual excitation was more consistently associated with higher sexual response and more sexual activity. This likely, in-part, reflected the specific outcome measures chosen. Variables related to activation of the sexual response cycle, such as sexual arousability, desire, and drive, overlap conceptually with sexual excitation. In contrast, sexual anxiety overlaps conceptually with sexual inhibition and was consistently associated with inhibition in all subgroups. Therefore, despite the role of sexual inhibition in understanding cross-cultural differences, sexual excitation remained an important variable in understanding within-group diversity in sexual response and behaviours in both Chinese and Euro-Caucasian men. This is also conceptually consistent with the dual control model (Bancroft and Janssen, 2000); sexual inhibition and sexual excitation represent different mechanisms by which sexual response and behaviour are regulated, and these mechanisms may be differentially impacted by cultural factors.

Limitations

One important limitation of the current study was the cross-cultural applicability of sexuality constructs. Although we did approximately replicate the original factorial structure of the SISSES (Janssen et al., 2002) in both Chinese and Euro-Caucasian men using an exploratory factor analysis (see Appendix 2), some items did not load as expected. Similarly, there appeared to have been less distinction between Inhibition 1 (inhibition due to performance concerns) and Inhibition 2 (inhibition due to consequence concerns) in the current sample of Chinese men compared to both the current sample of Euro-Caucasian men and in the original SISSES validation sample (Bancroft & Janssen, 2000). Malavige et al. (2013) reported that several concepts of the SISSES did not have a clear semantic translation into various (non-Chinese) Asian languages. Although the current study used English questionnaires, this suggested there may have been subtle differences in how excitation and inhibition were interpreted in the current

sample compared to how the items were conceived, and that Chinese and Euro-Caucasian men may have interpreted these questions differently. For example, concerns about performance difficulties and concerns about negative consequences may not be two conceptually distinct forms of sexual inhibition in the experience of Chinese men. Other sources of inhibition, such as concerns about social impropriety of sexual expression, may also have not been captured by the current instrument. Therefore, the current findings should be interpreted with caution, and further validation of the dual control model in this population will be necessary. Cross-cultural validation of constructs created in Euro-Caucasian Western populations is particularly complex in Chinese individuals living in Canada population, as they would be exposed (to varying degrees) to both Chinese and Canadian cultural perspectives on sexuality.

Other considerations related to response bias, use of a correlational study design, and cohort effects discussed in the previous chapter for women were also applicable here. The current study was unable to distinguish whether the lower levels of sexual activity reported by Chinese men compared to their Euro-Caucasian peers represented lower sexual function, less interest and motivation for sexual activity, or fewer opportunities to engage in (partnered) sexual activity. Similar to the Chinese women in the previous chapter, the Chinese men in the current study reported lower rates of being in committed romantic relationships, which may have been another important factor in understanding the lower levels of reported sexual activity.

Engagement in partnered sex, although captured in the current study as a dependent variable through the DSFI Experience and Drive scale, may also be an important predictor or moderator of other sexuality variables. This possibility will be examined in more detail in Chapter 6.

Clinical Implications

The current study raised some potential implications for clinical treatment of sexual difficulties in Chinese men. The current research suggested that Chinese and Western cultural factors can have a significant impact on sexual inhibition in men, and restrictive versus permissive sexual attitudes may play an important role in maintaining high levels of sexual inhibition. Therefore, existing treatments of male sexual dysfunction, such as cognitive-behavioural approaches aimed at reducing anxiety (Barlow, 1986) may be useful in reducing inhibition. Targeting of inhibitions in dyadic contexts, such as fears about performance failure, may be particularly valuable. Given the importance of the dyadic context, relational-interpersonal frameworks to sexuality may also be useful in clinical treatment (Mitchell, 1988). Psychoeducation about alternative perspectives to challenge overly-restrictive attitudes may also be useful. Chinese men, as a group, likely do not experience lower levels of sexual excitation as their Euro-Caucasian peers, particularly in solitary contexts. However, any individual man's level of excitation will likely be an important correlate of other aspects of his sexual response and behaviours. More broadly, the current study suggests that the dual control model, and distinguishing between sexual excitation and sexual inhibition, may be a useful way of conceptualizing individual differences in sexual activity and sexual response. However, the current findings did not speak to whether differences between Chinese and Euro-Caucasian men would be best conceptualized as differing levels of distress and dysfunction, which will be explored further in Chapter 6.

Conclusion

The current investigation examined the role of the dual control model in understanding the ethnic and cultural differences in sexual attitudes, response, and behaviours between Chinese and Euro-Caucasian men. It was found that Chinese men, on average, reported higher levels of

sexual inhibition but not lower levels of sexual excitation compared to their Euro-Caucasian peers. They also, on average, endorsed more sexually restrictive and fewer sexually permissive attitudes than Euro-Caucasian. These findings were largely consistent with expectations. Chinese men scored lower, on average, for dyadic and partnered aspects of sexual response and behaviour (i.e., dyadic sexual desire, sexual experience, sexual drive, sociosexual orientation); but not for solitary aspects of sexual response (i.e., solitary sexual desire, sexual arousability). SEMs showed that sexual attitudes contributed separately to higher levels of sexual inhibition and lower levels of dyadic sexual response and activity in Chinese men compared to Euro-Caucasian men. These results were somewhat consistent with expectations, and highlighted the role of sexual inhibition, and the dual control model more generally, in understanding Chinese men's sexual expression. Further research is needed to understand the meaning of some of these patterns, including whether differences in sexual response can be seen as reflective of greater likelihood of sexual dysfunctions.

Table 3.1.

Demographic characteristics of Euro-Caucasian (n = 127) and Chinese (n = 207) men.

Ethnic Category	Age	Years in Canada	# Prev. Rel. Part.	# Prev. Sex Part.
Euro-Caucasian	21.5 (4.3)	17.2 (8.7)	2.4 (2.4)	5.5 (8.6)
Chinese	20.2 (2.1)	10.5 (7.8)	1.4 (1.5)	1.1 (2.6)

		Euro-Caucasian	Chinese
Sexual Orientation	Exclusive heterosexual oriented	81.1%	83.6%
	Primarily heterosexual oriented	2.4%	2.4%
	Bisexual oriented	3.9%	4.8%
	Primarily same-sex oriented	3.9%	2.9%
	Exclusive same-sex oriented	7.1%	6.3%
	Asexual	2.4%	0.5%
	Other or did not respond	1.6%	0.5%
Relationship Status	Monogamous	41.7%	28.0%
	Open relationship	1.6%	1.4%
	Single	56.7%	70.1%
	Did not respond	0.0%	0.5%
Sexually Active	Yes	59.8%	29.4%
	No	40.2%	70.6%
	Did not respond	0.0%	0.5%

Table 3.2.

Means, standard deviations, and t-test results for sexual excitation, sexual inhibition, conservative and liberal sexual attitudes, sexual desire, arousability, experiences, drive, fantasy, sociosexual orientation, and social desirability responding in Chinese and Euro-Caucasian men.

	Euro-Caucasian (n = 127)		Chinese (n = 207)			
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t</i>	Cohen's <i>d</i>
SISSES Excitation	53.72	8.85	52.77	7.29	1.07	.12
SISSES Inhibition 1	28.63	5.078	31.19	5.26	-4.30***	-.49
SISSES Inhibition 2	29.39	4.96	30.59	4.60	-2.21	-.25
DSFI Attitudes Con.	29.39	7.71	35.26	8.44	-6.36***	-.72
DSFI Attitudes Lib.	57.98	7.57	54.30	7.30	4.39***	.49
SDI Dyadic	27.97	8.31	24.79	9.08	2.96***	.36
SDI Solitary	15.33	6.75	15.66	6.48	-.44	-.05
SAI-E Arousability	83.46	26.18	86.46	25.26	-1.04	-.12
SAI-E Anxiety	9.43	27.88	20.13	35.31	-2.89***	-.33
DSFI Experience	17.11	6.60	12.23	8.67	5.44***	.62
DSFI Drive	24.42	6.50	21.78	7.67	3.21***	.37
DSFI Fantasy	7.99	4.09	6.14	3.94	4.12***	.46
SOI-R	4.34	1.84	3.19	1.50	6.19***	.71
MCSDS	5.54	2.84	5.82	2.51	-.86	-.11

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; DSFI = Derogatis Sexual Function Inventory; Con. = Conservative; Lib. = Liberal; SOI-R = Sociosexual Orientation Inventory-Revised; MCSDS = Marlow-Crowne Social Desirability Scale

*** $p < .002$; Bonferroni correction used to control for type 1 error inflation

Table 3.3.

Correlations sexual excitation and sexual inhibition with conservative and liberal sexual attitudes, sexual desire, arousability, experiences, drive, fantasy, sociosexual orientation in Euro-Caucasian (n = 127) and Chinese (n = 207) men.

Euro-Caucasian	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2
SISSES Inhibition 1	-.02		
SISSES Inhibition 2	-.07	.00	
DSFI Attitudes Con.	-.22	.12	-.02
DSFI Attitudes Lib.	.30***	-.01	.10
SDI Dyadic	.43***	-.02	-.01
SDI Solitary	.46***	.00	-.16
SAI-E Arousability	.63***	-.06	-.06
SAI-E Anxiety	-.20	.24*	.17
DSFI Experience	.28	-.12	-.20
DSFI Drive	.40***	-.04	-.16
DSFI Fantasy	.30***	.04	-.19
SOI-R	.26	-.01	-.22
Chinese			
	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2
SISSES Inhibition 1	.14		
SISSES Inhibition 2	-.08	.21	
DSFI Attitudes Con.	-.17	.39***	.11
DSFI Attitudes Lib.	.26***	-.35***	-.14
SDI Dyadic	.36***	-.10	-.08
SDI Solitary	.36***	-.10	-.18
SAI-E Arousability	.46***	-.12	-.09
SAI-E Anxiety	.07	.28***	.10
DSFI Experience	.25***	-.15	-.09
DSFI Drive	.37***	-.11	-.13
DSFI Fantasy	.36***	-.12	-.21
SOI-R	.41***	-.13	-.33***

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; DSFI = Derogatis Sexual Function Inventory; Con. = Conservative; Lib. = Liberal; SOI-R = Sociosexual Orientation Inventory-Revised; MCSDS = Marlow-Crowne Social Desirability Scale

*** $p < .002$; Bonferroni correction used to control for type 1 error inflation

Figure 3.1.

Hypothetical model in men for the association between ethnicity (Chinese and Euro-Caucasian) and sexuality variables. Ethnicity directly impinges upon a latent sexual attitudes factor, which then impacts latent sexual inhibition. Latent sexual inhibition and latent sexual attitudes then impinges upon a latent partnered sexual activity factor. DSFI = Derogatis Sexual Functioning Inventory; SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; SOI-R = Sociosexual Orientation Inventory-Revised.

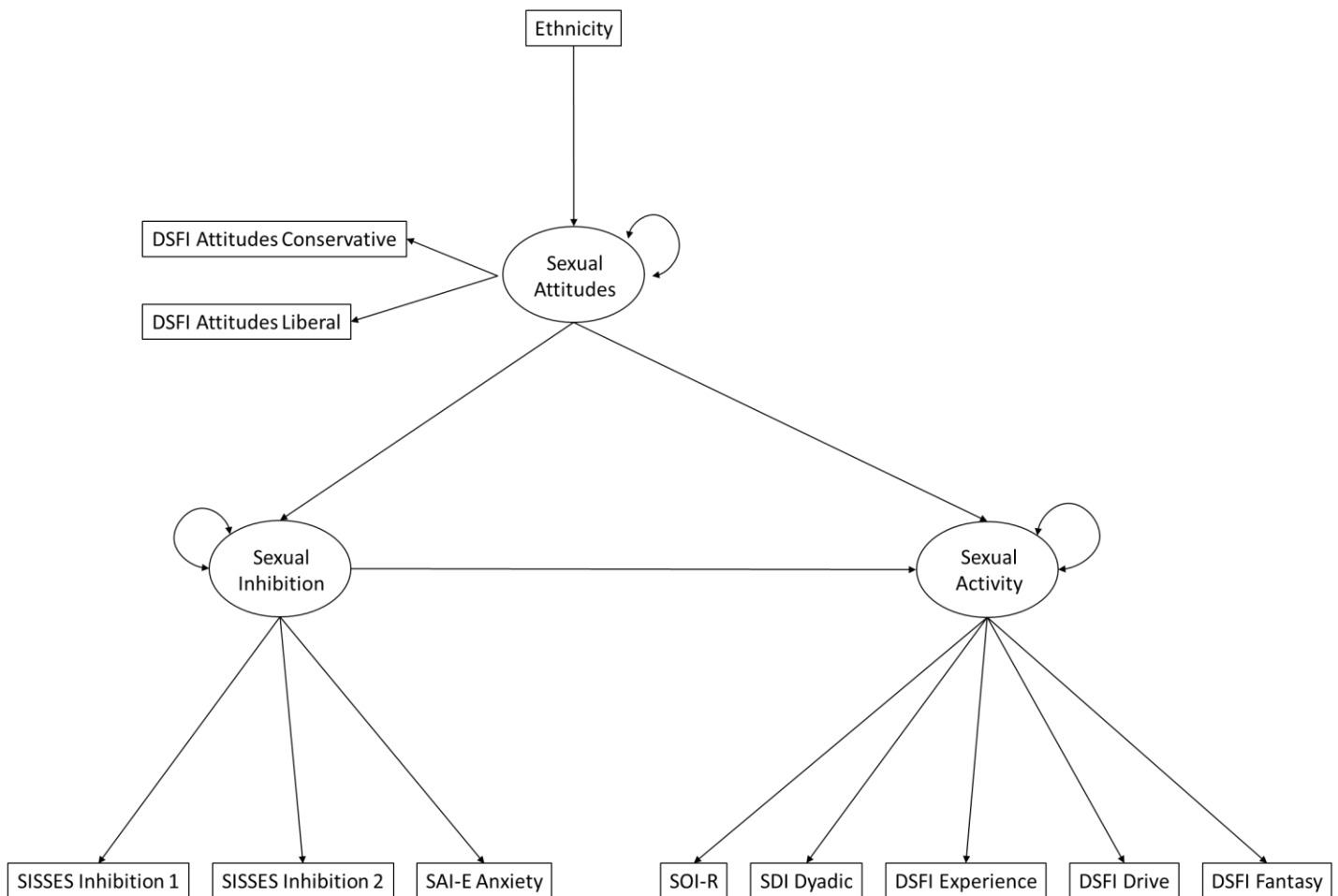


Figure 3.2.

SEM of the hypothetical model (see Figure 3.1) in Chinese ($n = 271$; coded as 1) and Euro-Caucasian ($n = 201$; coded as 0) men. Model displays adequate fit: $\chi^2(38) = 78.05$, $p < .001$; CFI = .96; RMSEA = .06; SRMR = .04; AIC = 8378.95. DSFI = Derogatis Sexual Functioning Inventory; SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; SOI-R = Sociosexual Orientation Inventory-Revised.

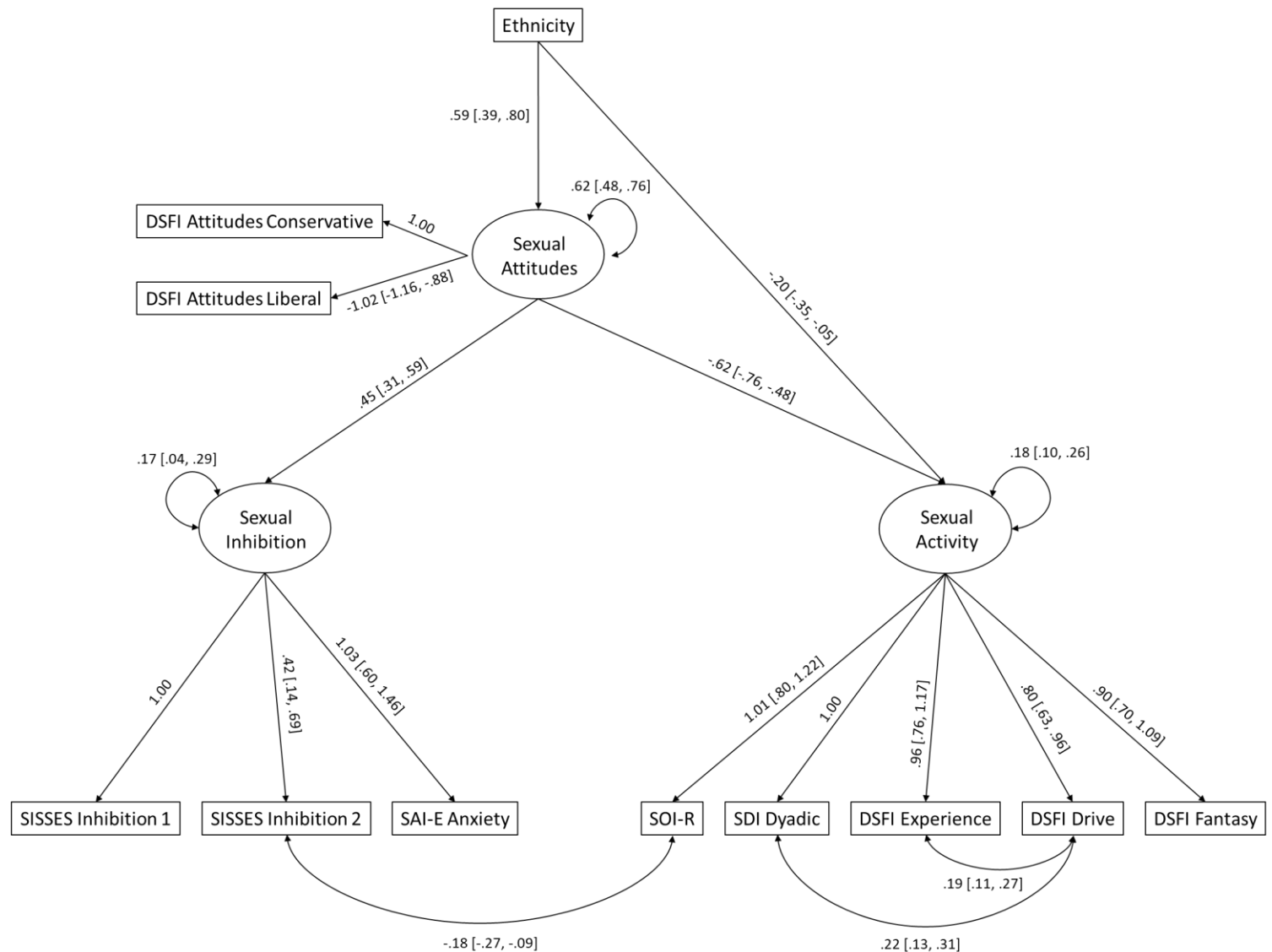
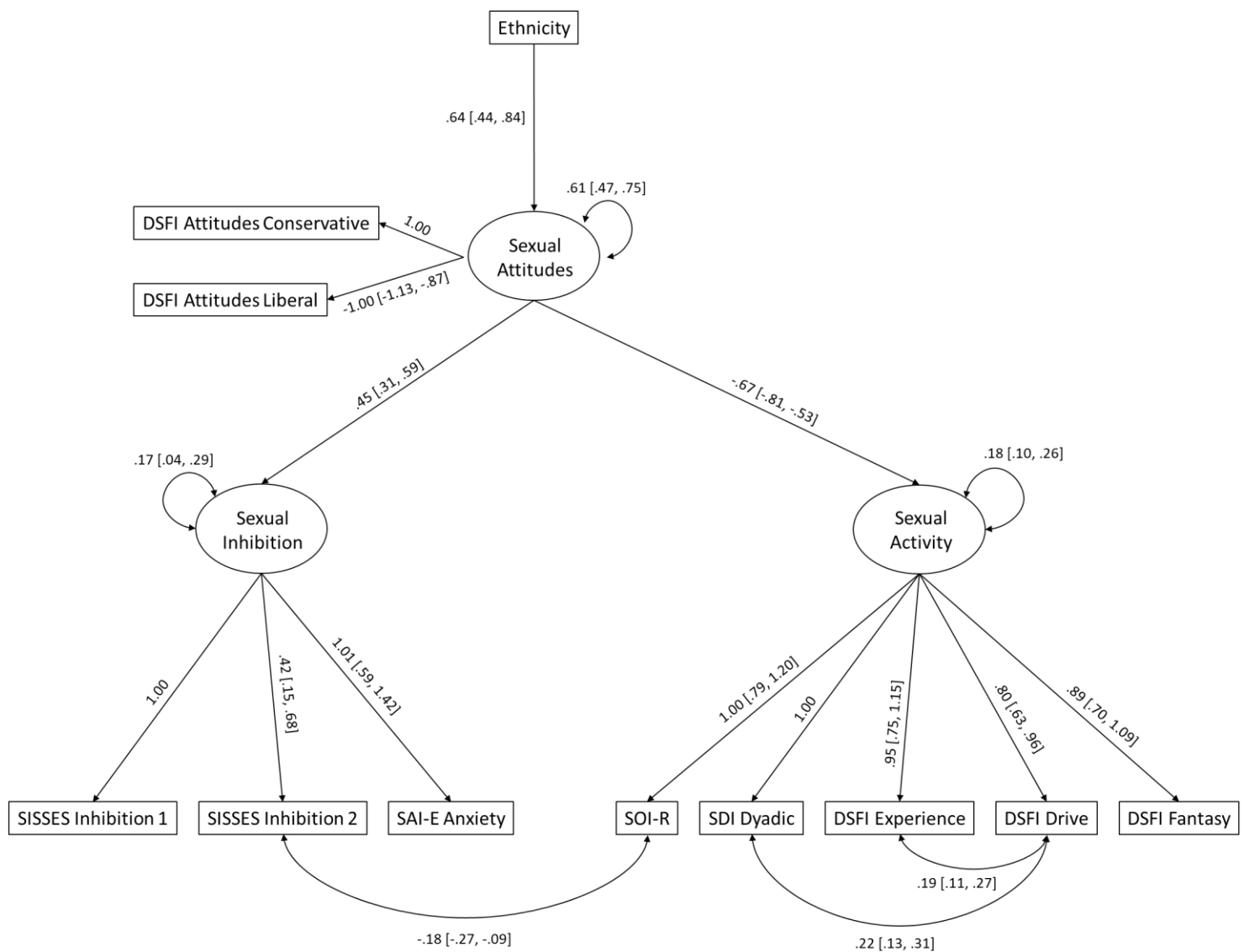


Figure 3.3.

SEM of an alternative model in Chinese ($n = 271$; coded as 1) and Euro-Caucasian ($n = 201$; coded as 0) men. In this model, the association between ethnicity and latent sexual activity was constrained to 0. Model displays adequate fit: $\chi^2(39) = 84.80$, $p < .001$; CFI = .96; RMSEA = .06; SRMR = .04; AIC = 8383.70. DSFI = Derogatis Sexual Functioning Inventory; SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory-Expanded; Con. = Conservative; Lib. = Liberal; SOI-R = Sociosexual Orientation Inventory-Revised.



Chapter 4: Examining Acculturation's Association with Sexuality and the Dual Control Model in Chinese Women and Men

A version of this chapter has been previously published: Dang, S.S., Hewitt, P. L., & Brotto, L. A. (2019). Heritage and mainstream acculturation's association with sexual response in young Chinese men and women in Canada. *The Canadian Journal of Human Sexuality*, 28(2), 159-176.

The previous chapters focused on examining between-group differences among Chinese and Euro-Caucasian men and women in sexual response and behaviours. Although these studies were able to identify some of the mechanisms involved in how ethnicity and culture may impact upon sexuality, they were limited by the use of a binary categorical measure of ethnicity as a proxy for culture. Examination of categorical group differences between “Chinese”- and “Euro-Caucasian”-identified individuals did not capture the potential diversity in any individual Chinese person’s sense of affiliation or identification with elements of Chinese culture (nor the same for Euro-Caucasian individuals with Western culture). Grouping all Chinese-identified individuals into a single category also did not recognize how all Chinese participants in the line of investigation, due to living in Canada and/or attending a Canadian university, would be exposed to Canadian cultural perspectives and ideas in addition to their Chinese cultural background. Indeed, some ethnically Chinese individuals may have been more exposed to and identify closer with Western and Canadian culture. The current study sought to examine how the within-group cultural diversity among Chinese women and men was associated with dual control processes of sexual excitation and inhibition, and other aspects of sexual response and activity.

The process by which bicultural (and multicultural) individuals adopt and identify with various aspects of both the culture of the mainstream society they live in, and the culture of their ethnic background, is known as *acculturation*. Berry (1997) described acculturation as involving

two trait-like dimensions: *heritage acculturation* and *mainstream acculturation*. Heritage acculturation refers to an individual's tendency and interest in maintaining the practices, values, and social connections of the culture of their ethnic background or familial ancestry, while mainstream acculturation refers to the individual's interest in maintain the practices, values, and social connections of the local culture they are living in (in this case, mainstream Canadian culture). Ryder, Alden, and Paulhus (2000) developed the Vancouver Index of Acculturation (VIA) based on this model specifically to measure acculturation processes in East Asian individuals in Canada; heritage and mainstream acculturation were characterized as orthogonal and independent in the original samples of East Asian participants. Earlier studies in acculturation and sexuality focused on length of residency in Canada as a unidimensional proxy for acculturation. Second-generation Chinese and East Asian individuals displayed higher levels of sexual activity and response, less restrictive sexual beliefs, and greater sexual knowledge than first-generation Chinese and East Asian individuals (e.g., Meston et al., 1996, 1998). More recent studies have utilized the bi-dimensional model of acculturation, which has been found to be more predictive of sexual functioning in East Asian men and women than unidimensional length of residency measures (e.g., Brotto et al., 2005, 2007).

In past findings, acculturation, and specifically higher mainstream acculturation, has been associated with higher levels of permissive and lower levels of restrictive sexual attitudes in Chinese and East Asian men and women in North America, in both community and university samples (e.g., Ahrold & Meston, 2010; Brotto et al., 2005, 2007; Woo et al., 2012). This was generally interpreted as that modern Canadian culture is more permissive and less restrictive about discussing, thinking about, expressing, and/or learning about sexuality compared to traditional Chinese culture. East Asian individuals who were more mainstream acculturated are

thought to be more exposed to these sex-positive elements of Canadian culture, which facilitate greater levels of sexual activity and response. However, the role of heritage acculturation is much less well understood. Heritage acculturation had not been found to be strongly associated with sexual activity or response variables across most studies at the zero-order correlational level (Ahrold & Meston, 2010; Brotto et al., 2005, 2007; Woo et al., 2011). Sexual beliefs and attitudes among East Asian women, of all sexual variables examined to date, most often showed a significant interaction effect between mainstream and heritage acculturation in predicting sexual outcomes (Ahrold & Meston, 2010; Brotto et al., 2005). In these cases, higher heritage acculturation predicted more restrictive attitudes (Ahrold & Meston, 2010) or less permissive attitudes (Brotto et al., 2005) only when mainstream acculturation was low. That is, East Asian women endorsed less permissive and more restrictive sexual attitudes when mainstream acculturation was low and heritage acculturation was high.

Despite the above interaction findings, the specific role of Chinese culture and heritage acculturation remains to be elucidated in bicultural populations. Research on the role of heritage acculturation remains important as previous analysis of qualitative themes revealed Chinese women had reported elements of Chinese culture playing a sexually-restricting role in their lives, but did not identify elements of Canadian culture as having a sexually-liberating role (Dang, Chang, & Brotto, 2017). Cultures are also not static over time. Continued emphasis on diversity and high volume of immigration from Asian countries (Chui & Flanders, 2018; Henry, 2002), and greater liberalization of sexuality in China in recent years (Zhang, 2011) have the potential to alter the experience of Chinese individuals in Canada and how cultural factors may impact sexual response and behaviours. As such, research findings from the 2000s may not reflect the experiences of the current population 10 to 15 years later. Furthermore, understanding the role of

heritage acculturation also has important clinical implications for treating sexual health concerns with Chinese individuals in Canada. Clinicians may find themselves needing to challenge culturally-bound beliefs and practices, which might conflict with supporting the heritage cultural connections of those seeking their care. For instance, some clients might be ambivalent about the most appropriate or desirable level of sexual permissiveness for their own lives if they wish to maintain attachments to both their Chinese heritage and Canadian mainstream cultural affiliations. Alternatively, some clients may benefit from the enhanced sexual response associated with higher mainstream acculturation, but may be unsure of how to integrate such ideas with their strong identification with Chinese heritage culture.

The current study sought to replicate the findings from past research on the role of acculturation in sexuality among Chinese individuals in Canada in an undergraduate sample of young men and women. Specific sexuality variables examined were the same as examined in Chapters 2 and 3: dual control model factors of sexual excitation and inhibition, dyadic and solitary sexual desire, sexual arousability, anxiety in response to sexual arousal, conservative and liberal sexual attitudes, sexual activity, sexual experience, sexual fantasies, and sociosexual orientation (interest and engagement in casual sex). Based on past research, mainstream acculturation was expected to be correlated with reports of less restrictive sexual attitudes and higher levels of sexual response and activity; heritage acculturation should not be consistently associated with sexual response, activity, or attitudes. An interaction between mainstream and heritage acculturation was also expected on some indices of sexuality. Previous findings have found that bidimensional acculturation better predicts sexual response than unidimensional models focusing on length of residency (Brotto et al., 2005); as such, (mainstream) acculturation

was predicted to remain a significant associate of sexual response above and beyond length of residence in Canada.

With regards to sexual orientation, prohibitive sexual attitudes related to non-heterosexual relationships and sexualities are common in Chinese cultural contexts (Kwok & Wu, 2015). Same-sex attracted Chinese men in previous research have reported difficulty in maintaining heritage acculturation on account of non-acceptance of their sexual orientation (Huang & Fang, 2019). This suggested that acculturation dynamics may be markedly different for sexual orientation minority individuals, particularly with regards to the association between acculturation factors with sexuality variables. Therefore, the samples of men and women in the current study were examined separately for heterosexual, bisexual, same-sex, and asexual oriented individuals. Not all groups would have had sufficient sample size for hypothesis testing and inferential analyses; in those cases, exploratory descriptive analyses for correlations between acculturation and sexuality variables were reported.

Method

Participants

Undergraduate men ($n = 364$) and women ($n = 467$) who self-identified as being of Chinese ethnic descent were recruited from a large Canadian university. These samples included, but were not limited to, all the Chinese men and women previously described in Chapters 2 and 3. Individuals who had sufficient English reading skills to understand the survey materials and who were over the age of 18 were invited to participate. With regards to English reading skills, participants rated their own English ability on a five point scale from “poor” to “fair” to “good”; only participants ranking themselves “fair” or better were included in the study. Further demographic characteristics for each sample are presented in Tables 1 and 2.

Procedures

Participants were recruited through online ads at the university's psychology human subject pool system, from September 2015 to April 2018. The study was advertised as involving culture and sexuality. Interested participants were directed to an online questionnaire hosted on Fluidsurveys (<http://www.fluidsurveys.com>; now defunct) or REDCap hosted at the local institution (Harris et al., 2009). Upon accessing the survey, participants had the opportunity to review consent documents, which explained their rights as participants, data confidentiality and security, and the sexual nature of the questions. If participants gave consent to participate, they then completed a series of online questionnaires. After completing the questionnaire, participants attended an online debriefing session, where they were informed about the intent of the study and invited to contact or meet with the researchers should they have further concerns and questions. Participants received one bonus mark towards an undergraduate psychology class in compensation for their participation. All procedures and methods were reviewed and approved by the university's behavioural research ethics board, and consistent with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Measures

Acculturation. The Vancouver Index of Acculturation (VIA) (Ryder et al., 2000) was administered to assess level of acculturation to the local mainstream culture (in this case, Canadian) and to the relevant heritage culture (in this case, Chinese). The instrument contains 10 pairs of statements which refer to aspects of the mainstream and heritage culture, to which the participants rate their endorsement on 9-point scales. For example, "I often participate in my heritage cultural traditions" and "I often participate in mainstream North American cultural traditions." The scale has a mainstream acculturation (range of scores from 9 to 90) and a

heritage acculturation (range of scores from 9 to 90) subscale. Higher scores on each subscale indicating greater identification with the mainstream or heritage culture, respectively. In our samples, Cronbach's α of the Heritage subscale was .92 (in women) and .90 (in men), and the Mainstream subscale was .93 (in women) and .92 (in men). Participants were also separately asked to report how many years they have lived in Canada (length of residency).

Sexual excitation and inhibition in women. The Sexual Excitation/Sexual Inhibition Inventory for Women (SESII-W) (Milhausen et al., 2010) was administered to assess sexual excitation and inhibition in women. The SESII-W is a self-report inventory consisting of 36 statements about factors that might influence sexual responding, which participants rate on a 5-point scale of their endorsement. For example, "Seeing an attractive partner's naked body really turns me on." The instrument contains eight factors, five of which form a higher order excitation factor and three of which form a higher order inhibition factor. Higher scores on the Excitation factor (range of scores from 1 to 4) indicate higher levels of sexual excitation, and higher scores on the Inhibition factor (range of scores from 1 to 4) indicate higher levels of sexual inhibition. In our sample, Cronbach's α of the Excitation subscale was .87, and of the Inhibition subscale was .77.

Sexual excitation and inhibition in men. The Sexual Inhibition Scale/Sexual Excitation Scale Questionnaire (SIS/SES) (Bancroft & Janssen, 2000) was used to assess sexual inhibition and sexual excitation in men. The SIS/SES is a self-report inventory consisting of 45 statements, which participants rate on a 4-point scale of their endorsement. For example, "When I look at erotic pictures, I easily become sexually aroused." The questionnaire has three subscales: sexual excitation (range of scores from 20 to 80), sexual inhibition 1 (fear of sexual performance failure; range of scores from 14 to 56), and sexual inhibition 2 (fear of negative consequences of

sexual activity; range of scores from 11 to 44). The instrument was re-coded during scoring such that higher scores on each subscale indicate greater magnitude (i.e., higher excitation or higher inhibition) of that construct. In our sample, Cronbach's α of the Excitation subscale was .88, the Inhibition 1 subscale was .80, and the Inhibition 2 subscale was .78.

Sexual attitudes. The Attitudes scale of the Derogatis Sexual Functioning Inventory (DSFI Attitudes) (Derogatis & Melisaratos, 1979) was administered to assess sexual attitudes. The DSFI Attitudes scale is a self-report inventory consisting of 30 statements, which participants rate on a 5-point scale of their endorsement. For example, "Masturbation is a perfectly normal, healthy sexual behaviour." The scale has two subscales: Liberal (permissive) Attitudes (range of scores from 15 to 75) and Conservative (restrictive) Attitudes (range of scores from 15 to 75). In our samples, Cronbach's α of the Liberal subscale were .84 (in women) and .82 (in men), and the Conservative subscale were .82 (in women) and .85 (in men).

Sexual experience. The Experience scale of the Derogatis Sexual Functioning Inventory (DSFI Experience) (Derogatis & Melisaratos, 1979) was administered to assess experience with various sexual activities. The DSFI Experience scale is a self-report instrument consisting of 24 sexual behaviours, in which participants indicate if they have ever engaged in that behaviour in their lifetime. For example, "Oral stimulation of your partner's genitals." Higher scores (range of scores from 0 to 24) in this scale indicate more sexual experience. In our sample, Cronbach's α of this scale were .95 (in women) and .97 (in men).

Sexual fantasies. The Fantasy scale of the Derogatis Sexual Functioning Inventory (DSFI Fantasy) (Derogatis & Melisaratos, 1979) was administered to assess sexual fantasies. The DSFI Fantasy scale is a self-report instrument consisting of 20 sexual fantasy themes, in which participants indicate if they have ever experienced each fantasy. For example, "Having more

than one sexual partner at the same time.” Higher scores (range of scores from 0 to 20) in this scale indicate greater diversity of sexual fantasies. In our sample, Cronbach’s α of this scale were .88 (in women) and .85 (in men).

Sexual desire. The Sexual Desire Inventory (SDI) (Spector et al., 1996) was administered to assess sexual desire. The SDI is a self-report instrument consisting of 11 items, some of which inquire about the frequency of sexual desire (on an 8-point scale) and others about the intensity of desire (on a 9-point scale). For example, “When you spend time with an attractive person (for example, at work or school), how strong is your sexual desire?” The instrument contains two subscales: Solitary Desire (range of scores from 0 to 35) and Dyadic Desire (range of scores from 0 to 56). Higher scores indicate higher levels of sexual desire. In our samples, Cronbach’s α of the Solitary Desire subscale were .89 (in women) and .85 (in men), and the Dyadic Desire subscale were .89 (in women) and .86 (in men).

Sexual arousability and anxiety. The Sexual Arousability Inventory – Expanded (SAI-E) (Hoon et al., 1976) was administered to assess sexual arousability and sexual anxiety. The SAI-E is a self-report instrument consisting of 28 items describing various situations. For each item, participants rate on a 7-point scale about how aroused, and then separately how anxious, they would feel when engaged in such a situation. For example, “When a loved one stimulates your genitals with mouth and tongue.” The instrument has an Arousability (range of scores from -28 to 140) and an Anxiety in response to arousability (range of scores from -28 to 140) subscale. Higher scores indicated higher Arousability and higher Anxiety respectively. In our samples, Cronbach’s α of the Arousability subscale were .95 (in women) and .96 (in men), and the Anxiety subscale were .97 (in women) to .98 (in men).

Sociosexual orientation. The Revised Sociosexual Orientation Inventory (SOI-R) (Penke & Asendorpf, 2008) was administered to assess sociosexual orientation (i.e., engagement in casual sex). The SOI-R is a self-report instrument consisting of 9 items that inquires about previous sexual partners, interest in sex without emotional commitment, and beliefs about casual sex. For example, “How often do you experience sexual arousal when you are in contact with someone you are not in a committed romantic relationship with?” Participants respond along 9-point scales. Higher scores (range of scores from 0 to 9) indicate greater willingness and interest in casual sex. In our sample, Cronbach’s α of this scale were .84 (in men) to .83 (in women).

Sexual orientation was measured by asking participants to rate their own relative level of attraction to same or different-sex individuals on a 7-point scale, with 0 being entirely different-sex attracted and 6 being entirely same-sex attracted. These were then coded into heterosexual (0, 1), bisexual (2, 3, 4), or same-sex (5, 6) oriented. Participants also had the option to identify as asexual by selecting the option “asexual/no sexual attraction”. Note that among men, only two individuals identified as asexual, but each also happened to give a numerical rating of their attraction and one was coded into heterosexual and the other into bisexual based on this rating.

Data Analysis

Pearson’s r correlations were used to examine zero-order associations between study variables. Correlations were described separately for men and women, and for individuals of each sexual orientation of each gender. Bonferroni correction was used to control for type I error inflation, setting the alpha level at $p = .004$. Effect sizes of approximately Cohen’s $d = .20$ or $r = .10$ were considered small, approximately Cohen’s $d = .50$ or $r = .30$ were considered medium, and approximately Cohen’s $d = .80$ or $r = .50$ or greater were considered large (Cohen, 1988).

Due to sample size/power considerations, inferential statistics were only conducted among heterosexual individuals. However, descriptive correlations were examined for all groups.

Unique effects of acculturation on sexual outcomes were then examined using multiple regression. Age, number of years living in Canada, heritage acculturation (VIA Heritage), mainstream acculturation (VIA Mainstream), and the interaction between VIA Heritage and VIA Mainstream were entered as independent/predictor variables, while sexuality variables were entered as dependent/outcome variables. For outcomes where there was a significant interaction term (95% confidence interval of the interaction regression coefficient does not cross zero), the unique effects of VIA Heritage and VIA Mainstream was interpreted at the interaction level. For outcomes where there was not a significant interaction term, the unique effects of each VIA subscale was interpreted at the main effects level when excluding the interaction effect from the model. Due to an expected effect size of approximately $R^2 = .10$ and a priori power of .80, these analyses were only conducted in groups with greater than 134 individuals (i.e., heterosexual men and heterosexual women).

Multiple imputation (20 imputations) was used to manage missing data. No variable was missing more than 10% of cases. All statistics are naïve pooled values, except means and standard errors which are univariate pooled values. Analyses were conducted using SPSS 20 (IBM), and power calculations using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007).

Results

Correlations for Women by Sexual Orientation

Means and standard errors of the mean for all measures in women are presented in Table 4.3, and Pearson's r correlations in Table 4.4. In heterosexual women ($n = 375$), mainstream acculturation (VIA Mainstream) was significantly positively correlated with sexual excitement

(SESII-W Excitation), dyadic sexual desire (SDI Dyadic Desire), sexual arousability (SAI-E Arousability), and permissive sexual attitudes (DSFI Liberal Attitudes) at a medium effect size; and with sexual experience (DSFI Experience), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R) at a small-to-medium effect size. It was significantly negatively correlated with restrictive sexual attitudes (DSFI Conservative Attitudes) at a medium-to-large effect size, and anxiety in response to sexual arousal (SAI-E Anxiety) at a small-to-medium effect size. Heritage acculturation (VIA Heritage) was significantly negatively correlated with anxiety in response to sexual arousal (SAI-E Anxiety) at a small-to-medium effect size. Years in Canada was significantly positively correlated with sexual excitation (SESII-W Excitation), dyadic sexual desire (SDI Dyadic Desire), and permissive sexual attitudes (DSFI Liberal Attitudes) at a small-to-medium effect size; and significantly negatively correlated with restrictive sexual attitudes (DSFI Conservative Attitudes) at a small-to-medium effect size. Years in Canada showed a large significant positive correlation with mainstream (VIA Mainstream) but not heritage (VIA Heritage) acculturation, while a medium positive correlation was seen between heritage (VIA Heritage) and mainstream (VIA Mainstream) acculturation.

For bisexual women ($n = 60$), mainstream acculturation (VIA Mainstream) showed a large positive correlation with permissive sexual attitudes (DSFI Liberal Attitudes); medium positive correlations with sexual excitation (SESII-W Excitation) and sexual arousability (SAI-E Arousability); and small-to-medium positive correlations with dyadic sexual desire (SDI Dyadic Desire), sexual experience (DSFI Experience), and interest/engagement in casual sex (SOI-R). It showed a medium negative correlation with anxiety in response to sexual arousal (SAI-E Anxiety) and restrictive sexual attitudes (DSFI Conservative Attitudes). Heritage acculturation (VIA Heritage) showed a medium positive correlation with permissive sexual attitudes (DSFI

Liberal Attitudes); and small-to-medium positive correlations with dyadic sexual desire (SDI Dyadic Desire), solitary sexual desire (SDI Solitary Desire), and sexual arousability (SAI-E Arousability). Years in Canada showed a medium-to-large positive correlation with SESII-W Excitation and medium-to-small positive correlations with sexual arousability (SAI-E Arousability), permissive sexual attitudes (DSFI Liberal Attitudes), and interest/engagement in casual sex (SOI-R). It showed a medium-to-large negative correlation with restrictive sexual attitudes (DSFI Conservative Attitudes). Years in Canada showed a medium positive correlation with mainstream (VIA Mainstream) but not heritage (VIA Heritage) acculturation, while a medium positive correlation was seen between heritage (VIA Heritage) and mainstream (VIA Mainstream) acculturation.

For same-sex attracted women ($n = 20$), mainstream acculturation (VIA Mainstream) showed a medium positive correlation with permissive sexual attitudes (DSFI Liberal Attitudes), and small positive correlations with dyadic sexual desire (SDI Dyadic Desire) and sexual arousability (SAI-E Arousability); it showed medium negative correlations with solitary sexual desire (SDI Solitary Desire) and restrictive sexual attitudes (DSFI Conservative Attitudes), and small negative correlations with sexual inhibition (SESII-W Inhibition) and diversity of sexual fantasies (DSFI Fantasy). Heritage acculturation (VIA Heritage) showed a medium positive correlation with sexual arousability (SAI-E Arousability) and small positive correlations with sexual excitation (SESII-W Excitation) and restrictive sexual attitudes (DSFI Conservative Attitudes); it showed medium negative correlations with solitary sexual desire (SDI Solitary Desire), sexual experience (DSFI Experience), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R). Years in Canada showed a medium positive correlation with permissive sexual attitudes (DSFI Liberal Attitudes), and small positive

correlations with dyadic sexual desire (SDI Dyadic Desire) and sexual arousability (SAI-E Arousability); it showed medium negative correlations with solitary sexual desire (SDI Solitary Desire), restrictive sexual attitudes (DSFI Conservative Attitudes), and sexual experience (DSFI Experience), and a small negative correlation with interest/engagement in casual sex (SOI-R). Years in Canada showed medium positive correlations with both mainstream (VIA Mainstream) and heritage (VIA Heritage) acculturation, while a medium positive correlation was seen between heritage and mainstream acculturation.

For asexual women ($n = 12$), mainstream acculturation (VIA Mainstream) showed a medium positive correlation with permissive sexual attitudes (DSFI Liberal Attitudes), and small positive correlations with sexual excitation (SESII-W Excitation), sexual inhibition (SESII-W Inhibition), dyadic sexual desire (SDI Dyadic Desire), sexual experience (DSFI Experience), and interest/engagement in casual sex (SOI-R); it showed a large negative correlation with anxiety in response to sexual arousal (SAI-E Anxiety), and a medium negative correlation with restrictive sexual attitudes (DSFI Conservative Attitudes). Heritage acculturation (VIA Heritage) showed large positive correlations with sexual excitation (SESII-W Excitation), sexual arousability (SAI-E Arousability), permissive sexual attitudes (DSFI Liberal Attitudes), diversity of sexual fantasies (DSFI Fantasy), and solitary sexual desire (SDI Solitary); and a medium positive correlation with sexual experience (DSFI Experience); it showed a large negative correlation with anxiety in response to sexual arousal (SAI-E Anxiety) and a medium negative correlation with restrictive sexual attitudes (DSFI Conservative Attitudes). Years in Canada showed small positive correlations with permissive sexual attitudes (DSFI Liberal Attitudes) and interest/engagement in casual sex (SOI-R); it showed a medium negative correlation with anxiety in response to sexual arousal (SAI-E Anxiety), and small negative correlations with sexual

excitation (SESII-W Excitation), dyadic sexual desire (SDI Dyadic Desire), solitary sexual desire (SDI Solitary Desire), sexual arousability (SAI-E Arousability), restrictive sexual attitudes (DSFI Conservative Attitudes), and diversity of sexual fantasies (DSFI Fantasy).

Inspection of the patterns of associations across all four sexual orientations showed that mainstream acculturation (VIA Mainstream) was negatively associated with restrictive sexual attitudes (DSFI Conservative Attitudes) and positively associated with permissive sexual attitudes (DSFI Liberal Attitudes) at medium effect sizes in all sexual orientations. Mainstream acculturation's (VIA Mainstream) associations with sexual excitation (SESII-W Excitation), inhibition (SESII-W Inhibition), arousability (SAI-E Arousal), anxiety in response to sexual arousal (SAI-E Anxiety), experience (DSFI Experience), diversity of fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R) showed similar patterns in heterosexual and bisexual Chinese women, whereas same-sex oriented women showed somewhat different patterns than heterosexual and bisexual women. Asexual women showed patterns for mainstream acculturation (VIA Mainstream) with other sexuality variables that were somewhat in between same-sex oriented women and heterosexual/bisexual women. For heritage acculturation (VIA Heritage), heterosexual women seemed to display the lowest magnitude of associations between heritage acculturation with sexuality variables. Asexual women showed the greatest magnitude of positive associations between heritage acculturation (VIA Heritage) with most sexual response and activity variables. Same-sex oriented women uniquely showed negative associations between heritage acculturation with sexual experience (DSFI Experience), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R).

Multiple Regression Analyses in Heterosexual Women

For heterosexual women, the combined model of age, years in Canada, heritage acculturation (VIA Heritage), mainstream acculturation (VIA Mainstream), and the interaction between heritage and mainstream acculturation explained a significant proportion of the variance for sexual excitation (SESII-W Excitation), dyadic sexual desire (SDI Dyadic), sexual arousability (SAI-E Arousability), anxiety in response to arousal (SAI-E Anxiety), restrictive sexual attitudes (DSFI Conservative Attitudes), permissive sexual attitudes (DSFI Liberal Attitudes), and interest in casual sex/sociosexual orientation (SOI-R). R^2 values and standardized regression coefficients are presented in Table 4.5.

No statistically significant heritage by mainstream interaction effects were observed. Among regression models excluding the interaction term, mainstream acculturation (VIA Mainstream) was a significant unique negative predictor of anxiety in response to sexual arousal (SAI-E Anxiety) and restrictive sexual attitudes (DSFI Conservative Attitudes); and a significant unique positive predictor of sexual excitation (SESII-W Excitation), sexual inhibition (SESII-W Inhibition), dyadic sexual desire (SDI Dyadic Desire), sexual arousability (SAI-E Arousability), permissive sexual attitudes (DSFI Liberal Attitudes), sexual experience (DSFI Experience), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R). Heritage acculturation (VIA Heritage) was a significant unique negative predictor of interest/engagement in casual sex (SOI-R). Years in Canada was not a unique predictor of any outcome variable. Age was a unique positive predictor of sexual experience (DSFI Experience) and diversity of sexual fantasies (DSFI Fantasy).

Correlations for Men by Sexual Orientation

Means and standard errors of the mean for all measures in men are presented in Table 4.6, and Pearson's r correlations in Table 4.7. For heterosexual men ($n = 315$), VIA Mainstream

showed statistically significant positive associations with permissive liberal attitudes (DSFI Liberal Attitudes) at a medium-to-large effect size; and dyadic sexual desire (SDI Dyadic Desire), sexual arousability (SAI-E Arousability), sexual experience (DSFI Experience), and diversity of sexual fantasies (DSFI Fantasy) at a small-to-medium effect size. It was significantly negatively correlated with sexual inhibition due to performance concerns (SISSES Inhibition 1) and restrictive sexual attitudes (DSFI Conservative Attitudes) at a medium effect size. Heritage acculturation (VIA Heritage) was significantly positively correlated with sexual arousability (SAI-E Arousability), permissive sexual attitudes (DSFI Liberal Attitudes), and sexual experience (DSFI Experience) at a small-to-medium effect size; it was significantly negatively correlated with sexual inhibition due to performance concerns (SISSES Inhibition 1) at a small-to-medium effect size. Years in Canada was not significantly correlated with any sexuality variable. Heritage (VIA Heritage) and mainstream (VIA Mainstream) acculturation were significantly positively correlated with each other, and years in Canada was significantly correlated with mainstream but not heritage acculturation.

For bisexual men ($n = 27$), mainstream acculturation (VIA Mainstream) showed large positive correlations with permissive sexual attitudes (DSFI Liberal Attitudes) and diversity of sexual fantasies (DSFI Fantasy), and medium positive correlations with sexual experience (DSFI Experience) and sexual arousability (SAI-E Arousal); it showed medium negative correlations with sexual inhibition due to performance concerns (SISSES Inhibition 1). Heritage acculturation (VIA Heritage) showed medium positive correlations with restrictive sexual attitudes (DSFI Conservative Attitudes); it showed medium negative correlations with sexual excitation (SISSES Excitation), sexual experience (DSFI Experience), diversity of sexual fantasies (DSFI Fantasy), and interest/engagement in casual sex (SOI-R). Years in Canada showed medium positive

correlations with permissive sexual attitudes (DSFI Liberal Attitudes), and a medium negative correlation with (SISSES Excitation). Years in Canada showed medium positive correlations with both mainstream (VIA Mainstream) and heritage (VIA Heritage) acculturation, while a small positive correlation was seen between heritage and mainstream acculturation.

For same-sex attracted men ($n = 22$), mainstream acculturation (VIA Mainstream) showed large positive correlations with solitary sexual desire (SDI Solitary Desire) and interest/engagement in casual sex (SOI-R); medium positive correlations with sexual arousability (SAI-E Arousability), permissive sexual attitudes (DSFI Liberal Attitudes), and diversity of sexual fantasies (DSFI Fantasy); a large negative correlation with restrictive sexual attitudes (DSFI Conservative Attitudes); and a medium negative correlation with anxiety in response to sexual arousal (SAI-E Anxiety). Heritage acculturation (VIA Heritage) showed medium negative correlations with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1), sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2), and diversity of sexual fantasies (DSFI Fantasy). Years in Canada showed medium negative correlations with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1), solitary sexual desire (SDI Solitary), and diversity of sexual fantasies (DSFI Fantasy). Years in Canada showed a small positive correlation with mainstream (VIA Mainstream) but not heritage (VIA Heritage) acculturation, and mainstream and heritage were minimally associated.

Inspection of the patterns of associations across heterosexual, bisexual, and same-sex oriented men showed that mainstream acculturation (VIA Mainstream) displayed broadly similar patterns of associations with sexual attitudes and other sexuality variables across orientations. Heritage acculturation (VIA Heritage) was positively associated with restrictive sexual attitudes

(DSFI Conservative Attitudes) in bisexual men only. Heritage acculturation (VIA Heritage) was negatively associated with sexual experience (DSFI Experience) in bisexual men only, and was negatively associated with diversity of sexual fantasies (DSFI Fantasy) in bisexual and same-sex oriented men only. Heritage acculturation (VIA Heritage) also showed the largest magnitude of negative correlations with sexual inhibition (SISSES Inhibition 1 & Inhibition 2) in same-sex oriented men. Heritage (VIA Heritage) and mainstream (VIA Mainstream) acculturation was positively correlated at a moderate effect size in heterosexual men, positively correlated at a small effect size in bisexual men, and not correlated in same-sex oriented men.

Multiple Regression Analyses in Heterosexual Men

For heterosexual men, the combined model of age, years in Canada, heritage acculturation (VIA Heritage), mainstream acculturation (VIA Mainstream), and the interaction between heritage and mainstream acculturation explained a significant proportion of the variance for sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1), sexual arousability (SAI-E Arousal), restrictive sexual attitudes (DSFI Conservative Attitudes), permissive sexual attitudes (DSFI Liberal Attitudes), sexual experience (DSFI Experience), and diversity of sexual fantasies (DSFI Fantasy). R^2 values and standardized regression coefficients are presented in Table 4.8.

Significant heritage by mainstream acculturation interaction effects were seen for sexual excitation (SISSES Excitation), sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1), restrictive sexual attitudes (DSFI Conservative Attitudes), and sexual experience (DSFI Experience). For sexual excitation (SISSES Excitation), as heritage acculturation (VIA Heritage) increases, mainstream acculturation (VIA Mainstream) changes from a more negative to a more positive predictor of sexual excitation (SISSES Excitation);

alternatively, as mainstream acculturation (VIA Mainstream) increases, heritage acculturation (VIA Heritage) becomes a less prominent negative predictor of sexual excitation (SISSES Excitation) (Figure 4.1).

For sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1), as heritage acculturation (VIA Heritage) increases, mainstream acculturation (VIA Mainstream) becomes a less prominent negative predictor of sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1); alternatively, as mainstream acculturation (VIA Mainstream) increases, heritage acculturation (VIA Heritage) becomes a less prominent negative predictor of sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) (Figure 4.2).

For sexual experience (DSFI Experience), as heritage acculturation (VIA Heritage) increases, mainstream acculturation (VIA Mainstream) changes from a more negative to a more positive predictor of sexual experience (DSFI Experience); alternatively, as mainstream acculturation (VIA Mainstream) increases, heritage acculturation (VIA Heritage) becomes a less prominent negative predictor of sexual experience (DSFI Experience) (Figure 4.3).

For restrictive sexual attitudes (DSFI Conservative Attitudes), as heritage acculturation (VIA Heritage) increases, mainstream acculturation (VIA Mainstream) changes from a more positive to a more negative predictor of restrictive sexual attitudes (DSFI Conservative Attitudes); alternatively, as mainstream acculturation (VIA Mainstream) increases, heritage acculturation (VIA Heritage) becomes a less prominent positive predictor of restrictive sexual attitudes (DSFI Conservative Attitudes) (Figure 4.4).

For main effects in models without significant interaction terms, mainstream acculturation (VIA Mainstream) was a significant unique positive predictor of sexual

arousability (SAI-E Arousal), permissive sexual attitudes (DSFI Liberal Attitudes), and diversity of sexual fantasies (DSFI Fantasy). Heritage acculturation (VIA Heritage) was a significant unique positive predictor of sexual arousability (SAI-E Arousal). Years in Canada was not a significant unique predictor of any outcome variable. Age was a significant positive predictor of sexual experience (DSFI Experience) and interest/engagement in casual sex (SOI-R).

Summary of Results

Overall, these results showed that mainstream acculturation (VIA Mainstream), in contrast to heritage acculturation (VIA Heritage), was the primary associate of sexual excitation (SESII-W Excitation) as well as other sexuality variables in heterosexual Chinese women. In heterosexual Chinese men, mainstream and heritage acculturation did not always consistently predict sexuality outcome variables; however, both mainstream and heritage acculturation were negative associated (i.e., in the same direction) with sexual inhibition due to performance concerns (SISSES Inhibition 1) and a number of other sexuality variables. Exploratory analyses in non-heterosexual Chinese women and men suggested that acculturation may not be associated in the same way with sexuality variables as in heterosexual women and men.

Discussion

Consistent with our hypotheses, the results showed that mainstream acculturation was associated with a range of sexuality variables among Chinese individuals in our population. This was most clearly seen among heterosexual women, wherein mainstream acculturation was significantly associated with all sexual variables examined except solitary desire and sexual inhibition (the latter two of which also displayed similar trends). Mainstream acculturation was associated with more permissive and less restrictive sexual attitudes, higher levels of sexual response, more sexual experience, less sexual anxiety, and higher sociosexual orientation. This

generally held for bisexual women. For same-sex attracted women, mainstream acculturation was correlated with more liberal and less restrictive attitudes and higher levels of sexual arousability, but only showed small or negligible associations with sexual excitation, sexual anxiety, sexual experiences, and sociosexual orientation; mainstream acculturation was also associated with less sexual fantasies. For asexual women, mainstream acculturation was correlated with more permissive and less restrictive attitudes, and greater sexual response.

A similar but less consistent pattern was seen in Chinese men. For heterosexual men, mainstream acculturation was significantly associated with lower sexual inhibition due to performance concerns, higher levels of sexual response, more permissive and less restrictive sexual attitudes, and more sexual experience and fantasies. Notably, mainstream acculturation was not prominently associated with sexual excitation, sexual inhibition due to external threat concerns, or solitary desire, along with only trends for associations with less sexual anxiety and greater interest in casual sex. Bisexual men showed a similar pattern, except with larger correlations between mainstream acculturation with less sexual anxiety and more interest in casual sex. This trend also held for same-sex attracted men, where mainstream acculturation also showed correlations with higher sexual excitation, lower sexual inhibition due to external threat concerns, and lower solitary desire. However, the small sample size of non-heterosexual men and women suggest that the trends in these subgroups should be interpreted with caution. These findings in men and women were generally consistent with the existing literature (Ahrold & Meston, 2010; Brotto et al., 2005, 2007).

Heritage acculturation had a more complex relationship with sexuality variables. Unlike in previous studies (Ryder et al., 2000), heritage and mainstream acculturation were positively correlated in most subgroups, suggesting that many individuals reported being attached to both

Chinese and Canadian cultures or attached to neither culture. This pattern was seen in heterosexual and bisexual men and all sexual orientations of women, but notably not same-sex oriented men. Among heterosexual women and men, heritage acculturation often showed the same direction of correlations with sexuality variables as mainstream acculturation, but to a lower magnitude. This was somewhat consistent among bisexual women, but was not associated with restrictive attitudes. However, notably, heritage acculturation was not positively, and at times was negatively, associated with sociosexual orientation in all genders and orientations. Heritage acculturation also was associated with less sexual fantasies among bisexual men and same-sex oriented women and men, and less sexual experience in bisexual men and same-sex oriented women. For asexual women, heritage acculturation was associated with higher sexual response, and less restrictive and more permissive attitudes. The small sample size of non-heterosexual men and women suggest again that these latter trends should be interpreted with caution. These findings differed from previous findings (Ahrold & Meston, 2010; Brotto et al., 2005, 2007), which did not report similar directions of correlation between heritage and mainstream acculturation with sexual response, experience, and attitudes. However, our results were consistent with past findings in that the magnitude of heritage acculturation's associations with sexual outcomes were smaller than that of mainstream acculturation.

Also consistent with past findings (Ahrold & Meston, 2010; Brotto et al., 2005), multiple regressions among heterosexual women showed that mainstream acculturation emerged as a unique predictor of sexual response, experience, and attitudes after controlling for heritage acculturation and length of residency in Canada. Heritage acculturation was no longer a significant predictor of any sexuality variables, except that it negatively predicted sociosexual orientation. Among heterosexual men, for regression models without significant interaction

effects, mainstream acculturation was a significant unique predictor of permissive sexual attitudes and sexual fantasies after controlling for heritage acculturation, age, and length of residency. However, heritage and mainstream acculturation both positively predicted greater sexual arousability.

Significant interaction effects were seen among heterosexual men in sexual excitation, sexual inhibition due to performance concerns, sexual experience, and restrictive sexual attitudes. In each case, at high levels of mainstream acculturation, heritage acculturation was not strongly predictive of these outcomes. At low levels of mainstream acculturation, heritage acculturation is associated with lower sexual excitation, lower sexual inhibition, and less sexual experiences and more restrictive sexual attitudes. These findings suggest that heritage Chinese acculturation can promote more sexually restrictive attitudes and behaviours in Chinese heterosexual men. However, this is only the case in men with low mainstream Canadian acculturation, as higher mainstream acculturation attenuates the impact of heritage acculturation. As such, attachment to traditional Chinese culture does not need to accompany low levels of sexual response or permissiveness, if the individual also values connections to mainstream Canadian culture. For sexual inhibition due to performance concerns, it is possible that the pattern of interaction seen (which was similar to that of sexual experience and excitation) reflected decreased salience of performance concerns among men who were high only on heritage acculturation due to reduced rates of sexual activity. These interactions, especially with regards to conservative attitudes, are consistent in direction with that seen in past findings (Ahrold & Meston, 2010; Brotto et al., 2005). This has been interpreted as one culture being a “lens” through which another culture is experienced (e.g., Ahrold & Meston, 2010).

However, unlike previous findings, no significant interaction effects emerged in heterosexual women, including for conservative sexual attitudes. Conversely, the significant interactions observed in heterosexual men had not been previously reported. This discrepancy may be due to changes over time in the underlying population of young Chinese men and women in Canada (see below), as well as potentially changing discourse about sexuality in East Asian (Zhang, 2011) and Western countries. Qualitatively different patterns between men and women on how acculturation relates to specific aspects of sexuality in general however, may be expected due to differing proscriptions about male and female sexuality in both Chinese and Canadian cultures. Similar to traditional Western culture, traditional Chinese culture is patriarchal (Ho, 1986), attaching greater value to women's virginity and purity while being more supportive of men's sexual prowess and competence. Chinese individuals in Canada are likely also subject to Western expectations, such as the exoticization and hyper-feminization of Asian women and the de-masculinization of Asian men (Espiritu, 2000). These factors may also interact with biological differences between male and female sexual behaviour. Further replication is needed to interpret the reliability of these interactions, and expand on why sex or gender differences may exist in how heritage and mainstream acculturation factors interact.

The current findings were partially supportive of the study's hypotheses overall. As predicted, among our samples of young Chinese men and women in Canada, mainstream acculturation emerged as the more consistent predictor of sexual attitudes, behaviours, and response. These results show that, among heterosexual men and women, mainstream acculturation is more directly associated with many sexual outcomes than heritage acculturation. However, heritage acculturation was not unrelated to sexual outcomes. At times, it was a positive correlate of greater sexual permissiveness and higher sexual response for some variables,

especially among heterosexual men and women. Some of this association seen were likely due to the observed positive correlation between mainstream acculturation with both heritage acculturation and greater sexual permissiveness and response. However, heritage acculturation was also a unique negative predictor of interest in casual sex among heterosexual women. In sexual excitation, inhibition, experience, and restrictive attitudes among heterosexual men, interaction effects between the two acculturation domains were also seen. Unlike past research, this study found such patterns in heterosexual men rather than women. Mainstream acculturation appeared to be the primary factor related to sexual outcomes, but associations between heritage acculturation and sexuality could not be dismissed entirely.

Heritage and mainstream acculturation were significantly positively correlated in women and heterosexual and bisexual men, such that higher identification with one culture was associated with higher identification with the other culture. This is not consistent with Ryder and colleague's (2000) original findings of heritage and mainstream as independent dimensions of the acculturation process in East Asian individuals in Canada. It was possible that the current sample differed from prior studies due to changes in the intervening years in the Chinese population in Canada. This included demographic-related reasons, such as the growth of the Chinese community especially in large urban enclaves (e.g., Chui & Flanders, 2018), as well as changes in the undergraduate student population due to recent programs aimed at international students (e.g., Rankin & CBC News, 2014). This pattern may be consistent with other models (e.g., Bhatia & Ram, 2009) that examine acculturation among diasporic migrants with a focus on dynamic processes shaped by local, national, and transnational events and structural forces. As Chinese individuals and culture gain greater visibility and representation in mainstream Canadian society, heritage and mainstream cultures may become less clearly differentiated in the

experiences of some young adults. Acculturation in these individuals may begin to reflect a more general engagement and connection with either the multicultural society at large, or with their own local communities which contain integrated elements of Chinese and Canadian culture. More research, perhaps using qualitative methods, would be useful in fully elucidating the specific pathways of biculturalism in the domain of sexuality among Chinese individuals.

One possible interpretation of the current findings is that mainstream Canadian culture, unlike Chinese culture, includes liberalizing and sex-positive sources of information. Therefore, Chinese people in Canada who engaged more frequently with, or became more assimilated into, mainstream Canadian culture, would be exposed to more of this material and ultimately become more confident, aware, and knowledgeable about their own sexuality. This model was, at least implicitly, endorsed by previous research in this area as well (e.g., Dang et al., 2017). However, another possible interpretation is that Chinese individuals who were more mainstream acculturated were more likely to endorse experiences that are consistent with normative mainstream Western conceptualizations of sexuality. That is to say, greater identification with Western culture also meant greater identification with Western culturally-bound models of sexuality; indeed, all of the sexual behaviour, attitudes, and response measures used in this study were developed from primarily Euro-Caucasian and Western samples. Thus, it is possible that heritage acculturation may be a stronger predictor than mainstream acculturation of other aspects of sexuality not measured in this study; some of these elements of sexuality may not be recognized as important or may not be well-captured by existing Western researchers and methods. The current data cannot easily distinguish between these perspectives. Further research, especially emic research (research from within the culture, rather than by outside observers), among the experiences and discourse of sexuality of Chinese people would be useful in

elucidating this matter. Using instruments designed specifically for Chinese individuals living in Western nations, such as the adapted measure of parental sexual communication used in Kim and Ward (2007), may also be appropriate.

The current findings also suggested that the above patterns seen primarily in heterosexual women and men may not be generalizable to all sexual orientations. The positive association between heritage and mainstream acculturation was not prominently seen in same-sex attracted men, and heritage acculturation was associated with lower levels of some sexual response variables in bisexual men and same-sex attracted women and men. Some of these patterns may have reflected a greater degree of negative attitudes and prejudice towards sexual orientation minorities and non-heterosexual behaviours in many Chinese and East Asian cultural contexts (Kwok & Wu, 2015). This may have caused non-heterosexual individuals to experience heritage Chinese culture as more aversive and less accepting, particularly in the context of their sexuality. As mainstream acculturation was associated frequently with less restrictive and more permissive attitudes about the acceptability of non-heterosexual behaviours and identities, it may be the case that some non-heterosexual individuals with low mainstream acculturation may have more difficulties acknowledging and exploring their sexuality and orientation.

At the same time, mainstream Western culture also has a history of non-acceptance towards non-heterosexual identities and behaviours. Some of these patterns also likely result from heteronormative nature of some scales, and especially the DSFI Experience scale. It was also unexpected that among asexual women, heritage acculturation was positively correlated with greater levels of sexual response and activity at larger magnitudes than in all other subgroups; this may have been an artifact of the particularly small sample size of this subgroup. It was difficult to draw clear conclusions from the current results due to the small sample sizes of

non-heterosexual orientations. Additional research into the intersectionality of sexual minority experiences with Chinese and Canadian culture, particularly with larger samples that specifically focus on non-heterosexual individuals' experiences, would be important given the additional complex interactions in this area (e.g., Huang & Fang, 2019). Investigation with a larger group of asexual Chinese individuals would also be important, including examining whether an asexual identity is interpreted the same way across cultures.

Limitations and Future Directions

There are several key conceptual limitations to the current study. The use of a bidimensional model of acculturation has been criticized as nevertheless still emphasizing the assimilation of immigrants to the normative Western experience (Ngo, 2008). Diaspora processes, which involve immigrants holding on to their heritage cultures but also recognizing themselves as part of a distinct community within the broader mainstream culture, are often not well captured in these models (Bhatia & Ram, 2009). Particularly salient in the current findings is how this model emphasizes the role of mainstream assimilation in producing a profile that is more desirable to liberal Western values about sexuality, while potentially omitting the role of heritage identity in factors that may be important to Chinese values about sexuality. Furthermore, cultural frame switching (i.e., the adoption of different values, norms, and behaviours depending on immediate context among multicultural individuals) may have impacted current results (Benet-Martínez et al., 2002). The current study used English language survey materials, which have been found to facilitate frame switching to a Western perspective among bicultural individuals, compared to using native language materials that may prime for a Chinese perspective (Schwartz et al., 2014). As such, different response patterns may have been seen if the data was collected outside of an English university environment. Furthermore, the current

study was not able to examine the full complexity of Chinese individuals' migration histories. Factors such as for how many generations have the individual's ancestors lived in Canada or left China, whether they maintain connections with peers from their countries of origin, or their personal reasons and motivations for coming to Canada, may have a profound impact on their acculturation experience and its subsequent association with sexuality. Finally, the current study also conceptualizes mainstream Canadian culture and heritage Chinese culture as two distinct entities, with Chinese individuals in Canada needing to navigate each separately. However, a borderlands model (Anzaldúa, 1987; Vila, 2000) suggests that individuals at the boundaries of two cultures often experience highly individualized admixtures of both, with novel and unique identities being adopted that are otherwise not possible in either culture alone. As such, understanding of experiences of these young adults may not only benefit from examining the interaction between Chinese and Canadian cultures, but also consideration of an emergent Chinese-Canadian culture that is unique and idiosyncratic to the current time and place.

Sampling bias may represent a substantial methodological limitation to the current study. Individuals were self-selected by their interest in and willingness to consent to a sexuality study. As such, individuals who experience excess anxiety, shame, or disgust around sexual topics may not have been willing to participate in the study, while the participants might have been more sexually permissive or comfortable than the norm in this population. It was also possible that the study was biased for sampling Chinese individuals who were more mainstream acculturated, perhaps due to the subject matter or the language of the materials. The current study therefore could not determine if these patterns were representative of all Chinese individuals in the population, or only those who were willing and able to participate in a sexuality study. It was also possible that some of the patterns seen reflected more what participants were willing to

acknowledge on a questionnaire, rather than their “true” experiences. Furthermore, given that this study used a Canadian undergraduate sample at a single site, it may not be generalizable to Chinese individuals who have not attended university, who are of a different generation cohort, or who are living in other countries (or even cities elsewhere in Canada). This correlational study also could not determine the causal direction of effects. Although we conceptualized sexuality as being impacted by acculturation, it was also possible that innate individual differences in sexual response or drives contributed to shaping the acculturation experiences of each person. Finally, further independent replication of the current findings will be necessary to determine the reliability of these results across time and populations; this is especially the case for our findings in non-heterosexual individuals.

Clinical Implications

This research has some notable clinical implications for working with young Chinese individuals in Canada on sexual health topics. The current and past findings suggest that patients and clinicians should consider a bidimensional rather than a unidimensional understanding of acculturation in this population. In particular, length of residency may not be a reliable indicator of acculturation. A bidimensional model also means that Chinese individuals do not need to make a binary choice between a sexually restrictive ethnic heritage and a sexually liberated foreign mainstream. A more nuanced understanding of acculturation allows clinicians to help patients pick and choose the elements that are most meaningful or important to them from each culture. For example, specific culturally-bound maladaptive thoughts or beliefs can be challenged without undermining the overall connection to any particular culture. More generally, promoting greater connection with mainstream culture (and especially its sex positive aspects) does not have to be done at the expense of connectedness to the heritage culture. Indeed, based

on the current findings, greater connectedness with mainstream Canadian culture may possibly also facilitate greater heritage acculturation in some young Chinese individuals. Education efforts, instead of focusing on the limitations of the heritage culture, may examine how to promote greater internalization of mainstream sexual health messaging in an inclusive and welcoming manner. Overall, these findings suggest that it is possible, perhaps even advisable, to support heritage acculturation while working to enhance sexual response and reduce unhelpful, potentially culturally-bound, sexual attitudes among young Chinese men and women.

Conclusions

The current study investigated the association between heritage and mainstream acculturation with self-report of sexual attitudes, behaviours, and response among two samples of undergraduate young Chinese men and women. Replicating past findings, mainstream acculturation was associated with more sexual permissiveness, less sexual restrictiveness, greater sexual response, and more past sexual behaviours. However, heritage acculturation was positively correlated with mainstream acculturation, and showed some inconsistent associations with more sexual permissiveness, less sexual restrictiveness, greater sexual response, and more past sexual behaviours. Heritage and mainstream acculturation had some interactive effects which were in the same direction as past research, but in heterosexual men rather than women. The current findings reiterated the important role of mainstream acculturation in understanding the sexuality of Chinese individuals in Canada; however, heritage acculturation also appeared to play a more subtle and complex role that needs further research to fully elucidate. These findings suggested that a more complex understanding of culture would be beneficial both theoretically and clinically when working with this population.

Table 4.1.

Demographic variables for Chinese women.

	Heterosexual	Bisexual	Same-sex	Asexual
<i>N</i>	375	60	20	12
Age	20.1 ± 2.0	19.7 ± 1.3	19.7 ± 1.4	20.3 ± 2.3
Years in Canada (<i>M</i> ± <i>SD</i>)	10.7 ± 7.7	9.1 ± 7.7	11.8 ± 7.2	9.9 ± 8.3
# Previous romantic partners (<i>M</i> ± <i>SD</i>)	1.4 ± 1.9	1.2 ± 1.5	1.6 ± 1.3	.6 ± 1.4
# Previous sexual partners (<i>M</i> ± <i>SD</i>)	1.0 ± 1.9	1.4 ± 3.1	2.3 ± 3.1	.2 ± 3.1
Birth country				
North America	38.2%	22.8%	35.0%	33.3%
East Asia	59.9%	77.2%	60.0%	66.7%
Other	1.9%	0.0%	5.0%	0.0%
Relationship status	38.2%	15.8%	40.0%	33.3%
Sexual activity status	32.6%	15.8%	35.0%	27.8%
Ever in relationship	65.7%	58.2%	75.0%	30.8%
Ever had intercourse	36.0%	36.4%	45.0%	38.9%

Table 4.2.

Demographic variables for Chinese men.

	Heterosexual	Bisexual	Same-sex
<i>N</i>	315	27	22
Age	20.1 ± 2.0	19.8 ± 1.6	20.1 ± 1.4
Years in Canada (<i>M</i> ± <i>SD</i>)	11.5 ± 8.9	11.6 ± 7.3	10.1 ± 8.4
# Previous relationships (<i>M</i> ± <i>SD</i>)	1.4 ± 1.8	1.4 ± 1.6	.9 ± .9
# Previous sexual parts (<i>M</i> ± <i>SD</i>)	1.6 ± 5.3	2.2 ± 3.1	2.4 ± 4.2
Birth country			
North America	44.2%	48.1%	36.4%
East Asia	52.2%	48.1%	45.5%
Other	3.5%	3.7%	18.2%
Relationship status	26.9%	25.9%	22.7%
Sexual activity status	24.9%	40.7%	27.3%
Ever in relationship	62.3%	59.3%	59.1%
Ever had intercourse	46.3%	57.7%	52.4%

Table 4.3.

Means and standard errors of the mean for all measures for Chinese women.

	Heterosexual (<i>n</i> = 375)	Bisexual (<i>n</i> = 60)	Same-sex (<i>n</i> = 20)	Asexual (<i>n</i> = 12)
VIA Heritage	66.73 ± .68	63.98 ± 1.80	61.27 ± 2.96	65.80 ± 3.08
VIA Mainstream	64.76 ± .75	61.54 ± 1.89	68.63 ± 2.70	62.76 ± 2.88
SESII-W Excitation	6.24 ± .25	6.77 ± .63	7.58 ± 1.18	2.12 ± .17
SESII-W Inhibition	6.36 ± .24	6.79 ± .60	7.47 ± 1.11	2.71 ± .10
SDI Dyadic Desire	21.97 ± .62	21.35 ± 1.52	32.31 ± 2.16	12.67 ± 3.38
SDI Solitary Desire	10.27 ± .41	13.92 ± 1.20	14.45 ± 1.90	6.14 ± 1.92
SAI-E Arousability	69.74 ± 1.63	68.05 ± 3.79	75.95 ± 3.55	46.05 ± 11.95
SAI-E Anxiety	22.87 ± 1.71	21.83 ± 3.74	19.62 ± 6.43	29.37 ± 12.17
DSFI Conservative Attitudes	35.96 ± .41	30.82 ± .83	34.10 ± 1.44	34.31 ± 1.55
DSFI Liberal Attitudes	51.25 ± .41	54.21 ± 1.01	54.80 ± 1.11	53.09 ± 1.17
DSFI Experience	9.60 ± .45	6.72 ± 1.03	12.85 ± 2.08	6.00 ± 2.21
DSFI Fantasy	4.14 ± .21	5.14 ± .50	5.95 ± 1.08	4.67 ± 1.52
SOI-R	2.03 ± .06	2.65 ± .17	2.90 ± .24	1.93 ± .28

VIA = Vancouver Index of Acculturation; SESII-W = Sexual Excitation Sexual Inhibition Index for Women; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

Table 4.4.

Pearson's r correlations between acculturation and sexuality variables for Chinese women.

Heterosexual oriented women ($n = 375$)

	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.32***		
Years in Canada	.01	.50***	
SESII-W Excitation	-.03	.32***	.15***
SESII-W Inhibition	-.04	.14	.09
SDI Dyadic	.04	.26***	.18***
SDI Solitary	.00	.11	.04
SAI-E Arousability	.13	.25***	.08
SAI-E Anxiety	-.15***	-.22***	-.10
DSFI Conservative Attitudes	-.13	-.36***	-.23***
DSFI Liberals Attitudes	.10	.29***	.09
DSFI Experience	.01	.18***	.15***
DSFI Fantasy	.07	.21***	.13
SOI-R	-.09	.21***	.09

Bisexual oriented women ($n = 60$)

	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.45		
Years in Canada	-.01	.46	
SESII-W Excitation	.06	.33	.37
SESII-W Inhibition	-.02	.06	.08
SDI Dyadic	.22	.25	.13
SDI Solitary	.16	-.04	-.13
SAI-E Arousability	.21	.30	.22
SAI-E Anxiety	-.09	-.37	-.07
DSFI Conservative Attitudes	-.01	-.29	-.40
DSFI Liberals Attitudes	.33	.56	.23
DSFI Experience	.01	.28	.09
DSFI Fantasy	.00	.14	.03
SOI-R	-.08	.24	.17

Same-sex oriented women ($n = 20$)

	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.29		
Years in Canada	.36	.37	
SESII-W Excitation	.16	.06	-.02
SESII-W Inhibition	-.02	-.15	.00
SDI Dyadic	-.08	.12	.10
SDI Solitary	-.37	-.39	-.37
SAI-E Arousability	.32	.20	.12
SAI-E Anxiety	.03	-.06	.06
DSFI Conservative Attitudes	.14	-.39	-.34
DSFI Liberals Attitudes	-.09	.31	.37
DSFI Experience	-.45	-.09	-.39
DSFI Fantasy	-.34	-.14	-.02
SOI-R	-.45	-.02	-.13

Asexual oriented women ($n = 12$)

	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.44		
Years in Canada	.05	.75	
SESII-W Excitation	.64	.15	-.12
SESII-W Inhibition	.11	.21	.01
SDI Dyadic	.73	.11	-.15
SDI Solitary	.46	.04	-.24
SAI-E Arousability	.71	.00	-.19
SAI-E Anxiety	-.54	-.57	-.49
DSFI Conservative Attitudes	-.44	-.27	-.12
DSFI Liberals Attitudes	.59	.34	.12
DSFI Experience	.29	.16	-.02
DSFI Fantasy	.54	.08	-.29
SOI-R	.01	.12	.25

VIA = Vancouver Index of Acculturation; SESII-W = Sexual Excitation Sexual Inhibition Index for Women; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 4.5.

Multiple regression of sexual outcome variables on acculturation in Chinese heterosexual oriented women (n = 375), controlling for age and length of residency in Canada. Regression models are with and without the interaction between heritage and mainstream acculturation. Standardized regression coefficients with 95% CIs are presented.

	R^2	Age	Years in Canada	VIA Heritage	VIA Mainstream	Heritage x Mainstream
SESII-W Excitation	.10***	-.01 [-.10, .08]	.03 [-.07, .14]	-.02 [-.12, .07]	.30 [.19, .41]*	
SESII-W Excitation	.10***	-.01 [-.10, .08]	.03 [-.07, .14]	-.12 [-.38, .15]	.19 [-.12, .50]	.18 [-.28, .63]
SESII-W Inhibition	.03	-.03 [-.12, .06]	.04 [-.07, .14]	-.08 [-.19, .04]	.14 [.01, .14]*	
SESII-W Inhibition	.03	-.03 [-.12, .06]	.04 [-.07, .14]	-.07 [-.31, .17]	.15 [-.13, .43]	-.02 [-.40, .37]
SDI Dyadic	.07***	.03 [-.06, .12]	.06 [-.05, .17]	-.02 [-.12, .07]	.24 [.13, .35]*	
SDI Dyadic	.08***	.03 [-.06, .12]	.06 [-.05, .17]	.10 [-.18, .38]	.39 [.08, .69]*	-.23 [-.69, .23]
SDI Solitary	.01	.05 [-.04, .14]	-.05 [-.16, .06]	-.03 [-.13, .07]	.10 [-.02, .21]	
SDI Solitary	.01	.05 [-.04, .14]	-.05 [-.16, .06]	.08 [-.16, .33]	.23 [-.05, .51]	-.22 [-.62, .19]
SAI-E Arousability	.08***	.08 [-.01, .17]	-.03 [-.13, .08]	.08 [-.01, .18]	.24 [.13, .35]*	
SAI-E Arousability	.09***	.08 [-.01, .17]	-.03 [-.13, .08]	-.08 [-.31, .14]	.05 [-.21, .31]	.30 [-.07, .68]
SAIE Anxiety	.05***	-.05 [-.14, .04]	.01 [-.10, .12]	-.07 [-.17, .03]	-.20 [-.31, -.08]*	
SAIE Anxiety	.06***	-.05 [-.14, .04]	.01 [-.10, .12]	-.19 [-.42, .04]	-.33 [-.60, -.07]*	.22 [-.16, .60]
DSFI Conservative Attitudes	.11***	-.01 [-.10, .08]	-.09 [-.19, .02]	.01 [-.08, .11]	-.29 [-.40, -.18]*	
DSFI Conservative Attitudes	.12***	-.01 [-.10, .08]	-.09 [-.19, .02]	.19 [-.04, .41]	-.09 [-.34, .17]	-.31 [-.68, .06]
DSFI Liberal Attitudes	.10***	.06 [-.03, .15]	-.07 [-.18, .03]	.00 [-.10, .10]	.34 [.23, .45]*	
DSFI Liberal Attitudes	.11***	.06 [-.03, .15]	-.07 [-.18, .03]	.17 [-.07, .42]	.55 [.27, .82]*	-.32 [-.73, .09]
DSFI Experience	.06***	.12 [.03, .21]*	.03 [-.08, .14]	-.08 [-.18, .02]	.20 [.08, .31]*	
DSFI Experience	.06***	.12 [.03, .21]*	.03 [-.08, .14]	.05 [-.22, .32]	.35 [.04, .66]*	-.24 [-.70, .22]
DSFI Fantasy	.04	.10 [.01, .19]*	.01 [-.10, .12]	-.03 [-.13, .06]	.19 [.07, .30]*	
DSFI Fantasy	.05***	.11 [.01, .20]*	.01 [-.10, .12]	.14 [-.13, .41]	.39 [.08, .70]*	-.32 [-.77, .13]
SOI-R	.07***	.02 [-.08, .11]	-.05 [-.16, .06]	-.22 [-.31, -.12]*	.29 [.18, .41]*	
SOI-R	.08***	.02 [-.08, .11]	-.05 [-.16, .06]	-.23 [-.45, -.01]*	.28 [.02, .54]*	.02 [-.35, .39]

VIA = Vancouver Index of Acculturation; SESII-W = Sexual Excitation Sexual Inhibition Index for Women; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

*** $p < .004$, statistically significant R^2 ; * 95% CI does not include 0, statistically significant β

Table 4.6.

Means and standard errors of the mean for all measures for Chinese men.

	Heterosexual (<i>n</i> = 315)	Bisexual (<i>n</i> = 27)	Same-sex (<i>n</i> = 22)
VIA Heritage	64.41 ± .77	63.85 ± 2.48	60.91 ± 2.87
VIA Mainstream	65.33 ± .77	67.86 ± 2.81	69.67 ± 2.25
SISSES Excitation	52.69 ± .40	55.11 ± 1.98	55.71 ± 1.73
SISSES Inhibition 1	31.77 ± .29	32.69 ± 1.20	29.51 ± 1.13
SISSES Inhibition 2	30.64 ± .25	31.52 ± 1.02	30.46 ± .89
SDI Dyadic Desire	26.66 ± .63	25.63 ± 2.04	28.23 ± 2.00
SDI Solitary Desire	16.32 ± .39	17.62 ± 1.33	18.60 ± 1.52
SAI-E Arousability	82.11 ± 1.50	84.00 ± 5.29	94.33 ± 4.35
SAI-E Anxiety	16.66 ± 1.81	23.74 ± 7.01	.87 ± 3.60
DSFI Conservative Attitudes	35.98 ± .47	31.04 ± 1.57	27.64 ± 1.49
DSFI Liberal Attitudes	53.47 ± .43	54.41 ± 1.64	56.95 ± 1.19
DSFI Experience	10.90 ± .51	11.78 ± 1.63	9.64 ± 1.71
DSFI Fantasy	5.18 ± .21	7.48 ± 1.06	8.55 ± .87
SOI-R	3.21 ± .08	3.88 ± .32	3.79 ± .27

VIA = Vancouver Index of Acculturation; SISSES = Sexual Excitation Scale/Sexual Inhibition Scale for Men; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

Table 4.7.

Pearson's r correlations between acculturation and sexuality variables for Chinese men.

Heterosexual oriented men (<i>n</i> = 315)			
	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.40***		
Years in Canada	-.10	.38***	
SISSES Excitation	.02	.04	.01
SISSES Inhibition 1	-.17***	-.30***	-.09
SISSES Inhibition 2	.07	.05	.07
SDI Dyadic	.07	.17***	.15
SDI Solitary	.09	.10	.07
SAI-E Arousability	.28***	.25***	-.04
SAI-E Anxiety	-.06	-.11	-.11
DSFI Conservative Attitudes	-.10	-.34***	-.14
DSFI Liberal Attitudes	.22***	.37***	.15
DSFI Experience	.16***	.23***	.12
DSFI Fantasy	.14	.24***	.04
SOI-R	-.05	.12	.15
Bisexual oriented men (<i>n</i> = 27)			
	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.24		
Years in Canada	.39	.43	
SISSES Excitation	-.30	-.03	-.30
SISSES Inhibition 1	.05	-.34	.12
SISSES Inhibition 2	-.05	.08	.17
SDI Dyadic	-.06	.17	-.05
SDI Solitary	.17	.04	.11
SAI-E Arousability	-.12	.29	-.10
SAI-E Anxiety	-.12	-.21	-.12
DSFI Conservative Attitudes	.44	-.20	.21
DSFI Lib. Att.	.15	.54	.28
DSFI Experience	-.41	.30	-.19
DSFI Fantasy	-.32	.46	.09
SOI-R	-.30	.21	-.24

Same-sex oriented men ($n = 22$)

	VIA Heritage	VIA Mainstream	Years in Canada
VIA Mainstream	.04		
Years in Canada	.04	.28	
SISSES Excitation	-.13	.18	-.21
SISSES Inhibition 1	-.40	-.19	-.26
SISSES Inhibition 2	-.28	-.23	.07
SDI Dyadic	-.02	.11	-.10
SDI Solitary	-.12	.45	-.28
SAI-E Arousability	.13	.34	.05
SAI-E Anxiety	.17	-.28	.20
DSFI Conservative Attitudes	-.13	-.56	-.08
DSFI Liberal Attitudes	.23	.44	-.09
DSFI Experience	.15	.16	.09
DSFI Fantasy	-.32	.46	-.40
SOI-R	.10	.45	.12

VIA = Vancouver Index of Acculturation; SISSES = Sexual Excitation Scale/Sexual Inhibition Scale for Men; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 4.8. *Multiple regression of sexual outcome variables on acculturation in Chinese heterosexual oriented men (n = 315), controlling for age and length of residency in Canada. Regression models are with and without the interaction between heritage and mainstream acculturation. Standardized regression coefficients with 95% CIs are presented.*

	R ²	Age	Years in Canada	VIA Heritage	VIA Mainstream	Heritage x Mainstream
SISSES Excitation	.00	.03 [-.07, .14]	-.01 [-.15, .12]	-.01 [-.13, .11]	.04 [-.09, .17]	
SISSES Excitation	.05	.05 [-.05, .16]	-.01 [-.14, .12]	-.81 [-1.22, -.40]	-.81 [-1.12, -.33]	1.31 [.67, 1.96]*
SISSES Inhibition 1	.08***	-.03 [-.14, .07]	.01 [-.12, .14]	-.06 [-.18, .07]	-.27 [-.40, -.13]*	
SISSES Inhibition 1	.12***	-.02 [-.12, .09]	.02 [-.12, .15]	-.64 [-1.05, -.23]	-.83 [-1.23, -.43]	.96 [.31, 1.61]*
SISSES Inhibition 2	.02	-.11 [-.22, .00]	.09 [-.05, .23]	.08 [-.05, .21]	-.00 [-.15, .14]	
SISSES Inhibition 2	.03	-.11 [-.21, .01]	.09 [-.05, .23]	-.17 [-.61, .27]	-.24 [-.67, .18]	.41 [-.28, 1.10]
SDI Dyadic	.04	.00 [-.11, .12]	.10 [-.03, .24]	.02 [-.11, .16]	.12 [-.03, .27]	
SDI Dyadic	.04	.00 [-.11, .12]	.10 [-.03, .24]	.08 [-.37, .54]	.18 [-.30, .65]	-.09 [-.84, .65]
SDI Solitary	.02	.06 [-.05, .18]	.06 [-.07, .18]	.07 [-.05, .20]	.04 [-.10, .17]	
SDI Solitary	.02	.06 [-.05, .17]	.06 [-.07, .18]	.17 [-.28, .61]	.13 [-.30, .56]	-.15 [-.86, .55]
SAI-E Arousability	.11***	.09 [-.02, .19]	-.10 [-.22, .03]	.18 [.06, .30]*	.21 [.08, .34]*	
SAI-E Arousability	.11***	.08 [-.02, .19]	-.10 [-.22, .03]	.24 [-.18, .66]	.26 [-.14, .67]	-.10 [-.76, .56]
SAIE Anxiety	.02	.00 [-.11, .12]	-.08 [-.21, .06]	-.05 [-.17, .08]	-.06 [-.20, .09]	
SAIE Anxiety	.02	.00 [-.11, .11]	-.08 [-.21, .06]	.23 [-.22, .67]	.20 [-.22, .63]	-.45 [-1.14, .25]
DSFI Conservative Attitudes	.12***	.01 [-.09, .11]	.02 [-.11, .15]	.06 [-.06, .17]	-.36 [-.49, .24]	
DSFI Conservative Attitudes	.13***	.00 [-.10, .10]	.02 [-.11, .14]	.46 [.06, .87]*	.03 [-.36, .42]	-.67 [-1.30, -.03]*
DSFI Liberal Attitudes	.16***	.11 [.00, .21]	.02 [-.10, .14]	.09 [-.03, .21]	.31 [.18, .43]*	
DSFI Liberal Attitudes	.16***	.10 [.00, .20]	.02 [-.10, .14]	.25 [-.15, .66]	.47 [.07, .86]*	-.27 [-.91, .37]
DSFI Experience	.08***	.12 [.01, .23]*	.04 [-.09, .16]	.10 [-.03, .22]	.16 [.02, .29]*	
DSFI Experience	.09***	.13 [.03, .24]*	.04 [-.08, .16]	-.36 [-.78, .07]	-.28 [-.69, .13]	.74 [.08, 1.41]*
DSFI Fantasy	.07***	.05 [-.05, .14]	-.06 [-.18, .06]	.03 [-.08, .14]	.23 [.11, .35]*	
DSFI Fantasy	.07***	.05 [-.05, .15]	-.06 [-.18, .06]	-.12 [-.51, .28]	.09 [-.29, .48]	.24 [-.38, .86]
SOI-R	.05	.13 [.02, .24]*	.04 [-.09, .17]	-.11 [-.23, .01]	.13 [-.01, .26]	
SOI-R	.05	.13 [.03, .24]*	.04 [-.09, .17]	-.25 [-.67, .17]	-.01 [-.42, .40]	.24 [-.43, .90]

VIA = Vancouver Index of Acculturation; SISSES = Sexual Excitation Scale/Sexual Inhibition Scale for Men; SDI = Sexual Desire Inventory; SAI-E = Sexual Arousability Inventory Expanded; DSFI = Derogatis Sexual Function Inventory; SOI-R = Sociosexual Orientation Inventory Revised

*** $p < .004$, statistically significant R^2 ; * 95% CI does not include 0, statistically significant β

Figure 4.1.

Simple slopes of the interaction between heritage and mainstream acculturation in predicting sexual excitation in heterosexual Chinese men ($n = 315$), controlling for age and number of years in Canada. VIA = Vancouver Index of Acculturation, SISSES = Sexual Inhibition Scale/Sexual Excitation Scale for Men.

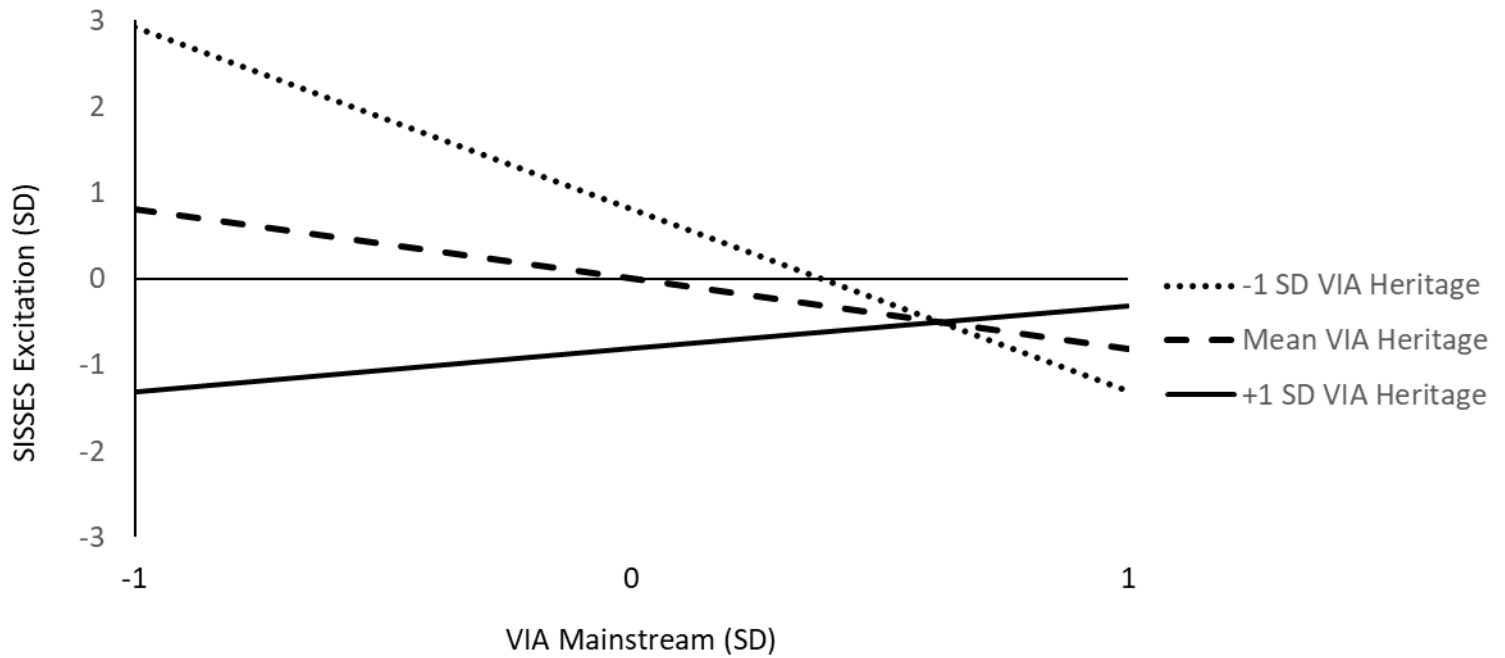


Figure 4.2.

Simple slopes of the interaction between heritage and mainstream acculturation in predicting sexual inhibition 1 (i.e., inhibition due to performance concerns) in heterosexual Chinese men ($n = 315$), controlling for age and number of years in Canada. VIA = Vancouver Index of Acculturation, SISSES = Sexual Inhibition Scale/Sexual Excitation Scale for Men.

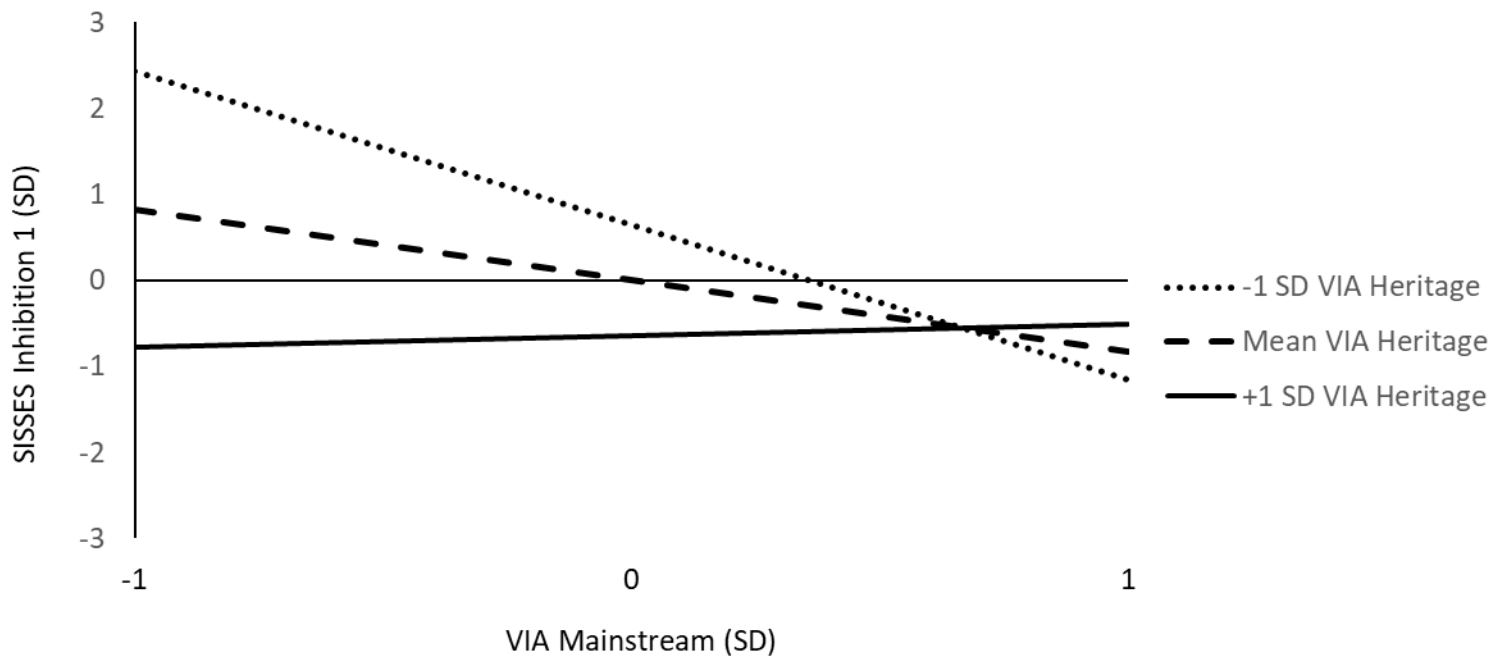


Figure 4.3.

Simple slopes of the interaction between heritage and mainstream acculturation in predicting experience in heterosexual Chinese men (n = 315), controlling for age and number of years in Canada. VIA = Vancouver Index of Acculturation, DSFI = Derogatis Sexual Functioning Inventory.

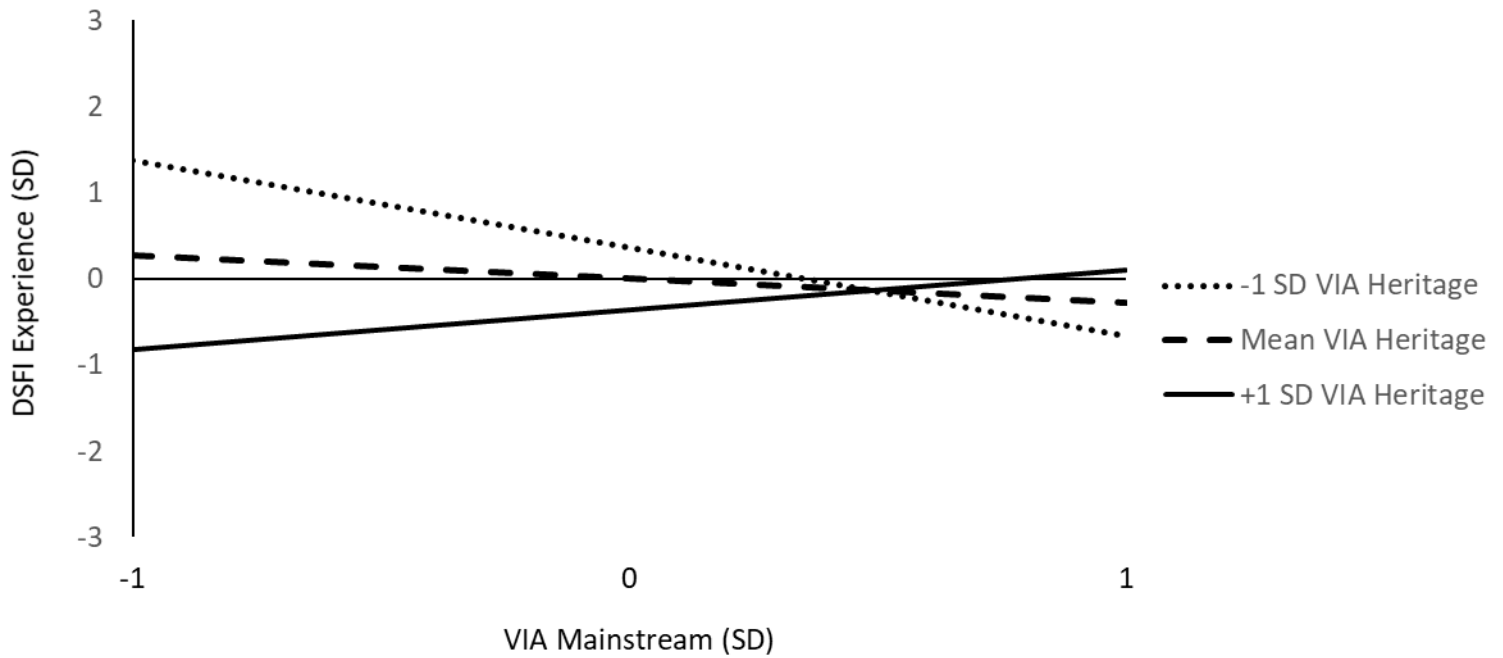
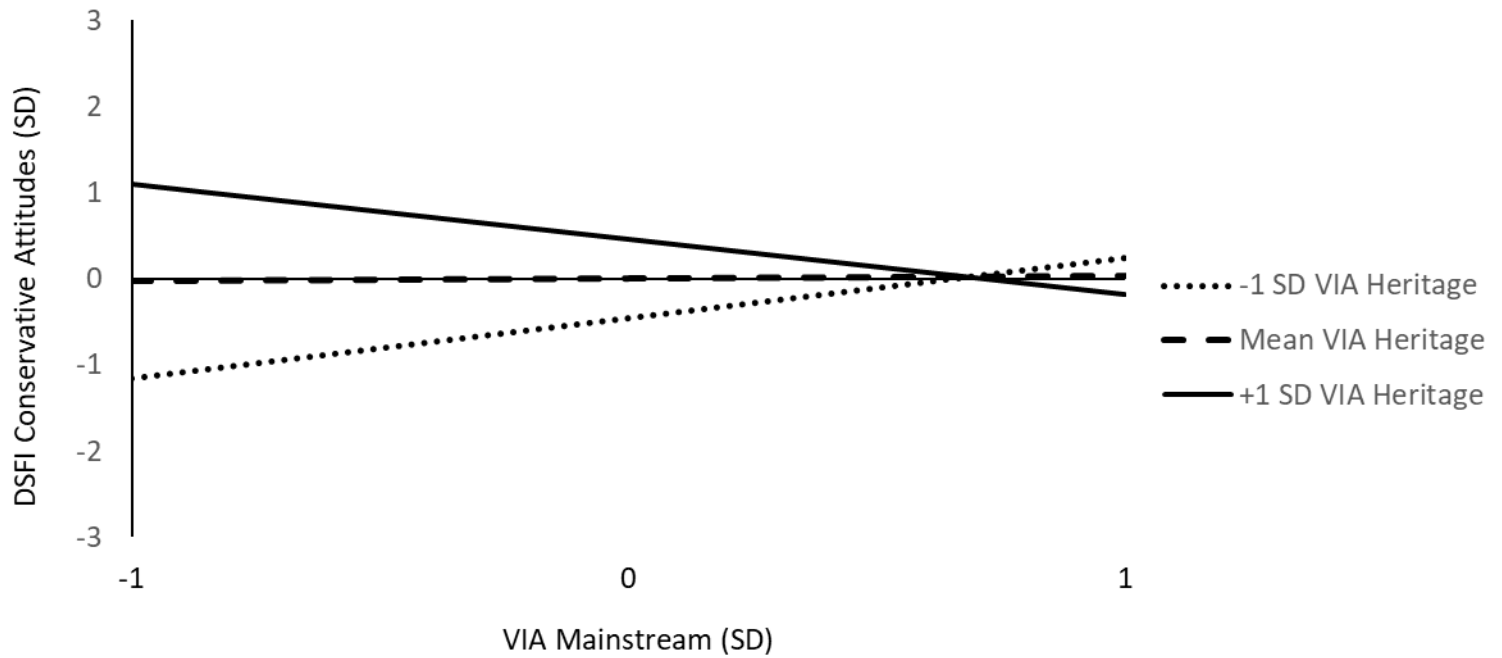


Figure 4.4.

Simple slopes of the interaction between heritage and mainstream acculturation in predicting conservative (i.e., restrictive) attitudes in heterosexual Chinese men ($n = 315$), controlling for age and number of years in Canada. VIA = Vancouver Index of Acculturation, DSFI = Derogatis Sexual Functioning Inventory.



Chapter 5: Examining Differences in Sexual Function, Asexuality, and Partnered Sexual Activity between Chinese and Euro-Caucasian Women

Results from previously described investigations replicated existing findings in the literature, and showed, in a sample of young women attending a Canadian university, that Chinese women reported lower levels of sexual response (sexual desire, sexual arousability) and lower levels of sexual activity (and experience) compared to Euro-Caucasian women. These ethnic differences were contextualized from the perspective of the dual control model, and between-group differences in sexual response and sexual activity were attributed to lower average levels of sexual excitation among Chinese women compared to Euro-Caucasian women. The difference in sexual excitation was further mediated by endorsement of more restrictive and less permissive attitudes on average by Chinese women in contrast to their Euro-Caucasian peers. Conversely, sexual inhibition did not emerge as being significantly different between ethnic groups. Among Chinese women, mainstream and heritage acculturation (Berry, 1997; Ryder et al., 2000) also appeared important in shaping sexual excitation and inhibition.

However, in order for these findings to be useful for theory-building and conceptualization of patient concerns in clinical treatment, further research is needed to understand the lens through which the observed patterns would be best understood. Previous qualitative research (Dang et al., 2017) has highlighted some of the emic (Agar, 2007) meaning of Chinese women's sexual desire (i.e., meaning that is made by Chinese women themselves based on their subjective lived experience). In contrast, the current study was aimed at elucidating or ascribing the etic (Agar, 2007) meaning to previously characterized patterns of differences and similarities between Chinese and Euro-Caucasian women in sexual excitation and inhibition (i.e., meaning that is made by an external observer based on attempts to arrive at

an objective or universal interpretation). Chinese women living in Canada will be exposed to frameworks (through seeking clinical services, consuming and participating in research, media and social discourse, etc.) for understanding sexual response derived from primarily Euro-Caucasian populations in a Western cultural context. As such, connecting and contrasting Chinese women's experiences of sexual response to these frameworks would be crucial for working towards inclusivity and equity in Canadian/Western sexuality research and therapy.

One lens through which lower levels of sexual response among young Chinese women, compared to their Euro-Caucasian peers, may be understood is that of sexual dysfunctions or disorders of sexual function (Althof et al., 2005). Characterization of Chinese women as being more prone to sexual dysfunctions may have important implications for clinical treatment, access to care, sexual/mental health outreach, and mental health stigmatization in this population. Sexual dysfunctions, as defined by the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), require the presence of both symptoms of impaired sexual response and clinically significant associated distress (American Psychiatric Association, 2013). Some previous studies have used measures of sexual function in identifying lower levels of sexual response for Chinese women in comparison to Euro-Caucasian women (e.g., Brotto et al., 2005); however, few studies have examined sexual distress within this population or connected differences in sexual function with the excitatory and inhibitory aspects of the dual control model. As such, the current study investigated differences between Chinese and Euro-Caucasian women in sexual function and sexual distress, as well as the association between sexual excitation and sexual inhibition with function and distress for both ethnicities.

Another perspective for understanding lower levels of sexual response among young Chinese women, compared to Euro-Caucasian women, may be that of asexuality (Bogaert, 2006;

Carrigan, 2011). Human asexuality is a relatively new area of research, and has been variously defined as an absence of attraction to others or lack of interest in sexual activities. It has generally been described as a sexual orientation in the contemporary literature (Brotto & Yule, 2017), though this remains an area of ongoing investigation. Asexual individuals have been differentiated from individuals diagnosed with a sexual desire disorder primarily due to asexual individuals not experiencing distress from their lack of attraction (Prause & Graham, 2007; Yule et al., 2015). Among young Chinese women, our previous findings in Chapter 2 incidentally found that Chinese women had a non-significant trend towards being more likely to identify as asexual compared to their Euro-Caucasian peers. An association between ethnicity and culture with asexuality may have implications for understanding the etiology of asexuality, the mechanisms by which culture and ethnicity interact with sexual orientation, and how clinicians work with the cultural factors in an individual patient's sexual response. As such, the current study investigated differences between Chinese and Euro-Caucasian women's identification with asexuality, and the association between sexual excitation and sexual inhibition with endorsement of elements of asexual identity.

The final framework through which ethnic differences in sexual response was examined was whether individuals were engaging in partnered sexual activity. Previous findings from Chapter 2 and 4 did not differentiate between women who were and were not engaging in partnered sexual activity; the dual control model and measures selected were applicable to women regardless of their specific level of partnered sexual activity. It was assumed that the level of partnered sexual activity and experience would be dependent upon levels of sexual excitation and/or inhibition. However, it was also possible that the relationship between dual control processes and other aspects of sexual response were primarily dependent on individual

decision making regarding whether to engage in partnered sex. This factor may be particularly important given that Chinese women did report significantly lower levels of partnered sexual activity, and previous studies have identified prohibitions against sex outside of committed romantic relationships as one of the most salient restrictive sexual attitudes among Chinese individuals (Dang et al., 2017; Higgins et al., 2002). The onset of partnered sexual activity has been reported as an important developmental milestone and initiation into adulthood in Western cultural contexts (Ott et al., 2006), while adherence to cultural values has been cited as a reason for Asian youth in maintaining abstinence (Trinh & Kim, 2020). As such, this study investigated how engaging in partnered sexual activity interacted with how ethnicity impacted sexual excitation and inhibition and other sexuality variables.

The current study sought to test the validity of the three above-described conceptualizations of the previously described group mean difference between Chinese and Euro-Caucasian women's sexual excitation. With regards to potential sexual difficulties and dysfunctions, the current study contrasted Chinese and Euro-Caucasian women's self-report of sexual functioning (including the subdomains of desire, arousal, lubrication, orgasm, satisfaction, and pain) and sexual distress (including general sexual distress, and anxiety about sexual performance). The study also examined whether within-group differences in sexual excitation and inhibition were associated with sexual functioning and distress similarly between Chinese and Euro-Caucasian women, in order to identify possible ethnic and cultural variation in how dual control processes may impact sexual dysfunctions. Potential ethnic differences in identification with asexuality, and within-group associations between asexuality and sexual excitation and inhibition, were also examined. With regards to the potential role of different frequencies of engaging in partnered sexual activity between young Chinese and Euro-Caucasian

women, the current study examined whether ethnic comparisons of sexual excitation and inhibition (as well as sexual functioning, sexual distress, and asexuality) were moderated by whether individuals reported currently engaging in partnered sexual activity.

Sexual excitation and inhibition were expected to show patterns similar to previous findings, where Chinese women would have lower average excitation but similar average inhibition compared to their Euro-Caucasian peers. As per the dual control model, higher inhibition and lower excitation were predicted to be associated with more difficulties in sexual function within each ethnicity, and thus Chinese women would have more sexual functioning difficulties than Euro-Caucasian women. For sexual distress, a higher mean among Chinese women would provide evidence that the patterns in other sexual variables is consistent with an interpretation of greater sexual dysfunctions within this population, whereas the absence of a significant difference in distress may suggest alternative interpretations of the cultural difference in sexual response. Chinese women may have also been more likely to endorse aspects of asexual identity compared to Euro-Caucasian women, as an alternative way of understanding their sexualities. It was also expected that moderation by engagement in partnered sex would not attenuate all ethnic differences in sexual response, function, or distress; this would be consistent with cultural factors having a broad impact on multiple domains of female sexuality, rather than solely on decision-making regarding engaging in or abstinence from partnered sex.

Methods

Participants

Chinese ($n = 230$) and Euro-Caucasian ($n = 188$) undergraduate women were recruited from a large Canadian university, completed online questionnaires, and were included in the data analysis. Ethnic category (Chinese or Euro-Caucasian) was based on participant self-report.

Individuals who self-identified as being women of Chinese or Euro-Caucasian ethnic descent, who had sufficient English reading skills to understand the survey materials, and who were over the age of 18 were invited to participate in the study. Individuals under the age of 18 or those who reported difficulties with English comprehension were excluded from the study. Further demographic variables for participants are reported in Table 5.1. All participants were attending university in Canada during the study.

Procedure

Participants were recruited through online ads at the university's psychology human subject pool system, from May 2018 to August 2019. The study was advertised as involving ethnicity, culture, and sexuality. Interested participants were directed to an online questionnaire hosted on the website www.qualtrics.com. Upon accessing the survey, participants had the opportunity to review consent documents, which explained their rights as participants, data confidentiality and security, and the sexual nature of some of the study questions. If they gave consent to participate, they then completed a series of online questionnaires. After completing the questionnaire, participants attended an online debriefing session, where they were informed about the intent of the study and invited to contact or meet with the researchers should they have further concerns and questions. Participants received one bonus mark towards an undergraduate psychology class in compensation for their participation. All procedures and methods were reviewed and approved by the university's behavioural research ethics board, and consistent with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Measures

Sexual excitation and inhibition. The Sexual Excitation/Sexual Inhibition Inventory for Women (SESII-W) (Graham et al., 2006) was administered to assess sexual excitation and

inhibition. The SESII-W is a self-report inventory consisting of 36 statements about factors that can influence sexual responding, which participants rate on a 5-point scale of their endorsement. The instrument contains eight factors, five of which form a higher order Excitation factor and three of which form a higher order Inhibition factor. Higher scores on the Excitation factor (range of scores from 1 to 4) indicate higher levels of sexual excitation, and higher scores on the Inhibition factor (range of scores from 1 to 4) indicate higher levels of sexual inhibition. In our sample, the Cronbach's α for the Excitation factor was .85 and for the Inhibition factor was .81.

Sexual function. The Female Sexual Function Index (FSFI) (Rosen et al., 2000) was administered to assess sexual function. The FSFI is a self-report inventory consisting of 19 questions asking about different aspects of psychological and physiological sexual response, which participants rate on a 5-point or 6-point (depending on question) scale of their frequency or intensity of difficulties in each aspect. These items form 6 specific subscales (Desire, Arousal, Lubrication, Orgasm, Satisfaction, and Pain) representing different domains of female sexual functioning and response, as well as a total score for the entire instrument. Higher scores indicate fewer difficulties and higher sexual functioning. The Desire subscale (range of scores from 1.2 to 6) and one question about overall sexual satisfaction (item 16) are applicable to all women, while all other subscales (range of scores from 0 to 6) and the total score (range of scores from 1.2 to 36) are only applicable to women currently engaging in partnered sexual activity. In the current study, the Desire subscale and the one question about overall sexual satisfaction were examined in all women, while the other subscales and total score were only examined in women who reported engaging in partnered sex. In our sample, the Cronbach's α for the Desire was .86 in the total sample and .83 in the subsample who were engaging in partnered sexual activity. The

Cronbach's α for the Arousal, Lubrication, Orgasm, Satisfaction, Pain, and total score were .89, .87, .92, .89, .96, and .91, respectively, in the subsample who were engaging in partnered sex.

Sexual distress. The Female Sexual Distress Scale (FSDS) (Derogatis et al., 2002) was administered to assess sexually-related personal distress. The FSDS is a self-report inventory consisting of 12 statements referring to different types of distressing emotions or thoughts related to sexual problems, behaviours, and relationships. Participants rate items on a 5-point scale of the frequency they experience each emotion or thought, and the total scale has a range of scores from 0 to 48. Higher scores indicate greater levels of distress. In our sample, the Cronbach's α for the total scale was .92.

Sexual performance anxiety. The Performance Anxiety subscale of the Sexual Function Scale (SFS) (McCabe, 2010) was administered to assess anxiety about one's own sexual performance and sexual difficulties. The SFS Performance Anxiety subscale is a self-report inventory consisting of 10 questions about emotions, thoughts, and behaviours related to one's experience of sexuality. Participants rate items on a 5-point scale of the frequency they experience each item. The total scale has a range of scores from 0 to 40. Higher scores indicate greater levels of anxiety. In our sample, the Cronbach's α for the total scale was .85.

Asexuality. The Asexuality Identification Scale (AIS) (Yule et al., 2015) was administered to assess experiences consistent with an asexual sexual orientation. The AIS is a self-report inventory consisting of 12 statements about sexual attraction or interest in sexual activity, which participants rate on a 5-point scale of their endorsement. The total scale has a range of scores from 1 to 60, with higher scores reflecting greater identification with asexuality. In our sample, the Cronbach's α for the total scale was .91. Participants were also asked in the demographics questionnaire to self-identify their sexual orientation.

Social desirability responding. The Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1998) was administered to assess social desirability responding. The instrument contains 40 statements that reflect positive impression management and self-deceptive positivity, which participants rate on a 7-point scale of their endorsement. Higher scores (range of scores from 0 to 40) indicate greater levels of socially desirable responding. In our sample, the Cronbach's α for the instrument was .72.

Psychological symptoms. The Brief Symptoms Inventory (BSI) (Derogatis & Melisaratos, 1983) was administered to assess general psychological distress and symptoms of common psychological disorders. The instrument contains 53 statements that reflect specific symptoms or distress, which participants rate how frequently they've experience each over the past 7 days on a 4-point scale. Higher scores (range of scores from 0 to 212) indicate greater levels of psychopathology and distress. In our sample, the Cronbach's α was .97.

Data Analysis

Comparisons of mean differences between Chinese and Euro-Caucasian participants were conducted using *t*-tests. Pearson's *r* correlations were used to examine correlations between sexual inhibition (SESII-W Inhibition) and sexual excitation (SESII-W Excitation) with other sexuality variables. Moderation effects of ethnicity and engaging in partnered sexual activity on sexuality variables were examined using 2 x 2 ANCOVA models with first-order interaction effects. Ethnic differences in correlations were examined using *z*-score comparisons between correlations coefficients. Bonferroni correction was used to control for type I error inflation, setting the alpha level at $p = .004$. Effect sizes of approximately Cohen's $d = .20$ or $r = .10$ were considered small, approximately Cohen's $d = .50$ or $r = .30$ were considered medium, and approximately Cohen's $d = .80$ or $r = .50$ or greater were considered large (Cohen, 1988).

Some missing data was observed in the dataset, but no variable was missing more than 10% of cases. As the pattern could not be shown to be missing completely at random, multiple imputation with 20 imputations was used for statistical analyses. Analyses were conducted using SPSS 20 (IBM Corporation).

Results

Sexual Function and Dysfunction

In the subsample of women who reported not currently engaging in partnered sexual activity, the means for Chinese women, compared to Euro-Caucasian women, were significantly lower for desire (FSFI Desire) and sexual distress (FSDS) at a medium effect size (see Table 5.2). Chinese women had on average higher satisfaction (FSFI Satisfaction) than Euro-Caucasian women at a small-to-medium effect size, though this did not reach statistical significance after applying Bonferroni correction of the alpha level. No significant mean difference between ethnicities were seen on sexual excitation (SESII-W Excitation), sexual inhibition (SESII-W Inhibition), and sexual performance anxiety (SFS Performance Anxiety). Other FSFI subscales were not examined as they were only applicable to women who were sexually active.

In the subsample of women who reported currently engaging in partnered sexual activity, the means for Chinese women, compared to Euro-Caucasian women, were significantly lower for sexual excitation (SESII-W Excitation) at a small-to-medium effect size (see Table 5.3). Chinese women on average had lower scores compared to Euro-Caucasian women for desire (FSFI Desire), arousal (FSFI Arousal), lubrication (FSFI Lubrication), lack of pain (FSFI Pain), and overall sexual function (FSFI total scale) at a small effect size, though this did not reach statistical significance after applying Bonferroni's correction. No significant mean difference between ethnicities were seen on sexual inhibition (SESII-W Inhibition), orgasm (FSFI Orgasm),

satisfaction (FSFI Satisfaction), sexual distress (FSDS), and sexual performance anxiety (SFS Performance Anxiety).

Among Euro-Caucasian women who were not engaging in partnered sexual activity, sexual excitation (SESII-W Excitation) was significantly positively correlated with desire (FSFI Desire) at a large effect size. It also showed a medium negative association with satisfaction (FSFI Satisfaction) but this did not reach statistical significance (see Table 5.4). Sexual excitation (SESII-W Excitation) was not significantly correlated with sexual distress (FSDS), or sexual performance anxiety (SFS Performance Anxiety). Sexual inhibition (SESII-W Inhibition) showed a medium negative association with desire (FSFI Desire), and medium positive associations with sexual distress (FSDS) and performance anxiety (SFS Performance Anxiety), though these associations did not reach statistical significance. It was not significantly correlated with satisfaction (FSFI Satisfaction). Sexual excitation (SESII-W Excitation) showed a medium negative association with sexual inhibition (SESII-W Inhibition), though this was not statistically significant. Significance testing in this subgroup was subject to reduced power as a result of the relatively low numbers of Euro-Caucasian women who reported not engaging in partnered sexual activity.

Among the sample of Chinese women who were not engaging in partnered sexual activity, sexual excitation (SESII-W Excitation) was significantly positively correlated with desire (FSFI Desire) at a large effect size (see Table 5.4). Sexual excitation (SESII-W Excitation) showed low-to-medium positive associations with sexual distress (FSDS) and sexual performance anxiety (SFS Performance Anxiety), though these associations did not reach statistical significance. It was not significantly associated with satisfaction (FSFI Satisfaction). Sexual inhibition (SESII-W Inhibition) showed a small-to-moderate negative association with

satisfaction (FSFI Satisfaction), though this was not statistically significant. It was not significantly correlated with other sexuality variables. Sexual excitation (SESII-W Excitation) was not significantly correlated with sexual inhibition (SESII-W Inhibition).

In comparison of the magnitude of correlation coefficients between Chinese and Euro-Caucasian women who were not engaging in partnered sexual activity, there were no statistically significant differences (see Table 5.4). Significance testing in this subgroup was subject to reduced power as a result of the relatively low numbers of Euro-Caucasian women who reported not engaging in partnered sexual activity.

Among Euro-Caucasian women who were engaging in partnered sexual activity, sexual excitation (SESII-W Excitation) was significantly negatively correlated at a medium effect size with sexual inhibition (SESII-W Inhibition) (see Table 5.5). Sexual excitation (SESII-W Excitation) was significantly positively correlated with arousal (FSFI Arousal) and overall sexual function (FSFI total score) at a medium effect size. Sexual excitation (SESII-W Excitation) showed non-significant small-to-medium positive associations with desire (FSFI Desire), (FSFI Lubrication), (FSFI Orgasm), and (FSFI Pain). Sexual excitation (SESII-W Excitation) was not significantly correlated with satisfaction (FSFI Satisfaction), sexual distress (FSDS), or performance anxiety (SFS Performance Anxiety). Sexual inhibition (SESII-W Inhibition) was significantly negatively correlated with desire (FSFI Desire), arousal (FSFI Arousal), lubrication (FSFI Lubrication), and overall sexual function (FSFI total score) at medium-to-large effect sizes; and significantly positively associated with sexual distress (FSDS) and performance anxiety (SFS Performance Anxiety) at medium-to-large effect sizes. It also showed small-to-medium, but not statistically significant, negative associations with orgasm (FSFI Orgasm) and lack of pain (FSFI Pain). It was not significantly associated with satisfaction (FSFI Satisfaction).

Among Chinese women who were engaging in partnered sexual activity, sexual excitation (SESII-W Excitation) was not significantly correlated with SESII-W Inhibition (see Table 5.5). Sexual excitation (SESII-W Excitation) was significantly positively correlated with desire (FSFI Desire), arousal (FSFI Arousal), lubrication (FSFI Lubrication), and overall sexual function (FSFI total score) at medium-to-large effect sizes. It showed a small-to-moderate positive but not statistically significant association with lack of pain (FSFI Pain); it was not significantly correlated with orgasm (FSFI Orgasm), satisfaction (FSFI Satisfaction), sexual distress (FSDS), or performance anxiety (SFS Performance Anxiety). Sexual inhibition (SESII-W Inhibition) was significantly negatively correlated with arousal (FSFI Arousal), lubrication (FSFI Lubrication), and overall sexual function (FSFI total score) at a medium effect size; it was significantly positively correlated with performance anxiety (SFS Performance Anxiety) at a medium effect size. Sexual inhibition (SESII-W Inhibition) showed small-to-medium, but not statistically significant, associations with desire (FSFI Desire) and orgasm (FSFI Orgasm). Sexual inhibition (SESII-W Inhibition) was not significantly associated with satisfaction (FSFI Satisfaction) or lack of pain (FSFI Pain).

Comparing the magnitude of correlation coefficients between Chinese and Euro-Caucasian women who were engaging in partnered sexual activity, there were no statistically significant differences (see Table 5.5).

In the subsample who reported currently engaging in partnered sexual activity, Chinese women had a significantly higher mean than Euro-Caucasian women for psychological symptoms (BSI), and a significantly lower mean for social desirability responding (BIDR), at medium effect sizes (see Table 5.3). In the subsample who reported not currently engaging in partnered sexual activity, there were no significant ethnic group differences and the magnitude of

the effect sizes were smaller, but trended in the same direction as the sexually active group (see Table 5.2). In both subsamples, social desirability responding (BIDR) and psychological symptoms (BSI) were not significantly correlated with sexual excitation (SESII-W Excitation) or inhibition (SESII-W Inhibition) (see Tables 5.4 and 5.5). Associations of social desirability responding (BIDR) and psychological symptoms (BSI) with sexual excitation (SESII-W Excitation) and inhibition (SESII-W Inhibition) did not differ significantly between ethnicities for the total sample or the subsample engaging in partnered sex.

Asexuality

In the total sample, Chinese women were more likely to report asexual for their sexual orientation compared to Euro-Caucasian women, though this difference was not statistically significant ($\chi^2(1) = 3.06, p = .080$; Table 5.1). In both the subsample of women who reported not currently engaging in partnered sexual activity and the subsample who reported they were, Chinese women were also on average significantly higher on asexual identification (AIS) compared to Euro-Caucasian women, at a medium effect size (see Tables 5.2 and 5.3).

Among the subsample who were not engaging in partnered sex (see Table 5.4), for Euro-Caucasian women, sexual inhibition (SESII-W Inhibition) was significantly positively correlated with asexual identification (AIS) at a large effect size, while sexual excitation (SESII-W Excitation) showed a small-to-medium but nonsignificant negative association with asexual identification. For Chinese women, sexual excitation (SESII-W Excitation) was significantly negatively correlated with asexual identification (AIS) at a medium effect size, but did not show a significant association between sexual inhibition (SESII-W Inhibition) and asexual identification. Comparison of the correlation coefficients between Chinese and Euro-Caucasian women showed a significant difference between ethnicities in the association between sexual

inhibition (SESII-W Inhibition) and asexual identification (AIS). Significance testing in this subgroup was subject to reduced power as a result of the relatively low numbers of Euro-Caucasian women who reported not engaging in partnered sexual activity.

Among the subsample who were engaging in partnered sex (see Table 5.5), for Euro-Caucasian women, sexual inhibition (SESII-W Inhibition) was significantly positively correlated with asexual identification (AIS) at a large effect size, while sexual excitation (SESII-W Excitation) was significantly negatively correlated with asexual identification at a medium effect size. For Chinese women, sexual excitation (SESII-W Excitation) was significantly negatively correlated with asexual identification (AIS) at a large effect size, but did not show a significant association between sexual inhibition (SESII-W Inhibition) and asexual identification.

Comparison of the correlation coefficients between Chinese and Euro-Caucasian women showed a significant difference between ethnicities in the association between sexual inhibition (SESII-W Inhibition) and asexual identification (AIS). The effect size in the association between sexual excitation (SESII-W Excitation) and asexual identification (AIS) was of a greater magnitude in Chinese women, though this difference was not statistically significant.

Interaction Effects of Ethnicity and Partnered Sexual Activity

Chinese women were less likely to be engaging in partnered sexual activity compared to their Euro-Caucasian peers ($\chi^2(1) = 14.50, p < .001$). ANCOVA moderation analyses showed non-significant trends for interaction effects between ethnicity and engaging in partnered sexual activity for satisfaction (FSFI Satisfaction), sexual distress (FSDS), and sexual performance anxiety (SFS Performance Anxiety) ($p > .05$; see Table 5.6). Significant interaction effects were not observed in sexual excitation (SESII-W Excitation), sexual inhibition (SESII-W Inhibition),

desire (FSFI Desire), and asexual identification (AIS). Other FSFI subscales were not examined as they are not applicable to women who are not engaging in partnered sexual activity.

For sexual distress (FSDS), examination of marginal means showed that, among women not engaging in partnered sexual activity, Chinese women had lower mean scores (i.e., lower distress) compared to Euro-Caucasian women. Euro-Caucasian women who were engaging in partnered sexual activity had a lower mean score than Euro-Caucasian women who were not, such that Chinese and Euro-Caucasian women who were engaging in partnered sexual activity had comparable mean scores (see Figure 5.1).

For satisfaction (FSFI Satisfaction), examination of marginal means showed that, among women not engaging in partnered sexual activity, Chinese women had higher mean scores (i.e., higher satisfaction) compared to Euro-Caucasian women. Euro-Caucasian women who were engaging in partnered sexual activity had a higher mean score than Euro-Caucasian women who were not, such that Chinese and Euro-Caucasian women who were engaging in partnered sexual activity had comparable mean scores (see Figure 5.2).

For sexual performance anxiety (SFS Performance Anxiety), examination of marginal means showed that, among women not engaging in partnered sexual activity, Chinese women had lower mean scores (i.e., lower performance anxiety) compared to Euro-Caucasian women. Chinese women who were engaging in partnered sexual activity had a higher mean score than Chinese women who were not, such that Chinese and Euro-Caucasian women who were engaging in partnered sexual activity had comparable mean scores (see Figure 5.3).

For sexual excitation (SESII-W Excitation) (see Figure 5.4) and desire (FSFI Desire) (see Figure 5.5), Chinese women had lower mean scores (i.e., lower excitation and lower desire) compared to their Euro-Caucasian peers in both the subsample who were engaging in partnered

sexual activity and the subsample were not engaging in partnered sexual activity. For asexual identity (AIS) (see Figure 5.6), Chinese women had higher mean scores (i.e., greater identification with asexuality) compared to their Euro-Caucasian peers in both the subsample who were engaging in partnered sexual activity and the subsample were not engaging in partnered sexual activity. For sexual inhibition (SESII-W Inhibition) (see Figure 5.7), women of both ethnicities showed lower means (i.e., lower inhibition) among those who were engaging in partnered sexual activity compared to those who were not.

Discussion

The current study was aimed at understanding how to best interpret ethnic differences seen between Chinese and Euro-Caucasian women on sexual excitation. Specifically, we examined whether lower average levels of sexual excitation in Chinese women were associated with more difficulties with sexual functioning and distress (which would suggest an interpretation of ethnic/cultural differences in frequency of sexual dysfunctions), with greater likelihood to identify with asexuality (which would suggest an interpretation of ethnic/cultural differences in sexual orientation), or with greater likelihood to choose sexual abstinence (which would suggest an interpretation of cultural/ethnic differences in sexual decision-making).

We found that, among young women who were engaging in partnered sexual activity, Chinese women scored lower on average compared to Euro-Caucasian women on sexual excitation. However, this ethnic difference was only a non-significant trend among women who were not engaging in partnered sex. Significant ethnic differences were not observed for sexual inhibition among both subsamples, though among women who were engaging in partnered sex there was a small non-significant trend where Chinese women had higher average sexual inhibition. These results were somewhat consistent with expectations and the findings from

Chapter 2, which highlighted differences in sexual excitation but not inhibition between Chinese and Euro-Caucasian women, but did not differentiate between women who were and were not engaging in partnered sexual activity.

Examination of interaction effects between ethnicity and sexual excitation also showed that, for both Chinese and Euro-Caucasian women, engagement in partnered sex was associated with greater excitation. However, engagement in partnered sex was associated with a larger increase in sexual excitation for Euro-Caucasian than Chinese women. This suggested that engaging in partnered sex may have engendered stronger experiences of excitation for Euro-Caucasian women. Alternatively, Chinese women may have been more likely to elect to engage in partnered sex at lower levels of sexual excitation compared to Euro-Caucasian women. These potential mechanisms appeared to have been overlaid on top of a higher baseline sexual excitation in Euro-Caucasian women; controlling for engagement in partnered sex did not entirely explain the mean ethnic difference in sexual excitation.

Sexual Function and Distress

Among women who were not currently engaging in partnered sexual activity, Chinese women reported significantly lower sexual desire but showed a non-significant trend of higher sexual satisfaction compared to their Euro-Caucasian peers. Euro-Caucasian women who were not engaging in partnered sex also reported significantly higher average sexual distress than their Chinese peers. Among women who were engaging in partnered sexual activity, Chinese women reported non-significant trends of lower sexual functioning in the domains of desire, arousal, lubrication, and pain than Euro-Caucasian women. However, they did not report more distress or performance anxiety, or lower satisfaction, than Euro-Caucasian women. The findings for sexual function were consistent with the study hypotheses and previously literature (Brotto et al., 2005;

Meston et al., 1996), though the effects observed presently were of a small effect size. Findings related to sexual distress, satisfaction, and performance anxiety however were not consistent with expectations, and suggested that Chinese women may not experience more distress despite lower sexual excitation and slightly less consistent sexual function.

Examination of interaction effects in sexual desire and satisfaction showed that, in both ethnicities, engaging in partnered sexual activity was associated with higher levels of desire and satisfaction. For sexual desire, it appeared that Chinese women reported lower average desire than Euro-Caucasian women regardless of sexual activity status. However, for sexual satisfaction, it was observed that Euro-Caucasian women who were not engaging in partnered sex, in comparison to all other subgroups, were the least satisfied. Similarly, for sexual distress, Euro-Caucasian women who were not engaging in partnered sex appeared to have been most distressed on average compared to other subgroups. There was also a small non-significant trend for sexual performance anxiety such that Chinese women who were not engaging in partnered sex displayed lower average levels of performance anxiety than other subgroups. These patterns may suggest that Chinese cultural may have protected against distress and dissatisfaction among non-sexually active women, and that Western culture may have engendered greater distress and dissatisfaction among non-sexually active women.

Diagnosis of sexual dysfunctions requires both symptoms of impaired sexual function and distress about these symptoms (American Psychiatric Association, 2013). The findings, and in particular the lack of significant difference in sexual distress or satisfaction, did not provide clear evidence for conceptualizing young Chinese women's lower levels of sexual response, on average compared to Euro-Caucasian women, as representing an elevated level of diagnosable sexual dysfunction among Chinese women. These findings also appeared somewhat consistent

with British population-based findings which showed that 51.2% of sexual active women reported some difficulties in sexual response, but only 10.9% reported distress about their sex lives (Mitchell et al., 2013); sexual response difficulties may not necessarily translate into significant distress for many women in non-clinical samples (regardless of ethnicity). However, this absence of evidence did not conclusively prove that Chinese women's (on average) less-consistent sexual response and function do not contribute to increased rates of sexual dysfunction, particularly in light of higher anxiety to sexual arousal seen in Chinese women compared to Euro-Caucasian women in previous chapters. The possibility that Chinese women may be more vulnerable to sexual dysfunctions requires further investigation.

Relation of Dual Control Model with Sexual Function and Distress

Among Chinese and Euro-Caucasian women who were engaging in partnered sex, sexual excitation and sexual inhibition were associated with overall sexual function in the expected directions. Sexual desire, arousal, and lubrication were consistently associated with sexual excitation and inhibition, while orgasm and pain had trends that did not reach statistical significance. Sexual excitation was not significantly associated (but did display a nonsignificant small-to-medium positive association) with desire in Euro-Caucasian women only, potentially due to a ceiling effect or range restriction in sexual desire among sexually active Euro-Caucasian women. These findings were generally consistent with expectations, and with the theoretical conceptualization of the dual control model wherein high inhibition or low excitation can cause difficulties in sexual function.

Among women who were engaging in partnered sex, in both ethnicities, higher sexual inhibition was generally associated with higher levels of sexual distress and performance anxiety. This was consistent with predictions. However, sexual excitation was not prominently

associated with distress or performance anxiety in either ethnicity. As well, sexual satisfaction was not associated with excitation or inhibition in either ethnicity. These findings suggested that sexual inhibition was the primary contributor to negative emotional reactions or negative appraisals of reduced sexual response. The results provided some evidence that when Chinese and Euro-Caucasian women do engage in partnered sexual activity, their sexual function, satisfaction, and potential distress were subject to approximately similar excitatory and inhibitory regulatory processes, despite cultural and ethnic differences in the absolute mean level of reported excitation and inhibition.

Among women who were not engaging in partnered sex, sexual excitation was positively associated with sexual desire in both ethnicities. However, there were findings which potentially suggested that sexual excitation and sexual inhibition were differentially associated with satisfaction and distress between Chinese and Euro-Caucasian women. Most notably, the trends of association of inhibition with satisfaction differed between Chinese and Euro-Caucasian women, such that the small magnitude association was positive in Chinese women but negative in Euro-Caucasian women. As well, inhibition showed a medium non-significant association with sexual distress in Euro-Caucasian women but not Chinese women. Meanwhile, sexual excitation showed small-to-medium non-significant positive associations with more sexual distress and performance anxiety in Chinese women, but not in Euro-Caucasian women. These patterns potentially suggested that Chinese and Euro-Caucasian women who were not sexually active may have ascribed different meanings to their experiences of excitation and inhibition. It is important to note that the patterns described here did not reach statistical significance; this may have been due to the reduced sample size, particularly for Euro-Caucasian women not engaging in sexual activity. Further replication is needed to verify the reliability of these effects.

The findings in women who were not engaging in partnered sex suggested that Chinese and Euro-Caucasian women may have different understandings of their experiences of sexual excitation and inhibition. For Chinese women, due to the prominence of restrictive norms related to the expression of sexuality and engagement of sexual activity for young women, high intrinsic sexual excitation may have been experienced as more distressing as it would represent a psychological and physiological experience that was incongruent with social expectations. Conversely, high levels of sexual inhibition may have been experienced as a socially congruent ability to have self-control over one's sexuality. In contrast, Euro-Caucasian women may have been exposed to greater levels of permissive sexual norms; permission for sexual expression may have also become enmeshed with expectations one does engage in sexual activity or be a competent and attractive sexual partner. Thus, high levels of sexual inhibition may have been experienced as particularly distressing, being interpreted as a problematic barrier to meeting socially-expected levels of sexual expression. A lack of sexual excitation may have also induced greater frustration over one's inconsistent sexual response. These hypotheses require additional investigation to further elucidate potential differential impacts of cultural factors on individuals who are abstinent from partnered sexual activity.

Asexuality

The current study found that, on average, Chinese women reported greater identification with aspects of asexual identity than their Euro-Caucasian peers. This pattern held true for both the subsample who were and who were not engaging in partnered sex. This mean difference had the largest effect size of all group-mean comparisons made in the current study. Similar patterns were seen when examining interaction effects by ethnicity and engagement in partnered sex; engaging in partnered sex was associated with less identification with asexual experiences in

both ethnicities, but Chinese women consistently reported higher identification with asexual experiences than Euro-Caucasian women regardless of level of partnered sexual activity. These effects were consistent with our prediction. The contrast between Chinese women's experiences of sexuality in our sample also dovetails with the experiences of asexual individuals (who were primarily Euro-Caucasian) described in the literature (Bogaert, 2006; Brotto et al., 2010, 2015; Brotto & Yule, 2017). Both Chinese women and (primarily Euro-Caucasian) asexual individuals, compared to sexual Euro-Caucasian individuals, tend to report on average lower sexual excitation but not higher sexual inhibition (Prause & Graham, 2007), and lower sexual function and response but not higher sexual distress (Brotto et al., 2015). Older East Asian women were also more likely to report sex as being less important compared to other ethnic groups (Cain et al., 2003). Therefore, it is possible that some of the ethnic differences in sexual excitation might be explained by asexuality. However, more research is needed to make this conclusion.

The current study was not able to identify whether the observed contrast in sexuality variables among Chinese and Euro-Caucasian women represented the same underlying mechanism as the previously reported contrasts between asexual and sexual individuals in Western samples. Despite robust differences on scores in the AIS, Chinese women were not significantly more likely (though there was a non-significant trend), to label themselves as asexual compared to Euro-Caucasian women when asked to identify their sexual orientation. This was likely due to no subgroup mean having approached the empirically determined cutoff score for identifying participants as "asexual" or "sexual"; the cutoff score on the AIS is 40 out of 60 (Yule et al., 2015), while the highest subgroup mean (Chinese women not engaging in partnered sex) was only 26 out of 60. It was also possible that similarities between the impact of ethnicity and asexuality may have been superficial, and did not represent shared underlying

developmental or regulatory processes. For example, our research on ethnic differences has largely focused on cultural factors, while studies on asexuality have at times emphasized the potential role of biological factors (Yule et al., 2014). However, asexuality is also a diverse group that includes individuals identifying as demisexual, gray-asexual, and pansexual, and thus is not a monolithic concept (Bogaert, 2006; Carrigan, 2011). This heterogeneity could theoretically encompass sociocultural factors that may differ for Chinese and Euro-Caucasian women. If overlapping etiologies between asexuality and ethnic differences exist, it would provide greater opportunities for understanding both phenomena. For example, it could suggest a potential role for sociocultural factors to influence the development of asexuality and sexual orientation in general, and a potential role for early-life perinatal biological factors in the difference between Chinese and Euro-Caucasian individuals. Further research is necessary to better understand the patterns observed in the present findings.

“Asexual” is often also used as a broader umbrella term for a range of experiences and more specific identities that involve low or contextually limited (sexual) attraction to others, or a lack of intent to engage in sexual activity (Brotto & Yule, 2017; Carrigan, 2011; Scherrer, 2008). “Demisexual”, defined as one experiencing sexual attraction to another only in the context of a strong emotional bond or a committed romantic relationship (“Demisexual - AVENwiki”, 2019), in particular may be an important area for further investigation among Chinese women. This identity was endorsed by about 10% of participants in a recent survey of online asexuality community members (Weis et al., 2020). Previous research have reported that some Chinese women reported experiencing sexual desire only towards their longstanding romantic partners (Dang et al., 2017), and lower interest in sex outside of committed relationships (Wright & Reise, 1997). This would also be consistent with findings in Chapter 2 of lower mean levels of

interest/engagement in casual sex (sociosexual orientation) among Chinese women.

Demisexuality, as a novel concept within the broader novel concept of asexuality which has emerged in a contemporary Western context, may not necessarily be the meaning that most of the Chinese women in our sample ascribed to their experiences; however, future research may reveal potential shared psychological, physiological, and sociocultural mechanisms. Further investigation into the role of romantic relationships may be useful in elucidating the interaction between asexuality as an orientation and cultural/ethnic differences between Chinese and Euro-Caucasian women's experiences of sexuality.

Interpreting Sexuality through the Lens of Culture

The current findings, as a whole, highlighted the complexities of how cultural and ethnic factors may impact different aspects of sexuality. These results were somewhat consistent with the existing conceptualizations of Chinese versus Western cultural norms about women's sexuality identified in the literature (Brotto et al., 2005; Dang et al., 2017; Meston et al., 1996, 1998). Previous studies have highlighted messages about sexual guilt (Woo et al., 2011), shame (Kim & Ward, 2007), and impropriety (Dang et al.) common in Chinese culture. Chinese adolescents and young adults are also often discouraged from investing time and energy into romantic and sexual pursuits, and rather to focus on academics and careers instead (Kim & Ward, 2007). Chinese women, compared to Euro-Caucasian women, may therefore have been exposed to more messages about the importance of restricting of sexual expression, and discouraged from engaging in actions that would foster greater awareness of sexual excitement. This reduced excitement may then have caused reduced levels of partnered sexual activity, and less consistent sexual functioning and response when partnered sexual activity does occur. Low levels of sexual activity may then also further limit exploratory sexual experiences that would

otherwise engender more recognition of intrinsic sexual desire or arousal, or more knowledge of contexts that would be facilitative of responsive desire or arousal.

Similarly, culturally-bound messages about the impropriety of sexual arousal and expression may also promote higher levels of sexual inhibition. In our sample, we did not find evidence of significantly higher sexual inhibition in Chinese than Euro-Caucasian women. This may have been due to our current sample not having been sufficiently powered to detect a smaller effect size. Furthermore, the findings in Chapter 2, wherein the ethnic mean difference in anxiety related to arousal did not fit well with other findings of group differences in sexual response suggested that an anxiety-oriented inhibitory pathway may have played a role. Nevertheless, the current findings suggested that the mean differences in sexual inhibition, if present, were smaller in magnitude than mean differences in sexual excitation. This is potentially consistent with the dual control model, which postulates that the secondary “conceptual nervous system” representing sexual inhibition exists to impinge upon the primary “conceptual nervous system” of sexual excitation (Bancroft & Janssen, 2000). Sexual inhibition is only functionally applicable and meaningful in the presence of sufficient sexual excitation (i.e., inhibition is relevant only if there is something to inhibit). From this, if the level of sexual excitation is already low, the level of sexual inhibition does not necessarily need to be high in order to effectively restrict sexual behaviours and response. This would be consistent with previous findings about Asian women reporting sex as being less important compared to other ethnic groups (Cain et al., 2003). As discussed above, the relative apparent importance of low excitation versus high inhibition may also have resulted in the lack of a significant ethnic difference in sexual distress and satisfaction; an absence of intrinsic desire and arousal may compliment social norms related to abstinence or restriction of sexual activity for young women.

These findings appeared consistent with more general cultural factors that are not directly related to sexual response. Previous studies have shown that Western culture and Euro-Caucasian individuals tended to more strongly prefer positive valence emotions with a high arousal component (e.g., happiness), whereas East Asian culture and individuals tended to more strongly prefer positive valence emotions with a low arousal component (e.g., tranquility) (Tsai et al., 2006). Canadian children have been shown to be more likely to make decisions based on perceived interest or excitement, whereas Taiwanese children were more likely to make decisions based on perceived utility (Tsai et al., 2007). East Asian individuals have also been shown to experience less distress resulting from conformity with external expectations compared to Euro-Caucasian individuals (Falk et al., 2010). Being able to meet social expectations despite one's internal desires has been identified as an important aspect of self-construal and agency in East Asian cultures, in contrast to Western cultural emphasis on being able to enact one's internal qualities in the face of social pressures (Markus & Kitayama, 1991). These broader differences in sensation seeking may also translate to the sexuality domain, in that high levels of sexual excitation and arousal may be less valuable or motivating for Chinese women than Euro-Caucasian women. As such, Chinese women may have reported no more sexual distress despite some evidence of lower sexual response compared to their Euro-Caucasian peers, as sexual arousal may be less rewarding and restricting sexual activities less distressing. Findings of higher anxiety to sexual arousal in Chinese women (in Chapter 2) may further compound the lack of experiencing of arousal as rewarding.

Factors related to immigration and being an ethnic minority may have also played a role in some of the group differences seen. The Chinese women from our study were drawn from a population that included those born in Canada and other Western countries, immigrants to

Canada and other Western countries from East Asian countries, and international students from East Asian countries. For international students and recent immigrants, travel to Canada may have meant a pause or ending of the romantic relationships in which sexual activities would have occurred. For instance, one participant in this sample emailed the researchers to specify that she was not currently sexually active because her boyfriend remained in China while she studied abroad in Canada. Immigrant populations have also been recognized as having unique characteristics, such as a greater familial emphasis on academic achievement (Feliciano & Lanuza, 2016). This may have exacerbated cultural de-emphasis on pleasure-seeking pursuits such as sexual activity among young Chinese women. Chinese women in our sample also represented a visible ethnic and cultural minority, which may be more vulnerable to systematic discrimination and prejudice compared to Euro-Caucasian individuals in Western society. This minority stress (Grossman & Liang, 2008) may have also contributed to some of the patterns observed, including the higher rates of overall psychological distress. However, past research has found similar patterns when examining Chinese individuals living in East Asian countries (e.g., Cain et al., 2003; Higgins et al., 2002), suggesting that migration-related factors were unlikely the only cause of group differences for sexual response and function.

Despite most of the current discussion's emphasis on differences between Chinese and Western cultural factors in relation to women's sexuality, it is important to recognize the overlap between Chinese and Euro-Caucasian individuals' sexuality and between Chinese and Western culture as a whole. In the current sample, this was particularly notable in the small effect sizes observed for sexual function among women who were engaging in partnered sexual activity. This may be unsurprising given that Chinese people living in Canada are exposed to both Chinese and Western/Canadian cultural ideas and contexts, including norms about sexuality, as a

result of navigating acculturation in a multicultural context (Ahrold & Meston, 2010; Berry, 1997; Brotto et al., 2005; Ryder et al., 2000). As well, both Chinese and Western cultures are similarly grappling with patriarchal traditions in a context of rapid ideological and material change in the late 20th and early 21st centuries, and both cultures contain sexually prohibitive belief systems which arose in their history that continue to impact discourse and policy in the contemporary era (e.g., Ng & Lau, 1990; Runkel, 1998; Santos & Harrell, 2017). The evolutionary-mediated processes of selecting mates (Buss & Schmitt, 1993) and rearing offspring (Miller et al., 2005) also impact the biological aspects of sexuality for women regardless of cultural background. Therefore, research should continue to examine experiences of both cultural differences and common humanity within the psychology of sexuality.

Limitations and Future Directions

One methodological limitation of the current study was using only the Satisfaction subscale of the FSFI in assessing sexual satisfaction, and using only a single item from this scale for comparisons in women who were not engaging in partnered sex. Sexual satisfaction represents a complex and multi-dimensional construct. As such, a more comprehensive measurement of sexual satisfaction would be important in future studies (Mark et al., 2014; Shaw & Rogge, 2016), which may allow for more conclusive findings in the interaction between this construct with ethnicity, culture, and sexual response. Examination of forms of sexual inhibition would also be important in future studies, as Chinese and Euro-Caucasian women may experience inhibition from different sources (e.g., inhibition due to shame and guilt of expressing sexual excitation versus inhibition due to fear of having sexual functioning difficulties) despite similar mean levels of overall sexual inhibition between Chinese and Euro-Caucasian women.

Future studies may also benefit from examination of the interaction of relationship adjustment and satisfaction with sexual response and function variables.

The current study was limited by using a correlational approach. Though this is a common issue in many studies in this area, it was particularly salient in the current investigation as it limited the ability to interpret the causal relationship between sexual excitation and inhibition measures with sexual functioning and distress outcomes. It cannot be determined currently whether higher levels of sexual excitation in Euro-Caucasian individuals was the cause or effect of increased rates of partnered sexual activity and more consistent sexual functioning; there may also have been a reciprocal interaction between these domains. Similarly, it was not possible to determine the specific causal relationship between ethnic differences in sexual excitation and endorsement of aspects of asexual identity. Future studies using longitudinal methods may be useful for elucidating the temporal precedence of the relationship between sexuality variables, particularly if participants can be tracked over a number of years as they navigate changes in relationships and level of sexual experience. Daily diary designs and laboratory manipulations may also be useful in future research in this area.

As the study used a self-selected sample, it may not have represented the entire range of women in the population. It was possible that individuals who were the most uncomfortable with sexual topics elected to not participate in the study, resulting in a biased sample that focused primarily on more sexually permissive individuals in our population. Individuals who avoided our study may have been more likely to experience sexual dysfunction and distress, which would not be represented in our data. If this issue was applicable to different proportions of Chinese and Euro-Caucasian individuals, our findings may have under- or over-represented group differences. Even if there was no ethnic moderation of this sampling bias (Woo et al., 2010), it could still

have resulted in the findings and conclusions not being applicable to individuals who were struggling most with sexual difficulties. Future research would benefit from using other approaches to sampling, including broader population-based census methods, examination of clinical populations, and individual case studies. All sampling techniques which rely on the participant's informed consent are subject to this limitation, but a multi-methods approach may allow for a more representative overall understanding of the populations.

There were additional limitations on the representativeness of the current sample to all Chinese and Euro-Caucasian women. The sample focused on young women attending university, and as such may not generalize to older women or women not pursuing post-secondary education. The current study also focused on a sample of Chinese women who were living in Canada, and as such were exposed to both Chinese and Canadian cultural messages. As such, these findings may not necessarily be translatable to an understanding of Chinese culture in isolation, and especially to individuals living in East Asian countries where the mainstream culture is Chinese. Although the current study did not make specific hypotheses about sexual orientation or gender diversity, and the questionnaires used are not only applicable to cis-gender or heterosexual individuals, the large proportion of exclusively or mostly heterosexual women in the current sample likely meant that the current findings are representative only of cis-hetero-normative experiences. As such, follow-up studies should specifically focus on examining same-sex oriented and bisexual oriented Chinese women, as well as diversity in gender expression and experience among Chinese women, with regards to sexual response and function.

Conclusion

The current study focused on investigating how to best understand previously-established group differences between young Chinese and Euro-Caucasian women in sexual response and

sexual excitement. We were able to replicate previous research showing that Chinese women reported lower levels of sexual excitement and sexual function compared to their Euro-Caucasian peers. We did not find evidence that Chinese women experienced higher levels of sexual inhibition, distress, dissatisfaction, or performance anxiety. We also found that Chinese women had higher scores on a measure of asexuality, and that the cultural impact on sexual response may have some similarities to the etiology of asexuality. Among women who were not engaging in partnered sexual activity, Chinese women reported lower levels of distress, dissatisfaction, and performance anxiety; ethnic differences in sexual excitement were consistent regardless of whether women were sexually active. Sexual inhibition and sexual excitement were similarly associated with most other sexuality variables among Chinese and Euro-Caucasian women. This research presented novel findings on how etic meaning may be ascribed to cultural differences in sexual response in order to better understand Chinese women's sexualities.

Table 5.1

Demographic characteristics of Euro-Caucasian (n = 188) and Chinese (n = 230) women.

Ethnic Category	Age	Years in Canada	# Prev. Rel. Part.	# Prev. Sex Part.
Euro-Caucasian	21.6 (6.4)	16.8 (8.2)	2.2 (2.6)	6.3 (8.8)
Chinese	20.2 (1.6)	11.2 (7.8)	1.8 (2.0)	1.8 (3.5)

		Euro-Caucasian	Chinese
Sexual Orientation	Exclusive opposite-sex oriented	45.8%	59.2%
	Mostly opposite-sex oriented	37.3%	20.6%
	Bisexual oriented	5.0%	6.5%
	Mostly same-sex oriented	5.6%	4.4%
	Exclusive same-sex oriented	1.0%	2.4%
	Asexual	1.6%	4.3%
	Other or did not respond	3.7%	2.5%
Partnered sexual activity ¹	Yes	71.3%	52.2%
	No	28.7%	47.9%
Relationship Status ²	Monogamous and sexually active	47.9%	43.9%
	Monogamous and not sexually active	1.6%	7.0%
	Open relationship	3.2%	0.4%
	Single and sexually active	17.6%	4.8%
	Single and not sexually active	29.8%	43.9%

¹ As queried on the Female Sexual Function Index

² As queried on the demographics survey

Table 5.2.

Means, standard deviations, and t-test results for Euro-Caucasian and Chinese women who reported not currently engaging in partnered sexual activity, for sexual excitation, sexual inhibition, desire and satisfaction subscales of sexual functioning, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms. Ethnicity coded as 0 = Euro-Caucasian, 1 = Chinese.

		Euro-Caucasian (n = 51)		Chinese (n = 102)		t	Cohen's d
		M	SD	M	SD		
SESII-W	Excitation	2.57	.35	2.46	.47	1.42	.27
	Inhibition	2.81	.46	2.77	.42	.41	.09
FSFI	Desire	3.32	1.14	2.77	1.08	2.93***	.50
	Satisfaction ¹	2.42	1.29	3.18	1.97	-2.53	-.46
FSDS		17.25	10.84	11.25	10.50	3.40***	.56
SFS	Perform. Anx.	20.16	8.78	17.38	6.35	1.64	.36
AIS		20.62	8.40	26.00	9.21	-3.40***	-.61
BIDR		11.41	4.70	10.40	4.88	1.25	.21
BSI		39.81	34.61	49.31	41.03	-1.15	-.25

SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women; FSFI = Female Sexual Function Inventory; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

¹ Instead of the full FSFI Satisfaction subscale, only item 16 of the FSFI was used for this analysis

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 5.3.

Means, standard deviations, and t-test results for Euro-Caucasian and Chinese women who reported currently engaging in partnered sexual activity, for sexual excitation, sexual inhibition, sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms. Ethnicity coded as 0 = Euro-Caucasian, 1 = Chinese.

		Euro-Caucasian (n = 134)		Chinese (n = 120)		t	Cohen's d
		M	SD	M	SD		
SESII-W	Excitation	2.83	.35	2.67	.42	3.43***	.43
	Inhibition	2.56	.55	2.67	.47	-1.62	-.20
FSFI	Desire	4.20	1.04	3.86	1.01	2.66	.33
	Arousal	4.84	.99	4.55	1.09	2.28	.29
	Lubrication	5.32	.89	5.05	1.05	2.16	.27
	Orgasm	4.16	1.66	3.82	1.50	1.69	.21
	Satisfaction	4.78	1.30	4.71	1.28	.45	.06
	Pain	4.89	1.45	4.42	1.84	2.29	.29
	Total	28.20	4.99	26.41	5.43	2.72	.34
FSDS		11.33	8.75	11.78	9.21	-.39	-.05
SFS	Perform. Anx.	19.50	5.95	20.31	6.73	-.99	-.12
AIS		17.24	5.85	21.00	8.00	-4.23***	-.53
BIDR		11.01	4.54	9.05	4.40	3.46***	.43
BSI		36.74	29.93	50.20	36.08	-3.09***	-.38

SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women; FSFI = Female Sexual Function Inventory; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 5.4.

Correlations for sexual excitation and inhibition with sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms for Euro-Caucasian and Chinese women who reported not currently engaging in partnered sexual activity. Comparisons of differences between correlation coefficients in Chinese and in Euro-Caucasian women are also shown.

		Pearson's <i>r</i> for Euro-Caucasian (<i>n</i> = 54)		Pearson's <i>r</i> for Chinese (<i>n</i> = 110)		z-score of difference between Chinese and Euro-Caucasian	
		SESII-W Excitation	SESII-W Inhibition	SESII-W Excitation	SESII-W Inhibition	SESII-W Excitation	SESII-W Inhibition
SESII-W	Inhibition	-.29		-.02		-1.64	
FSFI	Desire	.58***	-.32	.53***	-.02	.43	-1.83
	Satisfaction ¹	-.37	-.14	-.13	.23	-1.51	-2.20
FSDS		-.05	.38	.24	.03	-1.73	2.17
SFS	Perform. Anx.	-.02	.27	.27	.16	-1.74	.68
AIS		-.22	.54***	-.36***	.08	.90	3.08***
BIDR		-.04	.18	-.15	.03	.72	.37
BSI		.07	.22	.06	.01	.95	1.26

SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women; FSFI = Female Sexual Function Inventory; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptom Inventory

¹ Instead of the full FSFI Satisfaction subscale, only item 16 of the FSFI was used for this analysis

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 5.5.

Correlations for sexual excitation and inhibition with sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms for Euro-Caucasian and Chinese women who reported currently engaging in partnered sexual activity. Comparisons of differences between correlation coefficients in Chinese and in Euro-Caucasian women are also shown.

		Pearson <i>r</i> for Euro-Caucasian (<i>n</i> = 134)		Pearson <i>r</i> for Chinese (<i>n</i> = 120)		z-score of difference between Chinese and Euro-Caucasian	
		SESII-W Excitation	SESII-W Inhibition	SESII-W Excitation	SESII-W Inhibition	SESII-W Excitation	SESII-W Inhibition
SESII-W	Inhibition	-.30***		-.05		-2.04	
FSFI	Desire	.25	-.39***	.48***	-.23	-2.10	-1.40
	Arousal	.31***	-.47***	.48***	-.30***	-1.59	-1.58
	Lubrication	.18	-.42***	.40***	-.34***	-1.90	-.74
	Orgasm	.23	-.19	.10	-.27	1.05	.66
	Satisfaction	.11	-.10	.16	-.06	-.40	-.31
	Pain	.19	-.25	.19	-.13	.00	-.98
	Total	.31***	-.41***	.39***	-.30***	-.72	-.99
FSDS		-.15	.39***	.01	.22	-1.27	1.47
SFS	Perform. Anx.	-.02	.49***	-.04	.34***	.16	1.43
AIS		-.26***	.44***	-.47***	.11	1.92	2.84***
BIDR		-.13	-.12	-.13	-.07	.00	-.40
BSI		.13	-.02	-.03	-.01	1.26	-.07

SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women; FSFI = Female Sexual Function Inventory; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 5.6.

ANCOVA models for the effect of ethnicity and sexual activity on sexual excitation, sexual inhibition, sexual desire, sexual satisfaction, sexual distress, sexual performance anxiety, and asexuality, controlling for age, social desirability responding, and psychological symptoms as covariates, in Chinese and Euro-Caucasian women. Sexual activity coded as 0 = not engaging in partnered sexual activity, 1 = engaging in partnered sexual activity. Ethnicity coded as 0 = Euro-Caucasian, 1 = Chinese.

		<i>F</i> (1, 393)	<i>p</i>	partial η^2
SESII-W Excitation	Ethnicity	10.40	.001***	.03
	Partnered sex	26.01	< .001***	.06
	Ethnicity x Partnered sex	.86	.355	.00
SESII-W Inhibition	Ethnicity	.13	.720	.00
	Partnered sex	11.42	.001***	.03
	Ethnicity x Partnered sex	.00	.954	.00
FSFI Desire	Ethnicity	14.59	< .001***	.04
	Partnered sex	72.71	< .001***	.16
	Ethnicity x Partnered sex	.75	.387	.00
FSFI Satisfaction ¹	Ethnicity	7.41	.007	.02
	Partnered sex	42.99	< .001***	.10
	Ethnicity x Partnered sex	7.76	.006	.02
FSDS	Ethnicity	15.79	< .001***	.04
	Partnered sex	8.43	.004***	.02
	Ethnicity x Partnered sex	8.37	.004***	.02
SFS Perform. Anx.	Ethnicity	3.90	.049	.01
	Partnered sex	2.66	.104	.01
	Ethnicity x Partnered sex	4.24	.040	.01
AIS	Ethnicity	24.36	< .001***	.06
	Partnered sex	25.39	< .001***	.06
	Ethnicity x Partnered sex	1.54	.220	.00

SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women; FSFI = Female Sexual Function Inventory; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

¹ Instead of the full FSFI Satisfaction subscale, only item 16 of the FSFI was used for this analysis

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Figure 5.1.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual distress, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. FSFS = Female Sexual Distress Scale.

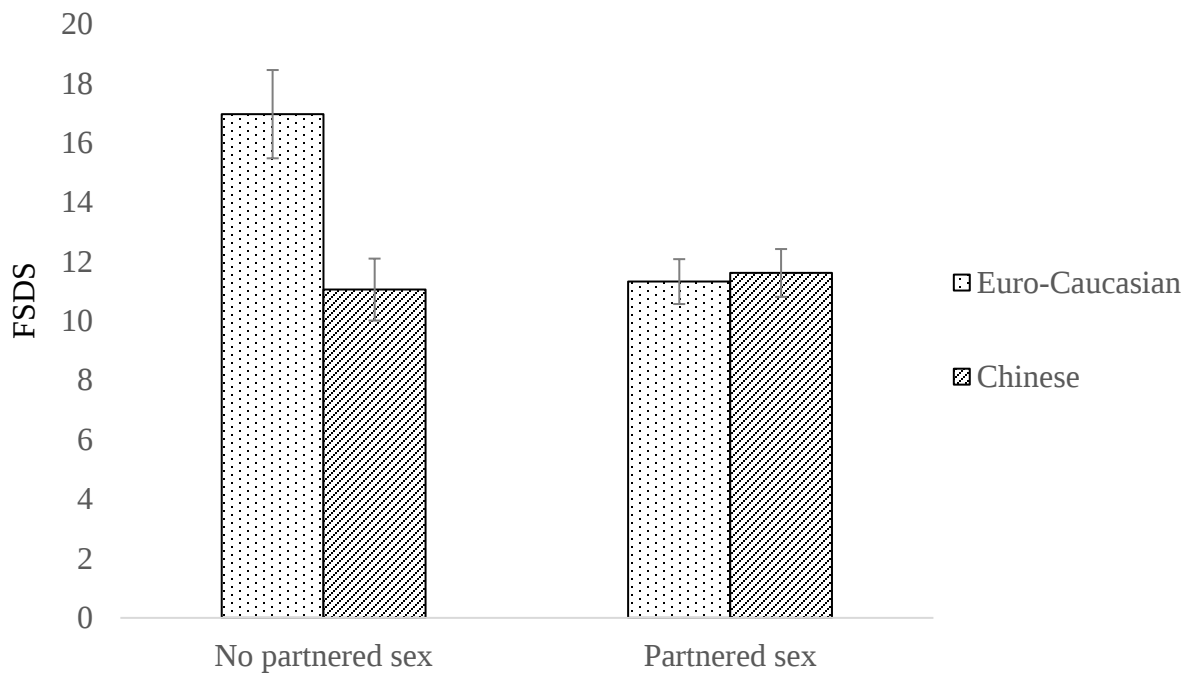


Figure 5.2.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual satisfaction, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. FSFI = Female Sexual Function Index.

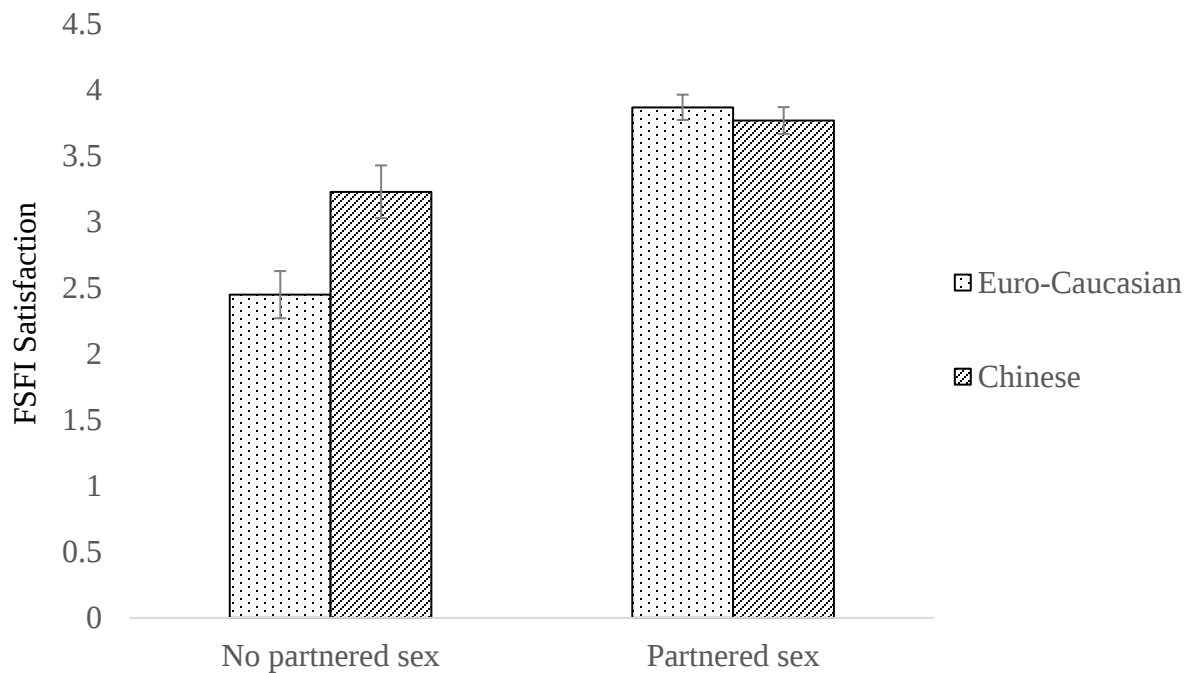


Figure 5.3.

Marginal means of the interaction effect of sexual activity status and ethnicity on performance anxiety, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. SFS = Sexual Function Scale.

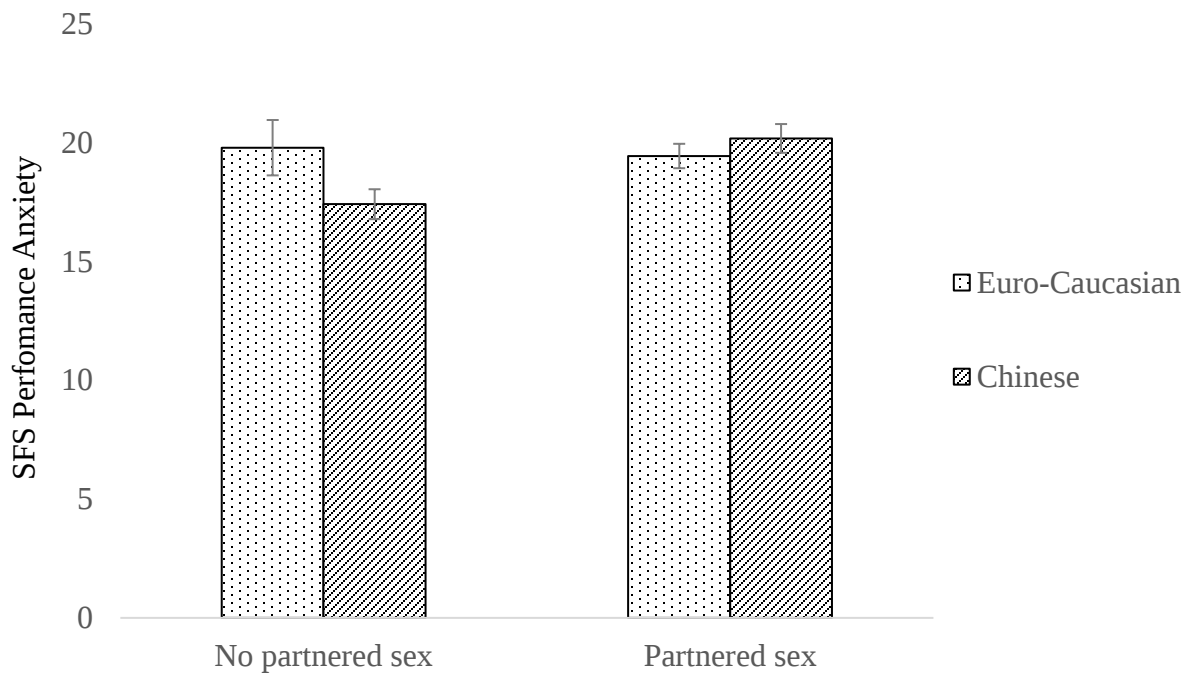


Figure 5.4.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual excitation, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women.

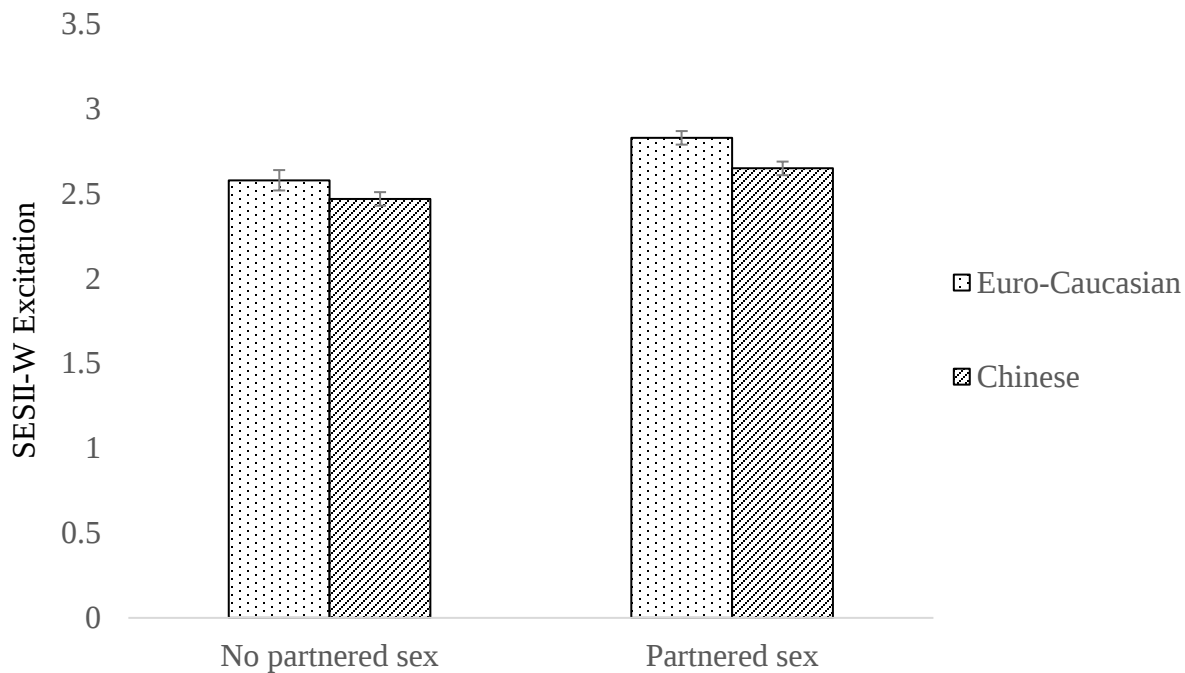


Figure 5.5.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual desire, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. FSFI = Female Sexual Function Index.

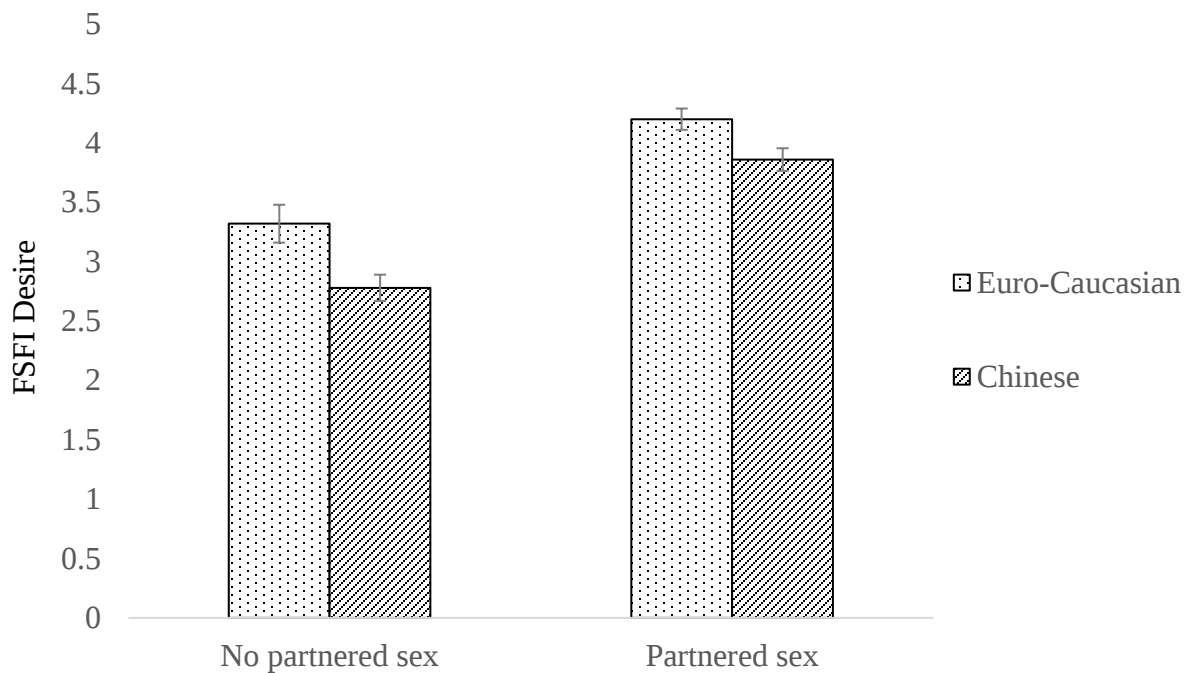


Figure 5.6.

Marginal means of the interaction effect of sexual activity status and ethnicity on asexual experiences, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. AIS = Asexuality Identification Scale.

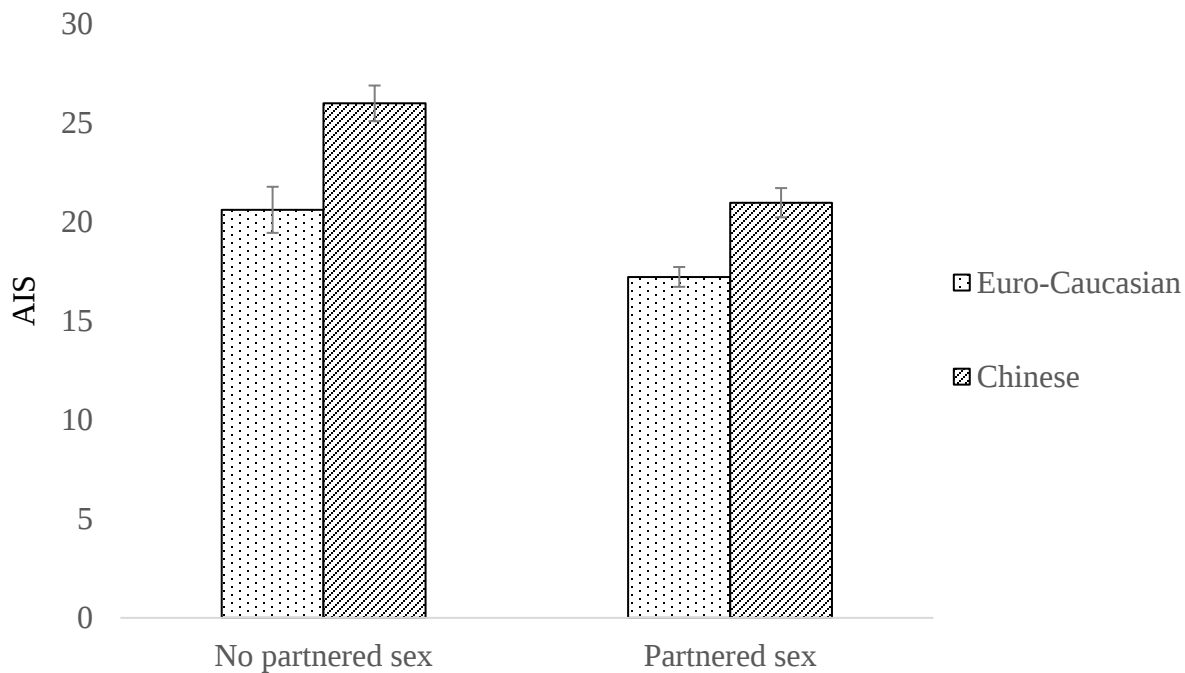
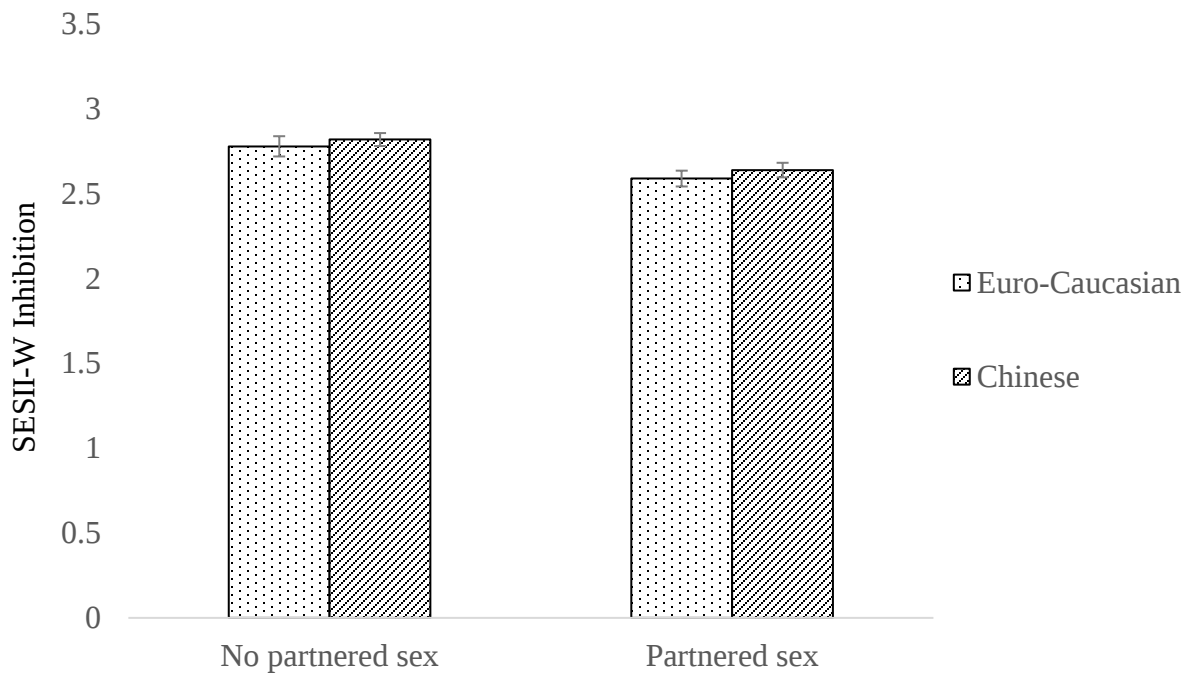


Figure 5.7.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual inhibition, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian women not engaging in partnered sex (n = 54), Chinese women not engaging in partnered sex (n = 110), Euro-Caucasian women engaging in partnered sex (n = 134), and Chinese women engaging in partnered sex (n = 120). Bars show marginal means of each group, error bars show standard errors of the marginal mean. SESII-W = Sexual Excitation Sexual Inhibition Inventory for Women.



Chapter 6: Examining Differences in Sexual Function, Asexuality, and Partnered Sexual Activity between Chinese and Euro-Caucasian Men

The investigation in Chapter 5 explored several ways of ascribing etic meaning (Agar, 2007) to lower average levels of sexual response and behaviour in Chinese women compared to their Euro-Caucasian peers. This chapter describes an extension of that research into a sample of Chinese and Euro-Caucasian men at a large Canadian university. As identified in Chapter 3, Chinese men, in comparison to Euro-Caucasian men, reported on average higher levels of sexual inhibition and lower levels of dyadic sexual response and behaviours compared to Euro-Caucasian men. However, the study did not investigate how those group differences should be interpreted by clinicians and researchers. The current study sought to examine three potential ways of understanding this difference in sexual response: sexual functioning difficulties and sexual distress from the perspective of sexual dysfunctions (Althof, 2002; American Psychiatric Association, 2013); asexuality and endorsement of elements of asexual experience from the perspective of sexual orientation (Bogaert, 2006; Brotto et al., 2015); and abstinence from engaging partnered sexual activity from the perspective of sexual incentives and decision-making (Ott et al., 2006; Trinh & Kim, 2020).

With regards to potential sexual difficulties and dysfunctions, the current study contrasted Chinese and Euro-Caucasian men's self-report of sexual function (including the subdomains of erectile function, orgasmic function, premature ejaculation, desire, and satisfaction) and sexual distress (including general sexual distress, and anxiety about sexual performance). The study also examined whether within-group differences in sexual excitation and inhibition were associated with sexual function and distress similarly between Chinese and Euro-Caucasian men, in order to identify possible ethnic and cultural variation in how dual control process may impact sexual

dysfunctions. Potential ethnic differences in identification with asexuality, and within-group associations between asexuality and sexual excitation and inhibition, were also examined. Given the previous findings in Chapter 3 regarding how young Chinese men, compared to their Euro-Caucasian peers, displayed significantly lower levels of dyadic but not solitary desire, the current study examined whether ethnic comparisons of sexual excitation and inhibition (as well as sexual function, sexual distress, and asexuality) were moderated by whether individuals reported currently engaging in partnered sexual activity.

For sexual excitation and inhibition, we expected to replicate previous findings, where Chinese men would have similar levels of sexual excitation but higher average sexual inhibition compared to their Euro-Caucasian peers. As per the dual control model, higher inhibition and lower excitation were predicted to be associated with more difficulties in sexual function within each ethnicity, and that Chinese men would have more sexual functioning difficulties than Euro-Caucasian men. For sexual distress, higher levels among Chinese men would provide evidence that the patterns in other sexual variables is consistent with an interpretation of more sexual dysfunctions within this population, whereas the absence of a significant difference in distress may suggest alternative interpretations of the ethnic and cultural difference in sexual response. Chinese men may have also been more likely to identify having asexual experiences compared to Euro-Caucasian men, as an alternative way of understanding their sexualities. It was also expected that moderation by engagement in partnered sex would not attenuate all ethnic differences in sexual response, function, or distress; this would be consistent with cultural factors having a broad impact on multiple domains of male sexuality, rather than solely on decision-making regarding engaging in or abstinence from partnered sex.

Methods

Participants

Chinese ($n = 270$) and Euro-Caucasian ($n = 164$) undergraduate men were recruited from a large Canadian university, completed online questionnaires, and were included in the data analysis. Ethnic category (Chinese or Euro-Caucasian) was based on participant self-report. Individuals who self-identified as being men of Chinese or Euro-Caucasian ethnic descent, who had sufficient English reading skills to understand the survey materials, and who were over the age of 18 were invited to participate in the study. Individuals under the age of 18 or those who reported difficulties with English comprehension were excluded from the study. Further demographic variables for participants are reported in Table 6.1. All participants were attending university Canada during the study.

Procedure

Participants were recruited through online ads at the university's psychology human subject pool system, from May 2018 to December 2019. The study was advertised as involving ethnicity, culture, and sexuality. Interested participants were directed to an online questionnaire hosted on the website www.qualtrics.com. Upon accessing the survey, participants had the opportunity to review consent documents, which explained their rights as participants, data confidentiality and security, and the sexual nature of some of the study questions. If they gave consent to participate, they then completed a series of online questionnaires. After completing the questionnaire, participants attended an online debriefing session, where they were informed about the intent of the study and invited to contact or meet with the researchers should they have further concerns and questions. Participants received one bonus mark towards an undergraduate psychology class in compensation for their participation. All procedures and methods were

reviewed and approved by the university's behavioural research ethics board, and consistent with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Measures

Sexual excitation and inhibition. The Sexual Inhibition/Sexual Excitation Scales (SISSES) (Janssen et al., 2002) was administered to assess sexual inhibition and sexual excitation. The self-report instrument consists of 45 statements, most of which are in “if-then” format, which the participants rate on a 4-point scale of their endorsement. The instrument contains three subscales: Excitation (range of scores from 20 to 80), inhibition from fear of performance failure (Inhibition 1; range of scores from 14 to 56), and inhibition from fear of consequences of sex (Inhibition 2; range of scores from 11 to 44). Higher scores on each subscale indicate higher levels of sexual excitation or inhibition. In our sample, the Cronbach's α of the excitation, inhibition 1, and inhibition 2 subscales were .85, .82, and .75, respectively.

Sexual functioning. The International Inventory of Erectile Function (IIEF) (Rosen et al., 1997) was administered to assess sexual function. The IIEF is a self-report inventory consisting of 15 questions asking about different aspects of physiological and psychological sexual response which participants rate on a 5-point or 6-point (depending on question) scale of their frequency or intensity of difficulties in each aspect. These items form 5 specific subscales (Erection, Orgasm, Desire, Intercourse Satisfaction, and Overall Satisfaction) representing different domains of male sexual functioning and response. Higher scores indicate fewer sexual difficulties and higher sexual function. The Overall Satisfaction (range 0 to 10) and Desire (range 0 to 10) subscales were examined in the current study for both men who were and were not engaging in partnered sexual activity; the Erection (range 0 to 30), Orgasm (range 0 to 10), and Intercourse Satisfaction (range 0 to 15) were only examined for men engaging in partnered

sexual activity as these subscales contain questions asking about partnered sexual intercourse. In our sample of men who were engaging in partnered sexual intercourse, the Cronbach's α for Erection, Orgasm, Desire, and Overall Satisfaction were .79, .68, .72, and .84. In the subsample who were not engaging in partnered sexual activity, the Cronbach's α for Desire and Overall Satisfaction were .81 and .86 respectively.

Premature ejaculation. The Premature Ejaculation Diagnostic Tool (PEDT) (Symonds et al., 2007) was administered to assess premature ejaculation, a common male sexual dysfunction. The PEDT is a self-report inventory consisting of 5 questions asking symptoms of premature ejaculation which participants rate on a 6-point scale (range 0 to 25) of their frequency or intensity of difficulties in each aspect. Higher scores indicate fewer difficulties in this domain of sexual function. This scale was only examined in men who reported engaging in partnered sexual activity, as it contains items that ask about partnered sexual intercourse. In our sample, the Cronbach's α for men who reported engaging in partnered sexual activity scale was .83.

Sexual distress. The Female Sexual Distress Scale (FSDS) (Derogatis et al., 2002) was administered to assess sexually-related personal distress. Despite being designed measuring for women's sexual distress, the scale has been shown to be reliable and valid for use in men (Santos-Iglesias et al., 2018). The FSDS is a self-report inventory consisting of 12 statements referring to different types of distressing emotions or thoughts related to sexual problems, behaviours, and relationships. Participants rate items on a 5-point scale of the frequency they experience each emotion or thought, and the total scale has a range of scores from 0 to 48. Higher scores indicate greater levels of distress. In our sample, the Cronbach's α for the total scale was .90.

Sexual performance anxiety. The Performance Anxiety subscale of the Sexual Function Scale (SFS) (McCabe, 2010) was administered to assess anxiety about one's own sexual performance and sexual difficulties. The SFS Performance Anxiety subscale is a self-report inventory consisting of 10 questions about emotions, thoughts, and behaviours related to one's experience of sexuality. Participants rate items on a 5-point scale of the frequency they experience each item. The total scale has a range of scores from 0 to 40. Higher scores indicate greater levels of anxiety. In our sample, the Cronbach's α for the total scale was .83.

Asexuality. The Asexuality Identification Scale (AIS) (Yule et al., 2015) was administered to assess experiences consistent with an asexual sexual orientation. The AIS is a self-report inventory consisting of 12 statements about sexual attraction, or interest in sexual activity, which participants rate on a 5-point scale of their endorsement. The total scale has a range of scores from 1 to 60, with higher scores indicating more experiences consistent with an asexual identity. In our sample, the Cronbach's α for the total scale was .87.

Social desirability responding. The Balanced Inventory of Desirable Responding (BIDR) (Paulhus, 1998) was administered to assess social desirability responding. The instrument contains 40 statements that reflect positive impression management and self-deceptive positivity, which participants rate on a 7-point scale of their endorsement. Higher scores (range of scores from 0 to 40) indicate greater levels of socially desirable responding. In our sample, the Cronbach's α for the instrument was .73.

Psychological symptoms. The Brief Symptoms Inventory (BSI) (Derogatis & Melisaratos, 1983) was administered to assess general psychological distress and symptoms of common psychological disorders. The instrument contains 53 statements that reflect specific symptoms or distress, which participants rate how frequently they've experience each over the

past 7 days on a 4-point scale. Higher scores (range of scores from 0 to 212) indicate greater levels of psychopathology and distress. In our sample, the Cronbach's α for the instrument was .97.

Data Analysis

Comparisons of means differences between Chinese and Euro-Caucasian participants were conducted using *t*-tests. Moderation effects of ethnicity and engaging partnered sexual activity on sexuality variables were examined using 2 x 2 ANCOVA models with first-order interaction effects. Pearson's *r* correlations were used to examine correlations between SESII-W Inhibition and Excitation with other sexuality variables. Ethnic differences in correlations were examined using *z*-score comparisons between correlations coefficients. Bonferroni correction was used to control for type I error inflation, setting the alpha level at $p = .004$. Effect sizes of approximately Cohen's $d = .20$ or $r = .10$ were considered small, approximately Cohen's $d = .50$ or $r = .30$ were considered medium, and approximately Cohen's $d = .80$ or $r = .50$ or greater were considered large (Cohen, 1988).

Some missing data was observed in the dataset, but no variable was missing more than 10% of cases. As the pattern could not be shown to be missing completely at random, multiple imputation with 20 imputations was used for statistical analyses. Analyses were conducted using SPSS 20 (IBM Corporation).

Results

Sexual Function and Dysfunction

Among men who reported not currently engaging in partnered sexual activity, the means for Chinese men, compared to Euro-Caucasian men, were significantly higher for sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) at a medium

effect size (see Table 6.2). There was also a small non-significant trend towards lower overall sexual satisfaction (IIEF Overall Satisfaction) among Chinese men. No significant mean differences between ethnicities were observed for sexual excitation (SISSES Excitation), inhibition (SISSES Inhibition 1), desire (IIEF Desire), distress (FSDS), or performance anxiety (SFS Performance Anxiety). These comparisons were subject to reduced power due to the low number of Euro-Caucasian men who reported not engaging in partnered sexual activity.

In the subsample of participants who were engaging in sexual intercourse, the means for Chinese men, compared to Euro-Caucasian men, were significantly higher for sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) at a medium-to-large effect size, and sexual inhibition due to concerns about negative consequences (Inhibition 2) at a small-to-medium effect size (see Table 6.3). Chinese men displayed significantly lower average sexual excitation (SISSES Excitation) than Euro-Caucasian men. Chinese men also showed significantly lower mean scores for erectile function (IIEF Erection), orgasmic function (IIEF Orgasm), intercourse satisfaction (IIEF Intercourse Satisfaction), overall sexual satisfaction (IIEF Overall Satisfaction), and premature ejaculation (PEDT) compared to Euro-Caucasian men. Chinese men scored higher on average for sexual performance anxiety (SFS Performance Anxiety). Chinese men, compared to Euro-Caucasian men, displayed a lower mean sexual desire (IIEF Desire) and higher mean sexual distress (FSDS) at medium effect sizes though these comparisons were not statistically significant.

Among the sample of Euro-Caucasian men who were not engaging in partnered sexual activity, sexual excitation (SISSES Excitation) was not significantly associated with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) and sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) (see Table 6.4).

Inhibition due to performance concerns (SISSES Inhibition 1) showed a medium but non-significant negative association with inhibition due to consequence concerns (SISSES Inhibition 2). Sexual excitation (SISSES Excitation) showed a medium but non-significant negative association with overall satisfaction (IIEF Overall Satisfaction). Sexual excitation (SISSES Excitation) was not significantly associated with sexual desire (IIEF Desire), sexual distress (FSDS), or sexual performance anxiety (SFS Performance Anxiety). Inhibition due to performance concerns (SISSES Inhibition 1) showed a medium positive association with sexual performance anxiety (SFS Performance Anxiety). Inhibition due to performance concerns (SISSES Inhibition 1) was not significantly associated with sexual desire (IIEF Desire), overall sexual satisfaction (IIEF Overall Satisfaction), and sexual distress (FSDS). Inhibition due to consequence concerns (SISSES Inhibition 2) was significantly positively associated with overall satisfaction (IIEF Overall Satisfaction) to a medium-to-large effect size. Inhibition due to consequence concerns (SISSES Inhibition 2) was not significantly associated with distress (FSDS) or performance anxiety (SFS Performance Anxiety).

Among the sample of Chinese men who were not engaging in partnered sexual activity, Sexual excitation (SISSES Excitation) showed a non-significant small negative association with sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2), and was not significantly associated with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) (see Table 6.4). Inhibition due to performance concerns (SISSES Inhibition 1) showed a non-significant small-to-moderate positive association with inhibition due to consequence concerns (SISSES Inhibition 2). Sexual excitation (SISSES Excitation) was significantly positively associated with sexual desire (IIEF Desire) at a large effect size and distress (FSDS) at a moderate effect size. Excitation (SISSES Excitation) was not significantly

associated with overall sexual satisfaction (IIEF Overall Satisfaction) and sexual performance anxiety (SFS Performance Anxiety). Inhibition due to performance concerns (SISSES Inhibition 1) showed a small but non-significant positive association with sexual distress (FSDS).

Inhibition due to performance concerns (SISSES Inhibition 1) was not significantly associated with sexual desire (IIEF Desire), overall satisfaction (IIEF Overall Satisfaction), and sexual performance anxiety (SFS Performance Anxiety). Inhibition due to consequence concerns (SISSES Inhibition 2) was significantly negatively correlated with sexual desire (IIEF Desire) at a moderate effect size, and not significantly associated with overall satisfaction (IIEF Overall Satisfaction), distress (FSDS), or performance anxiety (SFS Performance Anxiety).

Comparing of the correlation coefficients between men who were not engaging in partnered sex, there was no statistically significant differences in magnitude of associations between Chinese and Euro-Caucasian men.

Among the subsample of Euro-Caucasian men who were engaging in partnered sexual activity, sexual excitation (SISSES Excitation) showed a non-significant negative small association with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) and significantly negatively associated with sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) (see Table 6.5). Sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) showed a negative small-to-medium positive association with sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2). Sexual excitation (SISSES Excitation) was significantly positively associated with sexual desire (IIEF Desire) at a large effect size. Excitation (SISSES Excitation) showed non-significant medium positive association with erectile function (IIEF Erection) and orgasmic function (Orgasm); it was not significantly associated with overall sexual satisfaction (Overall

Satisfaction), premature ejaculation (PEDT), sexual distress (FSDS), and sexual performance anxiety (SFS Performance Anxiety). Inhibition due to performance concerns (SISSES Inhibition 1) was significantly negatively associated with erectile function (IIEF Erection), orgasmic function (IIEF Orgasm), desire (IIEF Desire), and intercourse satisfaction (IIEF Intercourse Satisfaction) at a moderate effect size, and significantly positively associated with distress (FSDS) and performance anxiety (SFS Performance Anxiety) at a moderate effect size. Inhibition due to performance concerns (SISSES Inhibition 1) was not significantly associated with overall satisfaction (IIEF Overall Satisfaction) and premature ejaculation (PEDT). Inhibition due to consequence concerns (SISSES Inhibition 2) was significantly negatively associated with desire (IIEF Desire) at a medium effect size, and not significantly associated with other study variables.

Among the subsample of Chinese men who were engaging in partnered sexual activity, sexual excitation (SISSES Excitation) was not significantly associated with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) or sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) (see Table 6.5). Inhibition due to performance concerns (SISSES Inhibition 1) was significantly positively associated with inhibition due to consequence concerns (SISSES Inhibition 2) at a moderate-to-large effect size. Sexual excitation (SISSES Excitation) was significantly positively associated with sexual desire (IIEF Desire) and sexual distress (FSDS) at moderate-to-large effect sizes. Sexual excitation (SISSES Excitation) showed a non-significant negative small association with overall sexual satisfaction (IIEF Overall Satisfaction), and not significantly associated with other study variables. Inhibition due to performance concerns (SISSES Inhibition 1) was significantly negatively associated with orgasmic function (IIEF Orgasm) at a medium effect size. Inhibition

due to performance concerns (SISSES Inhibition 1) showed positive small-to-medium associations with distress (FSDS) and performance anxiety (SFS Performance Anxiety), and not significantly associated with other study variables. Inhibition due to consequence concerns (SISSES Inhibition 2) showed non-significant small negative associations with orgasmic function (IIEF Orgasm), intercourse satisfaction (IIEF Intercourse Satisfaction), overall satisfaction (IIEF Overall Satisfaction), and premature ejaculation (PEDT); it showed a non-significant small positively associated with performance anxiety (SFS Performance Anxiety). Inhibition due to consequence concerns (SISSES Inhibition 2) was not significantly associated with erectile function (IIEF Erection) or distress (FSDS).

Comparing of the correlation coefficients between men who were not engaging in partnered sex, the association between sexual excitation (SISSES Excitation) and sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2) was significantly greater in magnitude in Euro-Caucasian men compared to Chinese men (see Table 6.5). The correlations between sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) with sexual desire (IIEF Desire), intercourse satisfaction (IIEF Intercourse), and distress (FSDS) were significantly greater in magnitude in Euro-Caucasian men compared to Chinese men. The correlation between inhibition due to consequence concerns (SISSES Inhibition 2) with overall sexual satisfaction (IIEF Overall) showed a significant ethnic difference, where it showed a small positive effect in Euro-Caucasian men but a small negative effect in Chinese men.

In the subsample who were engaging in partnered sexual activity, Chinese men displayed significantly lower mean social desirability responding (BIDR) than Euro-Caucasian men (see Table 6.3); there was a small non-significant trend in the same direction among those who were

not engaging in partnered sex (see Table 6.2). Chinese men reported on average significantly higher mean psychological symptoms (BSI) than Euro-Caucasian men in the subsample who were having partnered sex, but not in the sample who were not engaging in partnered sex.

When controlling for social desirability (BIDR) and psychological symptoms (BSI) using partial correlations in Euro-Caucasian men who were not engaging in partnered sex, notable changes (from zero-order correlations) in the magnitude of associations were seen in the correlation between sexual excitation (SISSES Excitation) with inhibition due to performance concerns (SISSES Inhibition 1) ($r = -.29, p = .026$; increased effect size though still non-significant) and sexual performance anxiety (SFS Performance Anxiety) ($r = -.17, p = .210$; change in direction of the non-significant effect). In Chinese men who were not engaging in partnered sex, partial correlations notably differed from zero-order correlations for inhibition due to performance concerns (SISSES Inhibition 1) with sexual distress (FSDS) ($r = .11, p = .216$; now non-significant), and inhibition due to consequence concerns (SISSES Inhibition 2) with overall sexual satisfaction (IIEF Overall Satisfaction) ($r = .21, p = .015$; increased effect size though still non-significant) and with distress (FSDS) ($r = -.20, p = .019$; increased effect size though still non-significant). In the sample of Chinese men engaging in partnered sex, partial correlations notably differed from zero-order correlations for inhibition due to performance concerns (SISSES Inhibition 1) with distress (FSDS) ($r = .13, p = .138$; now non-significant) and with performance anxiety (SFS Performance Anxiety) ($r = .16, p = .067$; now non-significant). In addition, in the sample of Chinese men engaging in partnered sex, partial correlations notably differed from zero-order correlations for inhibition due to consequence concerns (SISSES Inhibition 2) with orgasmic function (IIEF Orgasm) ($r = -.27, p = .002$; now significant). No notable changes when controlling for social desirability (BIDR) and psychological symptoms

(BSI) were seen for correlations in Euro-Caucasian men who reported engaging in partnered sex. Tests of differences between ethnicities in the magnitude of correlations showed similar patterns when using partial correlations in both men who were and were not engaging in partnered sex.

Asexuality

Chinese men were significantly less likely to report their sexual orientation as asexual on the demographics survey, ($\chi^2(1) = 10.02, p = .002$) (see Table 6.1). Among men who were not engaging in partnered sexual activity, Chinese and Euro-Caucasian men did not differ significantly on mean asexual identification (AIS) (see Table 6.2). However, among men who were engaging in partnered sexual activity (see Table 6.3), Chinese men showed a significantly higher mean asexual identification (AIS) than Euro-Caucasian men at a large effect size.

Among the sample of Euro-Caucasian men who were not engaging in partnered sexual activity, asexual identification (AIS) was significantly negatively correlated with sexual excitation (SISSES Excitation), and significantly positively correlated with sexual inhibition due to concerns about performance difficulties (SISSES Inhibition 1) and sexual inhibition due to concerns about negative consequences (SISSES Inhibition 2), at medium effect sizes (see Table 6.4). Among the sample of Chinese men who were not engaging in partnered sexual activity, asexual identification (AIS) was significantly negatively correlated with sexual excitation (SISSES Excitation), and significantly positively correlated with inhibition due to performance concerns, at medium effect sizes; it was not significantly associated with inhibition due to consequence concerns (SISSES Inhibition 2). The magnitude of associations showed a trend of being larger in magnitude among Euro-Caucasian men for sexual inhibition, but this ethnic comparison was not statistically significant.

Among the sample of Euro-Caucasian men who were engaging in partnered sexual activity, asexual identification (AIS) was significantly negatively associated with sexual excitation (SISSES Excitation) and significantly positively correlated with inhibition due to performance concerns (SISSES Inhibition 1), but not significantly associated with inhibition due to consequence concerns (SISSES Inhibition 2) (see Table 6.5). Among Chinese men who were engaging in partnered sexual activity, asexual identification was significantly positively associated with Inhibition due to performance concerns at a medium effect size, but was not significantly correlated with sexual excitation or inhibition due to consequence concerns. The ethnic comparisons for magnitudes of associations were not statistically significant.

Interaction Effects of Ethnicity and Partnered Sexual Activity

Chinese men showed a non-significant trend towards being less likely to engage in partnered sexual activity compared to their Euro-Caucasian peers ($\chi^2(1) = 7.11, p = .008$). ANCOVA moderation analyses showed significant interaction effects between ethnicity and engaging in sexual intercourse for overall satisfaction (IIEF Overall Satisfaction) and asexual identification (AIS) (see Table 6.6). Non-significant trends of interaction were observed for sexual excitation (SISSES Excitation), inhibition due to performance concerns (SISSES Inhibition 1), and sexual desire (IIEF Desire). Significant interaction effects were not observed in inhibition due to consequence concerns (SISSES Inhibition 2), sexual distress (FSDS), and sexual performance anxiety (SFS Performance Anxiety).

For overall sexual satisfaction (IIEF Overall Satisfaction) (Figure 6.1) and sexual desire (IIEF Desire) (Figure 6.2), examination of marginal means showed that among men who were not engaging in sexual intercourse, Chinese and Euro-Caucasian men had similar means. Men of both ethnicities who were engaging in partnered sexual activity showed higher means compared

to men who were not, but the Euro-Caucasian men in this group showed a higher mean than the Chinese men.

For asexual identification (AIS) (Figure 6.3), examination of marginal means showed that Euro-Caucasian men who were having sexual intercourse, Chinese men who were having sexual intercourse, and Chinese men who were not having sexual intercourse displayed similar means. However, Euro-Caucasian men who were not engaging in sexual intercourse on average endorsed significantly lower asexuality scores than the other groups.

For sexual excitation (SISSES Excitation) (Figure 6.4), examination of marginal means showed that men of both ethnicities who were not engaging in sexual intercourse had similar means. However, Euro-Caucasian men who were engaging in partnered sex had a higher mean than those who were not, and Chinese men who were engaging in partnered sex had a lower mean than those who were not. As such, among men who were engaging in partnered sex, Euro-Caucasian men had a higher mean than Chinese men.

For sexual inhibition due to performance concerns (SISSES Inhibition 1) (Figure 6.5), examination of marginal means showed that men of both ethnicities who were not engaging in sexual intercourse had similar scores. However, Euro-Caucasian men who were engaging in partnered sex had a lower mean than those who were not, whereas Chinese men who were engaging in partnered sex had similar means to those who were not. As such, among men who were engaging in partnered sex, Euro-Caucasian men had a lower mean than Chinese men.

For sexual inhibition due to consequence concerns (SISSES Inhibition 2) (Figure 6.6) and sexual performance concerns (SFS Performance Anxiety) (Figure 6.7) examination of marginal means showed that Chinese men had higher means than Euro-Caucasian men in both the groups who were and who were not engaging in partnered sex. For sexual distress (FSDS) (Figure 6.8)

Chinese men had lower means than Euro-Caucasian men in both the groups who were and who were not engaging in partnered sex.

Discussion

The current study was aimed at understanding how to best interpret ethnic differences seen between Chinese and Euro-Caucasian men on sexual inhibition. Specifically, we examined whether higher average levels of sexual inhibition in Chinese men were associated with more difficulties with sexual functioning and distress (which would suggest an interpretation of ethnic/cultural differences in frequency of sexual dysfunctions), with greater likelihood to identify with asexuality (which would suggest an interpretation of ethnic/cultural differences in sexual orientation), or with greater likelihood to choose sexual abstinence (which would suggest an interpretation of cultural/ethnic differences in sexual decision-making).

Among men who were engaging in partnered sexual activity, the current study found both inhibition due to concerns about performance difficulties and inhibition due to concerns about negative consequences of sexual activity were significantly higher in Chinese men compared to Euro-Caucasian men. However, in men who were not engaging in partnered sex, there were no significant ethnic differences in inhibition due to performance concerns, while there was a significant effect for inhibition due to consequences of sex. These results were somewhat consistent with expectations and the findings from Chapter 3, which highlighted differences in sexual inhibition between Chinese and Euro-Caucasian men but did not differentiate between men who were and were not engaging in partnered sexual activity.

One possible mechanism for the moderation of the ethnic difference in sexual inhibition due to performance concerns was that it was not a salient issue for either Chinese or Euro-Caucasian men when they were not engaging in partnered sex. However, examination of

interaction effects did not appear to support this interpretation. Instead, it appeared that engaging in partnered sex was associated with lower performance-related inhibition in Euro-Caucasian men but not in Chinese men. This potentially suggested that engagement in partnered sexual activity resulted in greater confidence about one's sexual performance for Euro-Caucasian men, but not for Chinese men. It was also possible that Chinese men, but not Euro-Caucasian men, were electing to engage in partnered sexual activity despite high levels of sexual performance concerns. In contrast, inhibition due to concerns about negative consequences was consistently lower in Euro-Caucasian men compared to Chinese men, regardless of level of sexual activity. This suggests that a greater level of external risk related to engaging in sexual activity (e.g., concerns about unwanted pregnancy, sexually-transmitted infections, negative social evaluations) was experienced or perceived by Chinese men, compared to Euro-Caucasian men, regardless of level of sexual activity.

Sexual excitation displayed a somewhat similar pattern as inhibition due to performance concerns. A significant ethnic difference was not observed among men who were not engaging in partnered sex. In men who were engaging in partnered sex, Euro-Caucasian men displayed a significantly higher average level of sexual excitation than Chinese men. This differed somewhat from expectations based on the results reported in Chapter 3, which did not find a significant ethnic difference but did not distinguish between men who were and were not engaging in partnered sexual activity. The collapsing of these two subgroups in the previous study likely washed out the moderated effect seen in the current sample. The pattern in sexual excitation appeared to have primarily been due to engaging in partnered sex being associated with increased sexual excitation among Euro-Caucasian but not Chinese men. This suggested potentially that engagement in partnered sex resulted in greater awareness and fostering of

excitation for Euro-Caucasian, but not Chinese, men. It was also possible that Euro-Caucasian men who were higher in sexual excitation were more likely to engage in partnered sex, whereas baseline sexual excitation had less impact on Chinese men's decision-making about whether to engage in partnered sex.

Sexual Function and Distress

Among men who were engaging in partnered sexual activity, the current study found that Chinese men reported lower average sexual function compared to Euro-Caucasian men in the domains of erectile function, orgasmic function, intercourse satisfaction, overall satisfaction, and premature ejaculation. Chinese men also reported significantly higher average sexual performance anxiety, and non-significant trends towards lower sexual desire and higher sexual distress. These findings were generally consistent with our expectations and previously reported findings in Chapter 3 and in the literature (Brotto et al., 2007). Although the ethnic difference in sexual distress was not statistically significant, the large observed effect sizes in sexual performance anxiety and sexual satisfaction suggested that it may be reasonable to conceptualize sexually active young Chinese men as being more likely to experience sexual dysfunctions compared to their Euro-Caucasian peers. Among men who were not engaging in partnered sexual activities, no significant ethnic differences were seen; the only potential exception was in overall sexual satisfaction, wherein Chinese men reported on average moderately (but non-significant) higher levels of satisfaction compared to Euro-Caucasian men.

Examination of interactions effects of ethnicity and engaging in partnered sexual activity suggested that, for overall sexual satisfaction, both Chinese and Euro-Caucasian men displayed a trend of greater average sexual satisfaction among those who were engaging in partnered sex. However, satisfaction showed a non-significant trend for being higher in Chinese men who were

not engaging in partnered sex, while satisfaction was significantly higher in Euro-Caucasian men who were. Engagement in partnered sex was associated with a greater increase in overall satisfaction among Euro-Caucasian men. Non-significant trends were also seen wherein performance anxiety was highest in Chinese men engaging in partnered sex, while sexual distress was highest in Euro-Caucasian men not engaging in partnered sex. Some of these trends were consistent with patterns described above for sexual excitation and inhibition, among women in Chapter 5, and in the theoretical role of culture (see below). However, many of these patterns did not reach statistical significance, and further replications may be needed to examine the reliability of these results. Greater statistical power to detect smaller effect sizes, and in particular through greater numbers of non-sexually active Euro-Caucasian men, may be needed.

Relation of Dual Control Model with Sexual Function and Distress

Among men who reported engaging in partnered sexual activity, Chinese men displayed a different pattern of associations between dual control processes and sexual function compared to Euro-Caucasian men. The patterns seen in Euro-Caucasian men were largely consistent with expectations based on the dual control model, in that higher sexual excitation and lower sexual inhibition (and particularly inhibition due to concerns about sexual performance) were associated with fewer difficulties in sexual function. Conversely, sexual excitation and sexual inhibition were less consistently associated with sexual function among Chinese men. In Chinese men, inhibition due to concerns about sexual performance was only significantly associated with more difficulties with orgasm, while sexual excitation was only significantly associated with fewer difficulties with desire. With regards to sexual distress and sexual performance anxiety, in Euro-Caucasian men, only sexual inhibition due to performance concerns was significantly associated with higher sexual distress and sexual performance anxiety. In contrast, among Chinese men,

sexual excitation was associated with higher levels of sexual distress, while the associations of inhibition due concerns about sexual performance with sexual distress and sexual performance anxiety did not reach statistical significance. Controlling for psychological symptoms further attenuated the magnitude of the association between sexual inhibition due to performance concerns with sexual distress and performance anxiety among Chinese men.

These findings were not wholly consistent with expectations. One possibility is that the measures used in the current study have limited validity in Chinese men. For example, the SISSES has shown some challenges when being translated into other languages (Malavige et al., 2013), and our factor analysis on the SISSES in Chapter 3 showed some differences with the original validation sample (see Appendix 2). However, some of these scales, including the IIEF, has been validated and used in multiple countries and languages (Rosen et al., 1997). Beyond psychometric properties of questionnaire items, the SISSES may also not have captured all aspects of sexual inhibition that may be relevant to sexual function in Chinese men. For example, one potential source of sexual inhibition for Chinese men may be interoceptive anxiety about experiencing sexual excitation and arousal, in contrast to inhibition due to concerns about being unable to perform sexually or that overt sexual activity may lead to physical risks. This potential type of sexual inhibition may have been better captured by the SAI-E Anxiety questionnaire from the previous study in Chapter 3 (where it was higher among Chinese men), and may also reflect some Chinese men's qualitative descriptions of fears about being revealed to have any internal experiences of sexual desire (Dang et al., 2017).

The greater positive association between sexual excitation with sexual distress in Chinese men, and the greater positive association between sexual inhibition due to performance concerns with sexual distress in Euro-Caucasian men, may have reflected a similar dynamic as was seen

among women (previously discussed in Chapter 5). Modern Chinese culture contains more sexually prohibitive messages, and potentially fewer expectations that individuals engage in frequent sexual activity. Therefore, excess sexual excitation (e.g., greater sexual excitation and desire than their partners) may have been experienced as particularly distressing for Chinese men as they may have been interpreted as socially inappropriate. Similarly, higher levels of sexual inhibition may not have been as distressing for Chinese men as Euro-Caucasian men. Greater sexual permissiveness in Western society may have been enmeshed with expectations of high sexual virility in Euro-Caucasian men that engender greater frustration and negative self-evaluation in the face of sexual inhibitions. These hypothesized impacts of cultural norms and expectations about sexuality on the association between sexual excitation and inhibition with symptoms of male sexual dysfunction require further research to characterize.

Among men who were not engaging in partnered sex, there were also differential patterns between Chinese and Euro-Caucasian men. Significant associations between sexual excitation and inhibition with overall satisfaction were only seen among Euro-Caucasian men, while significant associations between sexual excitation and inhibition with sexual desire were only seen in Chinese men. Notably, Chinese men who were not engaging in partnered sex displayed a similar pattern of associations between sexual excitation and inhibition with sexual desire and distress compared to Chinese men who were engaging in partnered sex. In contrast, Euro-Caucasian men who were not engaging in sexual activity did not display similar patterns of associations between dual control processes and sexual desire and distress.

These patterns may tentatively suggest that Chinese men who were and were not engaging in partnered sex were subject to similar interactions between dual control processes and sexual dysfunction symptoms, whereas Euro-Caucasian men who were not having partnered sex

may have qualitatively different experiences than Euro-Caucasian men who were. For example, not engaging in partnered sexual activity may be seen as somewhat normative for Chinese undergraduate men in the Chinese cultural context, but not engaging in partnered sexual activity may be seen as less normative for Euro-Caucasian undergraduate men in the Western cultural context. Previous research has also shown that initiation of partnered sex occurs at a significantly later age on average in East Asian compared to Euro-Caucasian men (Regan et al., 2004). These ethnic differences may have also related to similarities and differences in the rationales of Asian (e.g., social propriety; Trinh & Kim, 2020) and Western (e.g., personal choice; Ott et al., 2006) youth for abstinence versus initiation of partnered sex. This may be further reflected in how the proportion of men who were not engaging in partnered sex was smaller in Euro-Caucasian men and that Euro-Caucasian men had a greater number of past partners compared to Chinese men. Past findings in Western samples have also shown that earlier age of onset of partnered sex has been found to correlate with greater sexual satisfaction on a broad population level (e.g., Haavio-Mannila & Kontula, 1997). Further investigation into cultural influences on sexual decision-making be useful for understanding some of the patterns seen.

Asexuality

Among men who were not engaging in partnered sex, Chinese and Euro-Caucasian men did not display a significant difference in average level of identification with aspects of asexuality. Of note, all subgroups scored below the identification cutoff of 40 on the AIS. However, among men who were engaging in partnered sexual intercourse, Chinese men did have higher AIS scores on average than Euro-Caucasian men, suggesting potentially greater inclination to identify with asexuality compared to their Euro-Caucasian peers. Examination of interaction effects of ethnicity and engagement in partnered sex showed that engaging in

partnered sex was associated with a decrease in identification with asexual experiences in Euro-Caucasian men but not Chinese men. This may have been caused by “more asexual” Euro-Caucasian men being less likely to elect to engage in partnered sex, whereas Chinese men’s engagement with partnered sex was not related to their level of asexuality. For example, an individual Chinese man may have been more likely to engage in partnered sexual activity to maintain relationships or adhere to social expectations (e.g., that one engages in sexual activity with committed romantic partners), even if he had low sexual attraction to his partner as a result of an asexual orientation.

The higher levels of sexual functioning difficulties and performance anxiety, and lower sexual satisfaction, further differed from existing understandings of the distinction between asexual individuals and those with sexual dysfunctions (Brotto et al., 2015; Prause & Graham, 2007). Therefore, asexuality does not appear to be a suitable framework for understanding the previously-described pattern of Chinese men’s reporting lower sexual response compared to their Euro-Caucasian peers. In addition, Chinese men did not directly identify as asexual when reporting their own sexual orientation, suggesting that “asexual” was not the meaning they themselves ascribed to their experiences. However, these findings do tentatively suggest that Chinese men who have relatively higher asexual identification (compared to other Chinese men), unlike Euro-Caucasian men who have higher asexual identification, may be just as sexually active as Chinese men who have lower levels of asexual identification. Further investigation of how asexuality manifests in Chinese men, and how it potentially may manifest differently than in Euro-Caucasian men, would allow for greater elucidation of these patterns.

Interpreting Sexuality through the Lens of Culture

The current findings, as a whole, highlighted potential conceptual challenges in fitting Chinese men's sexual experiences within existing models for the regulation of sexual response and behaviours. Despite replicating previously observed mean differences in sexual function and response (Brotto et al., 2007), sexual excitation and inhibition was not reliably associated with sexual function in Chinese men. The associations between sexual inhibition, excitation, asexuality, and engagement in partnered sex also were not consistent with theoretical expectations (Bancroft, 1999; Barlow, 1986) or with results seen in Euro-Caucasian men. Although some of these findings may have been influenced by issues of scale validity in Chinese samples, the previous findings in Chapter 3 provided some evidence of the validity of the SISSES with relation to non-clinical aspects of sexual response, while the IIEF has been validated in a wide range of cultures and nationalities (Rosen et al., 1997). As such, cultural factors may have played a role in not only the level of sexual response and dysfunction, but also the inter-relationship between various aspects of Chinese men's experiences of sexuality.

As was the case for women in Chapter 5, broader cultural factors may have played an important role in shaping the ethnic differences in men's sexualities. East Asian individuals, in contrast to Euro-Caucasian individuals, have been shown to prefer low arousal (e.g., tranquility) rather than high arousal (e.g., happiness) positive valence emotions (Tsai et al., 2006), and to be less likely to make decisions based on excitement rather than utility (Tsai et al., 2007). Being able to meet social expectations despite one's internal desires has also been theorized as being more important to the more interdependent self-construals of East Asian cultures, in contrast to Western cultures' greater emphasis on an independent self-construal that focuses on enacting one's internal self in the face external demands (Markus & Kitayama, 1991). When applied to the context of sexuality, this suggests that the nature of incentives for engaging in sexual

behaviours, and thus also the meaning of sexual response and function, may be impacted by cultural factors. The incentives involved in sexual response and behaviour are not directly addressed by the SISSES; however, Redouté et al. (2005) has suggested that a cognitive devaluing of sexual partners and activities as another mechanism of sexual inhibition. Incentives for sexual behaviour are also a central feature of the incentive-motivation model (Toates, 2009). Therefore, this more complex model, which has many shared elements with the dual control model, may be a useful tool for further investigation into some of the hypotheses presented here.

The findings from the current study, as well as from previous chapters, may thus be understood as reflecting an ethnic and cultural moderation of how incentives could have been weighed and evaluated by Chinese versus Euro-Caucasian men (and women). Gratifying of internal experiences of excitation and inhibition may have been more salient reasons to engage or avoid sexual behaviours among Euro-Caucasian individuals. In contrast, Chinese individuals may have more valued external or interpersonal reasons for engaging or not engaging in sexual behaviours, such as maintaining relational or sociocultural expectations. This may present another potential explanation for the interaction effects between ethnicity and engaging in partnered sex seen in men and women – one's personal level of sexual excitation and inhibition may be less valued if sex is primarily motivated by meeting external expectations rather than satisfying internal sexual motivations. This approach, however, potentially creates greater chances for inconsistent sexual response and function when partnered sex does occur, as individuals may be more likely to enter into sexual encounters while experiencing low state excitation or high state inhibition.

The findings in the association between asexuality with partnered sexual activity further highlighted this potential ethnic distinction between internal versus external reasons for sex.

Euro-Caucasian men who had higher asexual identification were less likely to be sexually active, as expected based on the conceptual understanding of asexuality (Bogaert, 2006). However, Chinese men were just as likely to be sexually active regardless of their level of asexual identification. This further suggested that Chinese men may have placed greater importance on external contextual and relational reasons for sex, rather than basing their sexual decision-making on internal desires and motivations. These processes related to sexual incentives may further interact with specific restrictive attitudes and cultural norms about sexuality, and thus may also explain some of the residual links between ethnicity and sexual excitation/inhibition in previous structural equation models that were not explained by sexual attitudes alone. It may also provide a further explanation for the lack of direct link between the ethnic differences in men's level of sexual inhibition and sexual activity found in Chapter 3.

Examination of culture's interaction with sexual incentives may also be productive for understanding some of the putative differences seen between men and women in the current line of investigation. For example, in comparison with their Euro-Caucasian peers, Chinese men appeared to show larger effect sizes in sexual function differences than Chinese women. This pattern may have reflected Western cultural double standards about men's and women's sexual expression. Western culture, despite being more sexually permissive than Chinese culture, is still more likely to subject women (than men) to prohibitions against expressions of sexuality (Ringrose & Renold, 2012). Therefore, Chinese and Euro-Caucasian women may have faced similar challenges in this domain and thus showed smaller group mean differences in sexual function. Conversely, Chinese men's experiences of cultural prohibitions against sexual expression may have formed a more stark contrast with Western culture's more permissive attitudes towards men's sexual expression, resulting in larger group mean differences compared

to Euro-Caucasian men. This may have been further compounded by the particular lack of representation and role models of East Asian men, and East Asian men's sexualities specifically, in Western media depictions (Schug et al., 2017).

As well, ethnic differences in women appeared to be primarily mediated by excitation and affected both solitary and dyadic aspects of sexual response and behaviour, while ethnic differences in men appeared to be primarily mediated by inhibition and affected only dyadic aspects of sexual response and behaviour (Chapters 2 and 3). Based on theories related to male-female sex differences in mating strategy (e.g., Buss & Schmitt, 1993), men, on average, would be expected to have greater levels of intrinsic sexual excitation than women. As such, cultural prohibitions against sexual expression may more easily engender a lack of awareness of experiences of sexual excitation in women, while men may need stronger inhibitory controls on reliable intrinsic excitation to meet the same cultural expectations. From the sexual tipping point perspective (Perelman, 2006), men may need a greater level of inhibition to balance out the higher levels of intrinsic excitation in order to reach the levels of culturally-expected sexual restraint. Secondarily for men, as Chinese cultural prohibitions are often focused on social and relational propriety concerns (Dang et al., 2017; Ng & Lau, 1990), in contrast to more individualistic Western notions of (religious) morality (Runkel, 1998), inhibitory processes may likely be more important and active in partnered rather than individual contexts of sexual activity. In contrast, for Chinese women, fewer opportunities for developing awareness of sexual excitation may promote reduced global (i.e., both solitary and dyadic) sexual response and greater identification with asexuality. All these potential mechanisms described above require further empirical evaluation. Focusing on sexual incentives, and individual's stated reasons for engaging in partnered sexual activities, may be an important step for future research.

Although the current study focused on ethnic and cultural differences between Chinese and Western approaches to sexuality, it is important to recognize the similarities between Chinese and Euro-Caucasian individuals. Group mean differences among men for sexual function in the present study were only in the moderate range and had overlapping distributions, while the overall line of investigation showed that the dual control model did appear to be applicable in understanding Chinese men's sexual response even if the meaning attributed to such response may differ. Furthermore, examination of acculturation in Chapter 4 suggested that Chinese heritage and Canadian mainstream cultures may be experienced by Chinese-Canadian individuals in a complimentary rather than oppositional way. In the discussion about sexual incentives and reasons for engaging in sexual activity, it is undoubtable that Chinese men and women engage in sexual behaviours for a wide range of pleasure-oriented, relational, instrumental, and reproductive reasons, as have been identified in Euro-Caucasian and ethnically-mixed populations previously (Meston & Buss, 2007). Ultimately, cultural factors interact with the biological foundation for sexual behaviour that is present in all peoples as a result of our evolutionary context. In the same way, hypotheses about gender differences must be caveated by findings that cross-gender comparisons in sex drive are generally only moderate in size (Archer, 2019), and that humans of all sexes and genders face many common ecological challenges in reproduction and survival (Miller et al., 2005). Chinese and Western cultures too have had hundreds of years of shared and intersecting history through the processes of migration, economics, politics, technology, and warfare. As such, cultural and ethnic differences should be held alongside an understanding of shared experiences and common humanity.

Limitations and Future Directions

The current study was limited by the use of a self-report correlational approach, which prevented the delineation of the causal relationships between sexual excitation, inhibition, other sexuality variables, and engagement in partnered sex. As such, the specific mechanisms of interaction between these variables remained uncertain. In particular, whether specific ethnic and cultural differences in sexual response and function were the cause or effect of reduced engagement in ethnic differences in partnered sexual activities, and whether a participant's score on those variables were the cause or effect of individual decision-making, could not be determined from the current investigation. Future studies using repeated-measure and longitudinal approaches may be important to elucidate these issues. A self-report approach may also have meant that responses were subject to social desirability responding and other response biases on questionnaires. Although this was controlled for in some analyses, the potential for social desirability responding and other response biases to differentially impact Chinese and Euro-Caucasian men regarding sexual topics in particular remained a potential confound for interpreting the results. Additional research focusing on ethnic and cultural differences on response biases in the context of sexuality specifically would be useful for these considerations.

The sample of Chinese and Euro-Caucasian men was also limited in many respects regarding representativeness towards all Chinese or Western cultural experiences of sexuality. The sample focused on young men attending psychology courses at a Canadian university, and as such many not be generalizable to those of different ages, generations, educational backgrounds, or locations of residence. The current results were also predominantly focused on heterosexual experiences of sexuality, given the large proportion of primarily heterosexual identified men in the present sample. Although the current study did not make specific hypotheses about sexual orientation, and the questionnaires used are not only applicable to

heterosexual individuals, future studies emphasizing the experiences of non-heterosexual Chinese individuals would be important. This is especially important given the prevalence of restrictive attitudes about same-sex attractions and sexual orientation minority groups in Chinese culture (Ahrold & Meston, 2010; Brotto et al., 2007; Ng & Lau, 1990). Similarly, specific focus on transgender experiences and other forms of gender diversity would be important, both given the (presumably) primarily cisgender current sample and the binary division of analyses into male/men's and female/women's sexualities. As it used a self-selected sample, the current study was also not representative of the individuals (of either ethnicity) that were most uncomfortable or uninterested in discussions of sexuality. Research using other methods of data collection, such as population-based approaches and clinical case-studies, may be useful.

At a conceptual level, the overall line of research discussed in this chapter and previous chapters focused only on culture as a trait or quality internal to the individual. This is most salient in using a binary ethnicity measure as a proxy for cross-cultural comparisons, but also in emphasizing culture in the form of an individual's learned attitudes and expectations about sexuality. This individual-focused framework is also somewhat implicit within the dual control model and the incentive-motivation model, which attempt to capture cultural factors in the way of individual learned experiences (Toates, 2009) encoded onto the conceptual nervous system. This bias in the present research may reflect in part a Western independent self-construal perspective (Kitayama et al., 1990). However, culture also represents the social and physical environments individuals inhabit, and the affordances that those environments provide (Kaufmann & Clément, 2007). As such, examining the external context of sexuality would be crucial in a full understanding of the impact of social and cultural factors on sexuality. This would be analogous to needing to understand not just an organism's genotype and physiology,

but also current and past ecological and geographical environment, to fully capture the impact of biological and evolutionary factors on its phenotype. Therefore, multidisciplinary and multimethods approaches will be important to more thoroughly examine the ideas raised in the present research.

Conclusion

The current study focused on investigating how to best understand previously-established group differences between young Chinese and Euro-Caucasian men in sexual response and sexual inhibition. We were able to replicate previous research showing that Chinese men reported higher sexual inhibition and lower sexual function compared to their Euro-Caucasian peers. We also found lower levels of sexual satisfaction and higher levels of performance anxiety (though comparisons of sexual distress did not reach statistical significance). As such, young Chinese men appeared to be more likely on average to experience sexual dysfunctions than their Euro-Caucasian peers. Engagement in partnered sexual activity interacted with sexual distress, function, and response in unexpected ways, and suggested that Chinese men may have different motives for engaging in partnered sex compared to Euro-Caucasian men. Asexuality did not appear to be a good fit for Chinese men's experiences. This research highlighted challenges on how etic meaning may be ascribed to cultural differences in sexual response, and implications of these issues for the understanding sexual concerns in Chinese men.

Table 6.1

Demographic characteristics of Euro-Caucasian (n = 164) and Chinese (n = 270) men

Ethnic Category	Age	Years in Canada	# Prev. Rel. Part.	# Prev. Sex Part.
Euro-Caucasian	22.3 (5.7)	17.5 (8.6)	2.5 (2.4)	9.1 (13.2)
Chinese	20.5 (2.2)	11.2 (7.1)	1.6 (1.8)	2.9 (6.5)

		Euro-Caucasian	Chinese
Sexual Orientation	Exclusive opposite-sex oriented	72.8%	74.8%
	Mostly opposite-sex oriented	12.9%	8.1%
	Bisexual oriented	4.7%	8.1%
	Mostly same-sex oriented	3.6%	3.0%
	Exclusive same-sex oriented	2.3%	5.2%
	Asexual	3.7%	0.0%
	Other or did not respond	0.0%	0.7%
Partnered sexual activity ¹	Yes	62.8%	50.4%
	No	37.2%	49.6%
Relationship Status ²	Monogamous and sexually active	43.9%	24.1%
	Monogamous and not sexually active	3.7%	6.3%
	Open relationship	0.0%	1.1%
	Single and sexually active	21.3%	15.9%
	Single and not sexually active	31.1%	53.3%

¹ As queried on the International Index of Erectile Function

² As queried on the demographics survey

Table 6.2.

Means, standard deviations, and t-test results for Euro-Caucasian and Chinese men who reported not currently engaging in partnered sexual activity, for sexual excitation, sexual inhibition, sexual functioning, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms. Ethnicity was coded as 0 = Euro-Caucasian, 1 = Chinese.

		Euro-Caucasian (n = 61)		Chinese (n = 138)		t	Cohen's d
		M	SD	M	SD		
SISSES	Excitation	53.59	7.67	53.60	8.07	-.01	.00
	Inhibition 1	29.45	6.51	30.37	5.32	-1.04	-.15
	Inhibition 2	28.63	4.65	31.25	4.74	-3.60***	-.56
IIEF	Desire	6.40	1.42	6.65	1.83	-.95	.15
	Overall Sat.	4.91	2.03	5.62	2.23	-2.11	.33
FSDS		15.64	8.84	13.35	10.52	1.48	.24
SFS	Perform. Anx.	17.06	5.24	18.24	6.59	-1.23	-.20
AIS		19.22	8.48	18.80	4.96	.43	.06
BIDR		11.55	4.75	10.11	4.10	2.15	.32
BSI		35.23	29.06	33.10	24.35	.53	.08

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; IIEF = International Index of Erectile Function; Sat. = Satisfaction; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 6.3.

Means, standard deviations, and t-test results for Euro-Caucasian and Chinese men who reported currently engaging in partnered sexual activity, for sexual excitation, sexual inhibition, sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms. Ethnicity was coded as 0 = Euro-Caucasian, 1 = Chinese.

		Euro-Caucasian (n = 103)		Chinese (n = 132)		t	Cohen's d
		M	SD	M	SD		
SISSES	Excitation	56.33	8.22	53.02	7.40	3.24***	.42
	Inhibition 1	27.16	6.61	31.56	5.16	-5.73***	-.74
	Inhibition 2	27.44	5.71	29.64	5.17	-3.55***	-.40
IIEF	Erection	24.88	4.54	21.48	5.62	4.99***	.67
	Orgasm	8.68	2.28	6.86	3.27	4.78***	.65
	Desire	7.95	1.67	7.38	1.49	2.75	.36
	Intercourse Sat.	11.32	3.50	8.46	4.60	5.22***	.70
	Overall Sat.	8.20	1.69	7.01	1.95	4.92***	.65
PEDT		19.84	4.50	17.46	5.53	3.55***	.47
FSDS		11.19	7.52	13.22	7.86	-2.00	.26
SFS	Perform. Anx.	17.87	4.77	21.30	6.96	-4.27***	-.57
AIS		15.49	5.49	20.48	7.31	-5.77***	-.77
BIDR		11.37	4.95	8.40	4.56	4.78***	.62
BSI		26.72	26.88	41.77	31.53	-3.87***	.51

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; IIEF = International Index of Erectile Function; Sat. = Satisfaction; PEDT = Premature Ejaculation Diagnostic Tool; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; Perform. Anx. = Performance Anxiety; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 6.4.

Correlations for sexual excitation and inhibition with sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms for Euro-Caucasian and Chinese men. Comparisons of differences between correlation coefficients in Chinese and in Euro-Caucasian men are also shown.

		Pearson <i>r</i> for Euro-Caucasian (<i>n</i> = 61)			Pearson <i>r</i> for Chinese (<i>n</i> = 138)			z-score of difference between Chinese and Euro-Caucasian		
		SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2
SISSES	Inhibition 1	-.15			-.04			-.71		
	Inhibition 2	.18	.27		-.19	.24		2.38*	.02	
IIEF	Desire	.19	-.17	-.06	.47***	.01	-.31***	-2.02*	-1.16	1.66
	OS	-.25	-.03	.37***	-.08	-.07	.17	-1.12	-.79	1.38
FSDS		.18	.06	-.01	.32***	.21	-.18	-2.51*	1.09	1.10
SFS	PA	.10	.35	-.09	-.01	.16	-.13	.70	1.30	.26
AIS		-.39***	.50***	.37***	-.43***	.27***	.18	.31	1.74	1.31
BIDR		-.36***	-.30*	-.13	-.03	-.36***	.09	-2.21*	.43	-1.41
BSI		-.08	.15	-.03	.12	.15	.15	-1.28	.00	-1.15

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; IIEF = International Index of Erectile Function; OS = Overall Satisfaction; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; PA = Performance Anxiety; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 6.5.

Correlations for sexual excitation and inhibition with sexual functioning and subscales, sexual distress, sexual performance anxiety, asexuality, social desirability responding, and psychological symptoms for Euro-Caucasian and Chinese men who reported currently engaging in partnered sexual activity. Comparisons of differences between correlation coefficients in Chinese and in Euro-Caucasian men are also shown.

		Pearson <i>r</i> for Euro-Caucasian (<i>n</i> = 103)			Pearson <i>r</i> for Chinese (<i>n</i> = 132)			z-score of difference between Chinese and Euro-Caucasian		
		SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2	SISSES Excitation	SISSES Inhibition 1	SISSES Inhibition 2
SISSES	Inhibition 1	-.23			-.04			-1.95		
	Inhibition 2	-.38***	.27		.06	.43***		-4.61***	-1.83	
IIEF	Erection	.27	-.32***	-.14	.10	-.10	-.06	1.77	-2.32	-.81
	Orgasm	.28	-.33***	-.14	.08	-.29***	-.17	2.08	-.44	.31
	Desire	.44***	-.33***	-.32***	.45***	-.04	-.10	-.12	-3.03***	-2.32
	IS	.05	-.34***	-.07	.04	-.07	-.19	.10	-2.85***	1.22
	OS	-.13	-.13	.12	-.20*	-.04	-.21	.72	-.91	3.34***
PEDT		.16	-.15	.05	.16	-.13	-.19	.00	-.20	2.43
FSDS		.08	.44***	-.01	.30***	.18	.02	-2.30	2.91***	-.30
SFS	PA	-.04	.35***	.18	.13	.27	.19	-1.71	.89	-.10
AIS		-.31***	.41***	.16	-.22	.28***	-.03	-.97	1.48	1.92
BIDR		.18	-.23	.09	-.07	-.04	.36***	2.53	-1.95	-2.87***
BSI		-.04	.20	.06	.01	.31***	.04	-.50	-1.18	.20

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; IIEF = International Index of Erectile Function; IS = Intercourse Satisfaction; OS = Overall Satisfaction; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; PA = Performance Anxiety; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Table 6.6.

ANCOVA models for the effect of ethnicity and sexual activity on sexual excitation, sexual inhibition, sexual function, sexual distress, sexual performance anxiety, and asexuality, controlling for age, social desirability responding, and psychological symptoms as covariates, in Chinese and Euro-Caucasian men. Sexual activity coded as 0 = not engaging in partnered sexual activity, 1 = engaging in partnered sexual activity. Ethnicity coded as 0 = Euro-Caucasian, 1 = Chinese.

		<i>F</i> (1, 423)	<i>p</i>	partial η^2
SISSES Excitation	Ethnicity	.98	.500	.49
	Partnered sex	.32	.672	.24
	Ethnicity x Partnered sex	4.25	.040	.01
SISSES Inhibition 1	Ethnicity	2.31	.366	.69
	Partnered sex	.36	.656	.27
	Ethnicity x Partnered sex	4.87	.028	.01
SISSES Inhibition 2	Ethnicity	127.17	.009	.99
	Partnered sex	33.93	.117	.97
	Ethnicity x Partnered sex	.16	.688	.00
IIEF Desire	Ethnicity	.22	.719	.18
	Partnered sex	9.63	.199	.91
	Ethnicity x Partnered sex	4.99	.026	.01
IIEF Overall Sat.	Ethnicity	.03	.900	.02
	Partnered sex	8.41	.211	.89
	Ethnicity x Partnered sex	17.31	< .001***	.04
FSDS	Ethnicity	3.01	.319	.74
	Partnered sex	6.90	.233	.87
	Ethnicity x Partnered sex	1.62	.203	.00
SFS Perform. Anx.	Ethnicity	9.70	.171	.01
	Partnered sex	8.07	.217	.01
	Ethnicity x Partnered sex	.84	.361	.00
AIS	Ethnicity	.58	.584	.37
	Partnered sex	.26	.699	.21
	Ethnicity x Partnered sex	11.97	.001***	.03

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale; IIEF = International Index of Erectile Function; FSDS = Female Sexual Distress Scale; SFS = Sexual Function Scale; AIS = Asexuality Identification Inventory; BIDR = Balanced Inventory of Desirable Responding; BSI = Brief Symptoms Inventory

*** $p < .004$; Bonferroni correction used to control for type 1 error inflation

Figure 6.1.

Marginal means of the interaction effect of sexual activity status and ethnicity on overall sexual satisfaction, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. IIEF = International Index of Erectile Function.

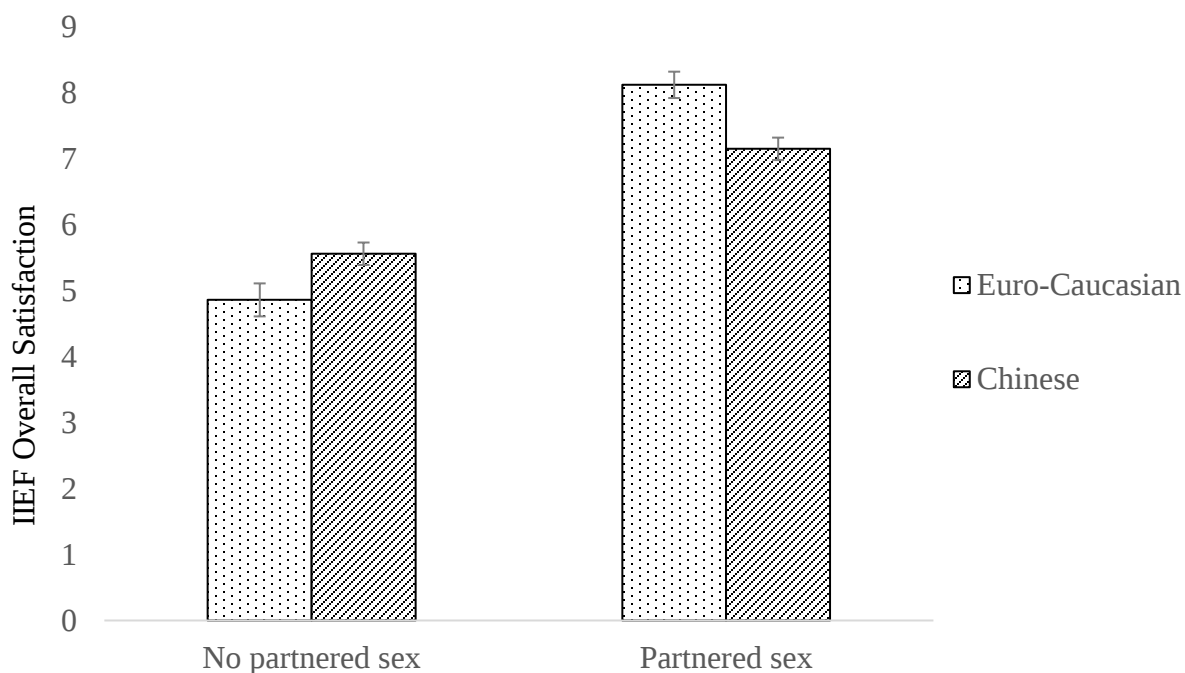


Figure 6.2.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual desire, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. IIEF = International Index of Erectile Function.

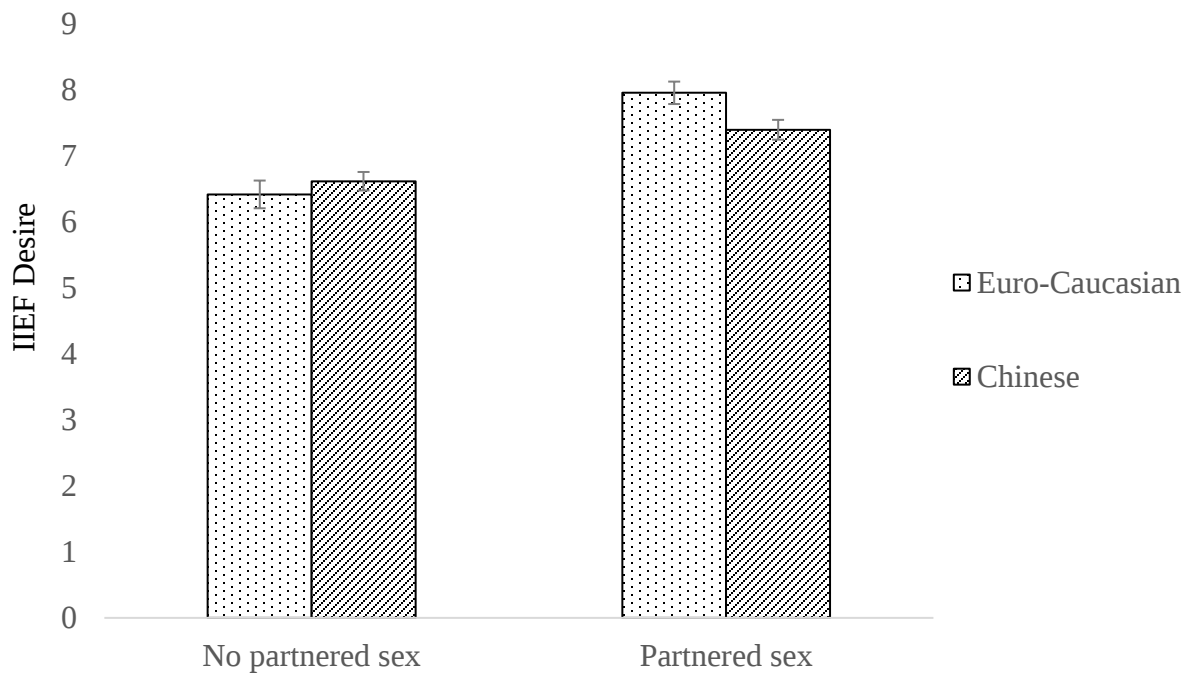


Figure 6.3.

Marginal means of the interaction effect of sexual activity status and ethnicity on asexual experiences, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. AIS = Asexuality Identification Inventory.

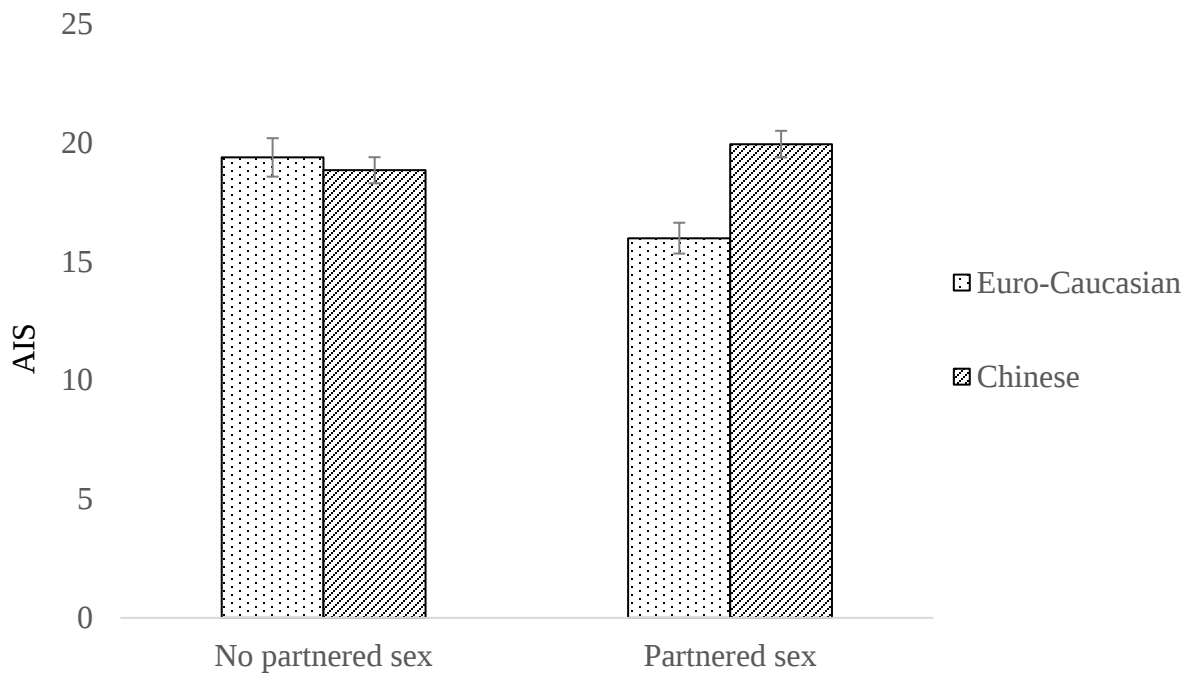


Figure 6.4.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual excitation, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. SISSES = Sexual Inhibition Scale/Sexual Excitation Scale.



Figure 6.5.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual inhibition due to fear of performance difficulties, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex ($n = 61$), Chinese men not engaging in partnered sex ($n = 138$), Euro-Caucasian men engaging in partnered sex ($n = 103$), and Chinese men engaging in partnered sex ($n = 132$). Bars show marginal means of each group, error bars show standard errors of the marginal mean.

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale.

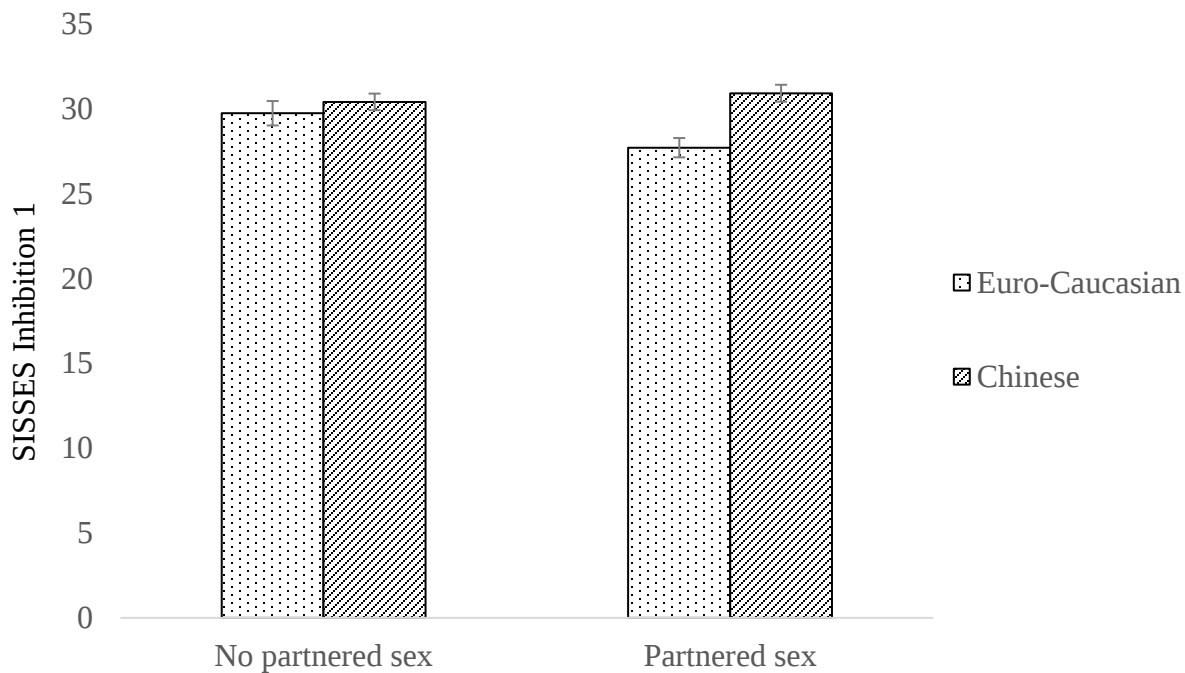


Figure 6.6.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual inhibition due to fear of negative consequences, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex ($n = 61$), Chinese men not engaging in partnered sex ($n = 138$), Euro-Caucasian men engaging in partnered sex ($n = 103$), and Chinese men engaging in partnered sex ($n = 132$). Bars show marginal means of each group, error bars show standard errors of the marginal mean.

SISSES = Sexual Inhibition Scale/Sexual Excitation Scale.

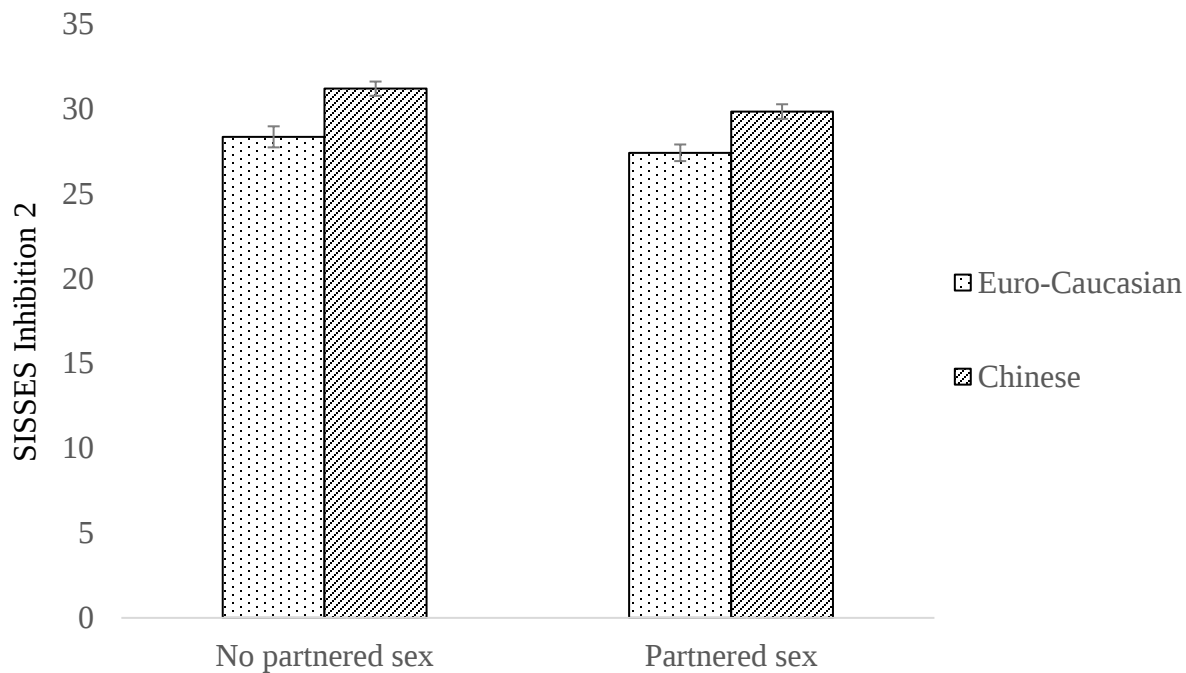


Figure 6.7.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual performance anxiety, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. SFS = Sexual Function Scale.

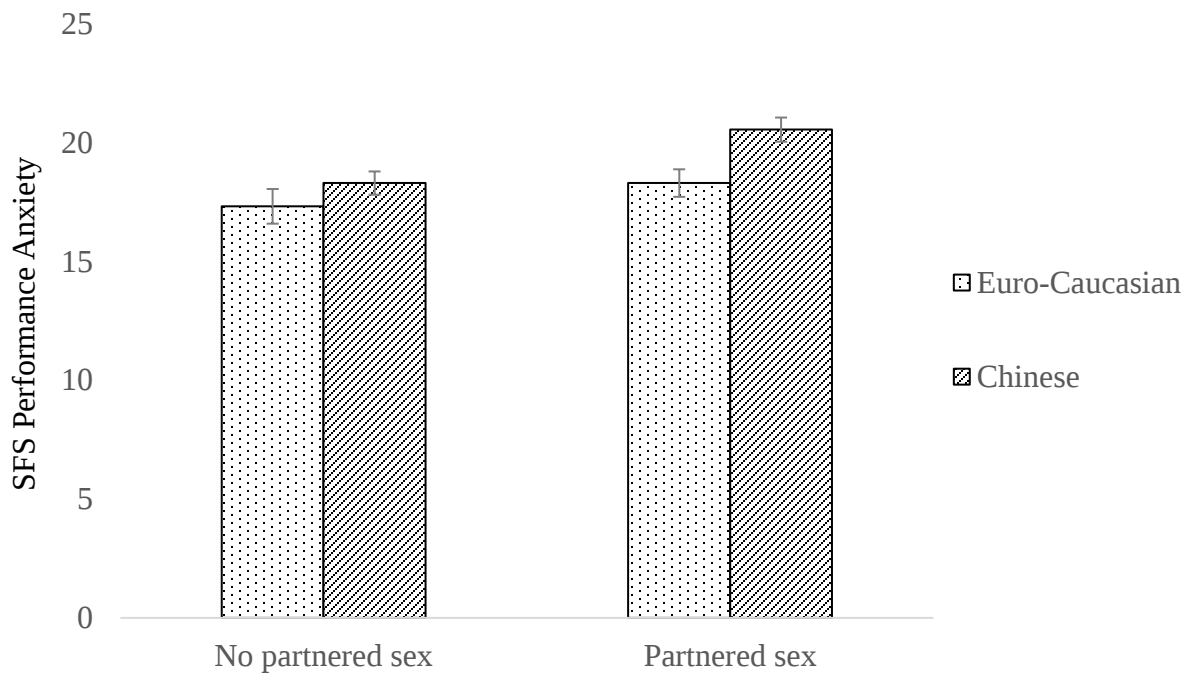
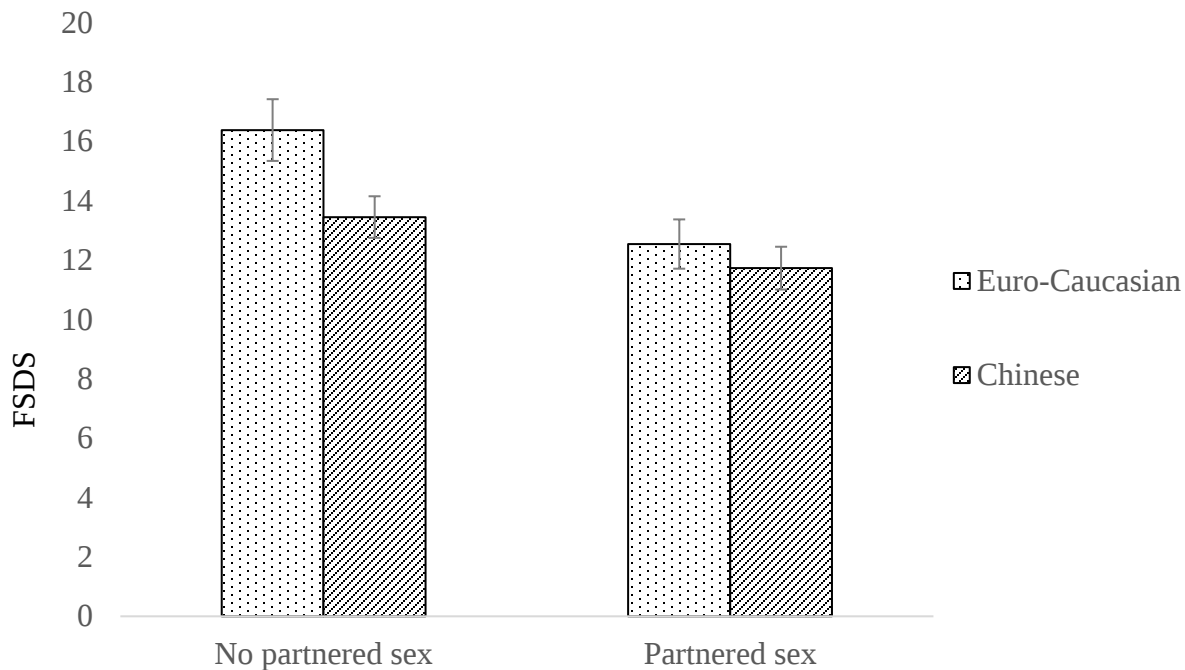


Figure 6.8.

Marginal means of the interaction effect of sexual activity status and ethnicity on sexual distress, controlling for social desirability responding, psychological symptoms, and age, in Euro-Caucasian men not engaging in partnered sex (n = 61), Chinese men not engaging in partnered sex (n = 138), Euro-Caucasian men engaging in partnered sex (n = 103), and Chinese men engaging in partnered sex (n = 132). Bars show marginal means of each group, error bars show standard errors of the marginal mean. FSDS = Female Sexual Distress Scale.



Chapter 7: Summary, Implications, and Conclusion

The current line of investigation examined the dual control model as a framework for understanding the patterns of sexual response and behaviours seen in a population of young adult Chinese men and women living in Canada. In Chapters 2 and 3, we examined whether underlying differences in sexual excitation and sexual inhibition may explain other observed between-group differences in sexual response and behaviour when comparing Chinese to Euro-Caucasian women and men, respectively. We also examined the role of sexual attitudes as a mediator of other ethnic differences. In Chapter 4, we examined whether within-group differences in sexual excitation and inhibition, as well as other sexual response and activity variables, were associated with differences in mainstream and heritage acculturation among Chinese women and men. In Chapters 5 and 6, we examined whether between-group differences in sexual dysfunctions, asexuality, and/or abstinence from partnered sexual activity were empirically-supported ways of understanding the contrast in sexual response and behaviour among Chinese women and men compared to their Euro-Caucasian peers.

Among women, we found that Chinese individuals reported on average lower levels of sexual excitation, but comparable levels of sexual inhibition in contrast to their Euro-Caucasian peers. This difference appeared to explain ethnic differences in other domains of sexual response (e.g., desire, arousability) and sexual activity, and were partially mediated by higher restrictive and lower permissive attitudes in Chinese women compared to Euro-Caucasian women. Ethnic differences in sexual excitation were partially but not entirely explained by lower rates of partnered sexual activity in Chinese women. Chinese women were more likely to identify as asexual compared to their Euro-Caucasian peers, and Chinese women who were not engaging in partnered sex may have been less distressed compared Euro-Caucasian women who were not

sexually active. Among Chinese women, within-group differences in sexual excitation, and sexual response and behaviour, were primarily associated with mainstream acculturation.

Among men, we found that Chinese individuals reported on average higher levels of sexual inhibition (in particular inhibition due to performance concerns), but comparable levels of sexual excitation. Chinese men also showed lower levels of sexual response and behaviours in dyadic contexts (e.g., partnered sexual activity, dyadic desire) than their Euro-Caucasian peers. Higher restrictive and lower permissive attitudes separately mediated the differences in sexual inhibition and differences in sexual response/activity. Chinese men were more likely to experience sexual dysfunction than Euro-Caucasian men when engaging in partnered sexual activity, and sexual excitation and inhibition were less linked to engagement in partnered sex for Chinese men compared to Euro-Caucasian men. Among Chinese men, within-group differences in sexual inhibition, and sexual response and behaviour, were primarily associated with mainstream acculturation but did show some interactions with heritage acculturation.

Theoretical Implications

The study provided evidence that the dual control model may be a useful framework for understanding the mechanisms which underlie ethnic and cultural differences in sexual response and behaviour. The current findings suggested that more sexually restrictive cultural/ethnic contexts (e.g., the Chinese cultural experience of the participants of the current study) and more sexually permissive ones (e.g., the Western/Canadian cultural experience of the participants of the current study) may constraint or facilitate sexual experience and expression by acting on sexual excitation in women, and on sexual inhibition in men. In the contrast between Chinese and Euro-Caucasian women, these processes were most often manifest as generally lower sexual response and activity among the Chinese women. In the contrast between Chinese and Euro-

Caucasian men, these processes were most often manifest as lower sexual response and activity in dyadic, but not solitary, contexts among the Chinese men. Sexual attitudes appeared to be one mechanism by which sexual excitation and inhibition are impacted by cultural or ethnic factors; however, attitudes alone did not explain all ethnic differences in sexual behaviours, particularly in women. Further research is needed to determine whether these patterns are generalizable to other cultures and cross-cultural comparisons, and further elaborate on these mechanisms.

Another common theme which emerged from the findings was the importance of relationship context. Variables examining partnered contexts for sexuality (e.g., dyadic desire, interest/engagement in casual sex) often showed the largest ethnic differences, and engagement in partnered sex had an important moderating role in the potential implications of these differences. The Chinese-Western contrast in experiences of the relational aspects of sexuality had been previously recognized in the domains of casual sex (Higgins et al., 2002), initiation of sexual activity (Trinh & Kim, 2020), and experiences of sexual desire (Dang et al., 2017). Lower rates of partnered casual sex among Chinese individuals compared to Euro-Caucasian individuals may have been an important factor in many of the findings observed. Age of first partnered sexual activity may be another important variable (Regan et al., 2004). More Chinese individuals may be initiating partnered sexual activities, and experiencing the associated psychosexual developmental processes, at a later age and in a different social context than what may be most common among their Euro-Caucasian peers. The initiation of partnered sexual activity, which is often seen as an important milestone in the emergence of adult sexual roles and identities (Dworkin, 2005), may also carry different meanings across cultures. Therefore, it could be useful for future research to examine in the role of culture on the nature and meaning of the

link between romantic relationships and partnered sexual activity, its change and development across the lifespan, and its implications for the regulation of sexual response and behaviours.

The current studies also highlighted the importance of Western culture in shaping the observed patterns of sexual response and behaviours in Chinese (and Euro-Caucasian) individuals. Findings from Chapter 4 showed that, among both Chinese men and women, it was the identification with mainstream Western/Canadian, rather than the rejection of heritage Chinese culture, that was most prominently associated with higher levels of sexual response and activity. Indeed, heritage acculturation was, for the most part, positively correlated with mainstream acculturation. Findings from Chapter 5 also putatively suggested that Chinese women may have been somewhat more protected against Western culture's potential to engender greater distress and reduced satisfaction for women who were not sexually active. These results raised the possibility that despite the emphasis in the literature on conservative Chinese values about sexuality (e.g., see Chapter 1), the influence of Western culture is just as vital of a factor in shaping the sexual experiences of Chinese people in Canada. Moreover, Western and Chinese acculturation do not need to represent conflicting identities or worldviews, and in fact may potentially be synthesized into a compatible and complementary cultural framework for many in this population. More broadly, findings from the current investigation exemplified the multifaceted nature of both Western and Chinese cultures' roles in sexuality, and the complex interaction of cultural factors that may be relevant to individuals living in multicultural contexts.

Clinical Implications

The current study highlights several key clinical implications for Chinese women's sexual health and wellbeing. The results from Chapter 5 did find that young Chinese women may be more likely to experience some difficulties in sexual function on average compared to Euro-

Caucasian women. However, these differences were of a small magnitude and did not occur alongside more sexual distress. Given that a diagnosis of a sexual disorder requires both distress and dysfunction elements (American Psychiatric Association, 2013), it will be important for clinicians to recognize that lower levels of sexual response in Chinese women (e.g., compared to Euro-Caucasian norms) do not always represent the presence of a DSM-5 diagnosis. In contrast, the results from Chapter 6 found that young Chinese men may be more likely to experience sexual dysfunctions on average compared to their Euro-Caucasian peers. These differences were of moderate magnitude, included reduced satisfaction and increased performance anxiety, and thus may qualify for DSM-5 diagnoses on account of both distress and dysfunction (American Psychiatric Association, 2013). However, group differences should not be conflated with individual experiences, and Chinese women and men in sex therapy will vary in their sexual response, function, and specific concerns. As such, careful assessment of both sexual response and function, level of resulting distress and dissatisfaction, and individual treatment goals will be important when working with Chinese individuals' sexual concerns.

The similar patterns of associations between sexual inhibition and sexual excitation with sexual functioning difficulties seen in Chapter 5 among Chinese and Euro-Caucasian women suggested that existing treatment approaches to women's sexual dysfunctions would likely be applicable for Chinese women (Althof et al., 2005; Brotto, 2017). Despite sexual excitation being the predominant group-level difference, individual Chinese women may benefit from both interventions aimed at reducing sexual inhibition as well as interventions that enhance awareness of sexual excitation (depending on the specific case conceptualization of the sexual concerns). As per the findings on anxiety to sexual arousal described in Chapters 2 and 4, targeting anxiety and other negative responses towards the experience of arousal may also be useful for some

women. Given the strong association between relationship and sexual satisfaction (Byers, 2002, 2005) and the importance of romantic relationships to young Chinese women's experience of sexual response, an relationally/interpersonally oriented treatment approach (e.g., Mitchell, 1988) and resolving romantic relationship barriers may also be particularly applicable in this patient population. Beyond sexual function, interventions aimed at reducing discomfort with sexuality may benefit Chinese women in accessing related health services such as cervical cancer screening (Woo et al., 2009). These interventions should validate, or at least not invalidate, cultural and individual experiences that valued by the patient, even if specific inaccurate beliefs need to be challenged. Although the findings on asexuality are at a preliminary stage, an exploration of this identity may also be useful for some Chinese women who are particularly disinterested in sexual activities or experience little sexual attraction and arousal. However, clinicians should also not assume that an asexual orientation identity will be suitable for all or most Chinese women, regardless of ethnic group mean differences in sexual response.

With regards to specific interventions in sex therapy for Chinese men, the current results suggest some potential approaches to reducing sexual dysfunction symptoms and enhancing sexual response. As per the findings from Chapter 3, challenging performance-based anxiety to target sexual inhibition (Barlow, 1986) may be effective for facilitating reliable sexual response, particularly for enhancing dyadic sexual desire. Building pleasure-oriented motivations for sexual activity, and challenging anxiety and shame associated with experiencing or pursuing sexual excitation, may be important for improving sexual function. Psychoeducation about sexuality, including about the role of sexual excitation and inhibition in sexual performance and function, could also be an important intervention. Given the important role of romantic relationships in this population (Dang et al., 2017), and previous findings that East Asian couples

have more restrictive timetables for initiation of sexual activities during dating (Feldman et al., 1999), resolving relationship barriers or communication challenges are likely particularly applicable to Chinese men as well. Conceptualizing sexuality from a relational/interpersonal perspective (Mitchell, 1988) may again be a useful framework. Being able to engage in these discussions in a way that integrates and validates both Western and Chinese cultural values may be especially useful for some Chinese men (and women) living in Canada.

The differential patterns seen between Chinese men and Chinese women for some associations in the current line of investigation highlight that cultural and ethnic factors do not necessarily impact all Chinese people in the same way. Sex and gender represented some of the dimensions along which individuals of any one ethnicity may differ. Acculturation represented another dimension of individual variability within an ethnic group. Other factors not emphasized in the current investigation, such as sexual orientation, education level, socioeconomic class, development across the lifespan, and (dis)ability represent just some of the other potential areas of intersectionality with the dynamics discussed presently. Chinese individuals are also subject to subcultural and regional differences, similar to Euro-Caucasian individuals. Ultimately, it will be important for sexuality clinicians trained in a Western cultural context to be able to connect with specific Chinese patients as individuals with unique lived experiences, as they would with other patients from potentially more familiar cultural and ethnic backgrounds.

Navigation of the intersection of Western and Chinese cultural values about sexuality may also be part of a broader discussion around cultural identity. Exploration of identity in general may be useful and could underscore the intersection of individuation from and connectedness with cultural and familial expectations (Kohut, 1971). It is also important to recognize that Chinese men and women in Western countries reside in cultural “borderlands”

(Anzaldúa, 1987) that are neither entirely Chinese nor entirely Western. Clinicians treating sexual difficulties in this population will likely require competence in helping patients navigate this landscape, including issues of acculturation (Berry, 1997; Doucerain et al., 2013) and the intersectionality of ethnicity, gender, sexual orientation, family, and individual experience (Hays, 1996). The importance of being able to conceptualize and work with the interaction between multiple aspects of human experience is particularly exemplified by the differential patterns of findings between men and women seen in the present line of investigation. Clinicians working in this area may benefit from discussion, in their training if not with their clients, the cultured, racialized, and gendered context in which sex therapy and psychotherapy have developed historically and are presently practiced (Falicov, 1995). This may also mean consideration towards the practice of clinical psychology not only as care providers and researchers, but also as agents of social and cultural preservation, change, and justice.

Conclusion

Overall, the current investigation showed that the dual control model may be a useful framework for understanding the range of differences in sexual response and behaviours between Chinese and Euro-Caucasian individuals. The evidence found support for the role of sexual excitation and inhibition as important components of the mechanism that maintains ethnic and cultural differences in sexuality. Elements of the dual control model interacted with a variety of other factors, including acculturation (in particular mainstream acculturation), sexual attitudes, relationship context, and sexual orientation. The interaction of these factors potentially had implications for sexual response, sexual activity, sexual functioning, and sexual identity (e.g., asexuality). The research also underscored the importance of the intersectionality between ethnicity and culture with (biological) sex and gender in shaping individual differences in lived

experiences of sexuality. These findings have significant practical implications for theory-building on the nature of culture and sexuality, and for clinical interventions for sexual concerns among Chinese patients.

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Appendix A: Exploratory Factor Analysis of the SESII-W

Exploratory factor analyses (EFA) for Sexual Excitation and Sexual Inhibition Inventory for Women in Euro-Caucasian (n = 201) and Chinese (n = 270) women. Consistent with Graham et al. (2006), an eight factor model was extracted using maximum likelihood EFA with varimax rotation. For Euro-Caucasian women the model explained 46.11% of the variance in the scale, while for Chinese women the model explained 44.77% of the variance. Only the largest factor loading per item is shown.

Euro-Caucasian	F1	F2	F3	F4	F5	F6	F7	F8
Excitation items								
Arousability								
Seeing an attractive partner's naked body really turns me on.	.471							
Just being physically close with a partner is enough to turn me on.	.469							
I get very turned on when someone really wants me sexually.	.415							
Fantasizing about sex can quickly get me sexually excited.	.593							
When I think about someone I find sexually attractive, I easily become...	.748							
With a new partner I am easily aroused.	.423							
If I see someone dressed in a sexy way, I easily become sexually aroused.	.581							
Certain hormonal changes definitely increase my sexual arousal.	.330							
Sometimes I am so attracted to someone, I cannot stop myself from...	.550							
Partner characteristics								
Someone doing something that shows he/ she is intelligent turns me on.					.625			
If I see a partner interacting well with others, I am more easily sexually...					.718			
Seeing a partner doing something that shows his/ her talent can make me...					.618			
Eye contact with someone I find sexually attractive really turns me on...					.450			
Sexual power dynamics								
It turns me on if my partner "talks dirty" to me during sex.						.408		
Feeling overpowered in a sexual situation by someone I trust increases...						.959		
If a partner is forceful during sex, it reduces my arousal.						-.495		
Dominating my partner sexually is arousing to me.						.254		
Smell								

Particular scents are very arousing to me.	.611
Often just how someone smells can be a turn-on.	.943
Setting (unusual or unconcealed)	
Having sex in a different setting than usual is a real turn-on for me.	-.368
If it is possible someone might see or hear us having sex, it is more...	.732
I find it harder to get sexually aroused if other people are nearby.	.791
I get really turned on if I think I may get caught while having sex.	-.644
Inhibition items	
Concerns about sexual function	
If I am concerned about being a good lover, I am less likely to become...	.637
If I think about whether I will have an orgasm, it is much harder for me...	.588
Sometimes I feel so “shy” or self-conscious during sex that I cannot...	.591
If I am worried about taking too long to become aroused, this can...	.587
Arousal contingency	
It is difficult for me to stay sexually aroused.	.536
When I am sexually aroused the slightest thing can turn me off...	.569
Unless things are “just right” it is difficult for me to become sexually...	.712
Relationship importance	
If I think that a partner might hurt me emotionally, I put the brakes on...	.486
It would be hard for me to become sexually aroused with someone who is...	.571
If I think that I am being used sexually it completely turns me off.	.653
It is easier for me to become aroused with someone who has...	.528
If I am uncertain about how my partner feels about me, it is harder for me...	.643
I really need to trust a partner to become fully aroused...	.675

Chinese	F1	F2	F3	F4	F5	F6	F7	F8
Excitation items								
Arousability								
Seeing an attractive partner’s naked body really turns me on.	.439							
Just being physically close with a partner is enough to turn me on.	.469							
I get very turned on when someone really wants me sexually.	.613							
Fantasizing about sex can quickly get me sexually excited.	.557							

When I think about someone I find sexually attractive, I easily become...	.436		
With a new partner I am easily aroused.	.560		
If I see someone dressed in a sexy way, I easily become sexually aroused.	.658		
Certain hormonal changes definitely increase my sexual arousal.	.274		
Sometimes I am so attracted to someone, I cannot stop myself from...	.518		
Partner characteristics			
Someone doing something that shows he/ she is intelligent turns me on.		.644	
If I see a partner interacting well with others, I am more easily sexually...		.559	
Seeing a partner doing something that shows his/ her talent can make me...		.731	
Eye contact with someone I find sexually attractive really turns me on...			.406
Sexual power dynamics			
It turns me on if my partner “talks dirty” to me during sex.	.588		
Feeling overpowered in a sexual situation by someone I trust increases...	.566		
If a partner is forceful during sex, it reduces my arousal.		.225	
Dominating my partner sexually is arousing to me.	.340		
Smell			
Particular scents are very arousing to me.		.714	
Often just how someone smells can be a turn-on.		.721	
Setting			
Having sex in a different setting than usual is a real turn-on for me.	.456		
If it is possible someone might see or hear us having sex, it is more...			.703
I find it harder to get sexually aroused if other people are nearby.			.739
I get really turned on if I think I may get caught while having sex.			-.462
Inhibition items			
Concerns about sexual function			
If I am concerned about being a good lover, I am less likely to become...	.362		
If I think about whether I will have an orgasm, it is much harder for me...		.517	
Sometimes I feel so “shy” or self-conscious during sex that I cannot...		.554	
If I am worried about taking too long to become aroused, this can...		.668	
Arousal contingency			
It is difficult for me to stay sexually...		.477	
When I am sexually aroused the slightest thing can turn me off...		.469	
Unless things are “just right” it is difficult for me to become sexually...			.755

Relationship importance	
If I think that a partner might hurt me...	.582
It would be hard for me to become...	.585
If I think that I am being used sexually it completely turns me off.	.681
It is easier for me to become aroused with someone who has...	.444
If I am uncertain about how my partner feels about me, it is harder for me...	.619
I really need to trust a partner to become fully aroused...	.591

Appendix B: Exploratory Factor Analysis of the SISSES

Exploratory factor analyses (EFA) for Sexual Inhibition Scale/Sexual Excitation Scale for Men in Euro-Caucasian (n = 127) and Chinese (n = 207) men. Consistent with Bancroft and Janssen (2000), a three factor model was extracted using maximum likelihood EFA (without rotation). For Euro-Caucasian men the model explained 34.27% of the variance in the scale, while for Chinese men the model explained 33.24% of the variance. Only the largest factor loading per item is shown.

Euro-Caucasian	F1	F2	F3
Excitation items			
When I look at erotic pictures, I easily become sexually aroused.	.523		
If I am on my own watching a sexual scene in a film, I quickly become...	.678		
Sometimes I become sexually aroused just by lying in the sun.	.471		
When a sexually attractive stranger accidentally touches me, I easily...	.552		
When I have a quiet candlelight dinner with someone I find sexually	.620		
When I feel sexually aroused, I usually have an erection.	.227		
When I see someone I find attractive dressed in a sexy way, I easily	.579		
When I think someone sexually attractive wants to have sex with me...	.559		
When I talk to someone on the telephone who has a sexy voice...	.586		
Just thinking about a sexual encounter I have had is enough to turn me...	.549		
When I am taking a shower or a bath, I easily become sexually aroused.	.524		
If I am with a group of people watching an X-rated film, I quickly...	.579		
When a sexually attractive stranger looks me straight in the eye...	.623		
When I wear something I feel attractive in, I am likely to become...	.490		
When I think of a very attractive person, I easily become sexually...	.614		
When I start fantasizing about sex, I quickly become sexually aroused.	.615		
When I see others engaged in sexual activities, I feel like having sex...	.617		
When I see an attractive person, I start fantasizing about having sex...	.617		
When I feel interested in sex, I usually get an erection.	.456		
When an attractive person flirts with me, I easily become sexually...	.606		
Inhibition 1 (concerns of performance failure) items			
Putting on a condom can cause me to lose my erection.		.508	
I need my penis to be touched to maintain an erection.		.512	
When I am having sex, I have to focus on my own sexual feelings in...		.532	
When I notice that my partner is sexually aroused, my own arousal...		-	
		.145	
I cannot get aroused unless I focus exclusively on sexual stimulation.		.529	
If I feel that I'm expected to respond sexually, I have difficulty getting...		.562	

If I am concerned about pleasing my partner sexually, I easily lose my...	.549		
It is difficult to become sexually aroused unless I fantasize about a...	.373		
If I think that I might not get an erection, then I am less likely to get...	.457		
Once I have an erection, I want to start intercourse right away before I...	.416		
When I have a distracting thought, I easily lose my erection.	.195		
I often rely on fantasies to help me maintain an erection.	.397		
If I am distracted by hearing music, television, or a conversation, I am...	.292		
During sex, pleasing my partner sexually makes me more aroused.	-		
	.030		
Inhibition 2 (concerns of performance consequences) items			
If I feel that I am being rushed, I am unlikely to get very aroused.	.328		
If there is a risk of unwanted pregnancy, I am unlikely to get sexually...		.493	
If I am having sex in a secluded, outdoor place and I think that...		.513	
If I discovered that someone I find sexually attractive is too young, I...		.500	
If my new sexual partner does not want to use a condom, I am unlikely...		.386	
If I am masturbating on my own and I realize that someone is likely to...		.435	
If I can be heard by others while having sex, I am unlikely to stay...		.492	
If I realize there is a risk of catching a sexually transmitted disease, I...		.441	
If I can be seen by others while having sex, I am unlikely to stay...		.472	
If I think that having sex will cause me pain, I will lose my erection.		.364	
If having sex will cause my partner pain, I am unlikely to stay sexually...		.398	
Chinese	F1	F2	F3
Excitation items			
When I look at erotic pictures, I easily become sexually aroused.	.591		
If I am on my own watching a sexual scene in a film, I quickly become...	.485		
Sometimes I become sexually aroused just by lying in the sun.		.422	
When a sexually attractive stranger accidentally touches me, I easily...	.504		
When I have a quiet candlelight dinner with someone I find sexually	.348		
When I feel sexually aroused, I usually have an erection.	.283		
When I see someone I find attractive dressed in a sexy way, I easily	.573		
When I think someone sexually attractive wants to have sex with me...	.545		
When I talk to someone on the telephone who has a sexy voice...	.435		
Just thinking about a sexual encounter I have had is enough to turn me...	.534		
When I am taking a shower or a bath, I easily become sexually aroused.		.461	
If I am with a group of people watching an X-rated film, I quickly...	.389		
When a sexually attractive stranger looks me straight in the eye...	.545		
When I wear something I feel attractive in, I am likely to become...	.307		
When I think of a very attractive person, I easily become sexually...	.680		
When I start fantasizing about sex, I quickly become sexually aroused.	.618		
When I see others engaged in sexual activities, I feel like having sex...	.507		
When I see an attractive person, I start fantasizing about having sex...	.603		
When I feel interested in sex, I usually get an erection.	.333		
When an attractive person flirts with me, I easily become sexually...	.525		
Inhibition 1 (concerns of performance failure) items			

Putting on a condom can cause me to lose my erection.	.419
I need my penis to be touched to maintain an erection.	.410
When I am having sex, I have to focus on my own sexual feelings in...	.513
When I notice that my partner is sexually aroused, my own arousal...	.430
I cannot get aroused unless I focus exclusively on sexual stimulation.	.523
If I feel that I'm expected to respond sexually, I have difficulty getting...	.593
If I am concerned about pleasing my partner sexually, I easily lose my...	.593
It is difficult to become sexually aroused unless I fantasize about a very...	.487
If I think that I might not get an erection, then I am less likely to get...	.310
Once I have an erection, I want to start intercourse right away before I...	.383
When I have a distracting thought, I easily lose my erection.	.329
I often rely on fantasies to help me maintain an erection.	.395
If I am distracted by hearing music, television, or a conversation, I am...	.285
During sex, pleasing my partner sexually makes me more aroused.	.413
Inhibition 2 (concerns of performance consequences) items	
If I feel that I am being rushed, I am unlikely to get very aroused.	.180
If there is a risk of unwanted pregnancy, I am unlikely to get sexually...	.482
If I am having sex in a secluded, outdoor place and I think that...	.483
If I discovered that someone I find sexually attractive is too young, I...	.316
If my new sexual partner does not want to use a condom, I am unlikely...	.355
If I am masturbating on my own and I realize that someone is likely to...	.457
If I can be heard by others while having sex, I am unlikely to stay...	.409
If I realize there is a risk of catching a sexually transmitted disease, I...	.578
If I can be seen by others while having sex, I am unlikely to stay...	.558
If I think that having sex will cause me pain, I will lose my erection.	.489
If having sex will cause my partner pain, I am unlikely to stay sexually...	.594