

Acculturation and Sexual Function in Asian Women

Lori A. Brotto, Ph.D.,^{1,4} Heather M. Chik, B.Sc.,² Andrew G. Ryder, Ph.D.,³
Boris B. Gorzalka, Ph.D.,² and Brooke N. Seal, B.A.⁴

Received March 10, 2004; revision received August 25, 2004; accepted August 25, 2004

Cultural effects on sexuality are pervasive and potentially of great clinical importance, but have not yet received sustained empirical attention. The purpose of this study was to explore the role of acculturation on sexual permissiveness and sexual function, with a particular focus on arousal in Asian women living in Canada. We also compared questionnaire responses between Asian and Euro-Canadian groups in hopes of investigating whether acculturation captured unique information not predicted by ethnic group affiliation. Euro-Canadian ($n = 173$) and Asian ($n = 176$) female university students completed a battery of questionnaires in private. Euro-Canadian women had significantly more sexual knowledge and experiences, more liberal attitudes, and higher rates of desire, arousal, sexual receptivity, and sexual pleasure. Anxiety from anticipated sexual activity was significantly higher in Asian women, but the groups did not differ significantly on relationship satisfaction or problems with sexual function. Acculturation to Western culture, as well as maintained affiliation with traditional Asian heritage, were both significantly and independently related to sexual attitudes above and beyond length of residency in Canada, and beyond ethnic group comparisons. Overall, these data suggest that measurement of acculturation may capture information about an individual's unique acculturation pattern that is not evident when focusing solely on ethnic group comparisons or length of residency, and that such findings may be important in facilitating the assessment, classification, and treatment of sexual difficulties in Asian women.

KEY WORDS: acculturation; culture; sexual arousal; female sexual function; Asian culture.

INTRODUCTION

Despite recent advances in the research on pharmacological treatment of female sexual dysfunction, research on the influence of sociocultural factors in sexuality lags considerably behind. For example, although over 13% of Canada's population of 29.6 million (Statistics Canada, 2001), and 23% of the USA's population of 290.8 million (United States Census Bureau Population Division,

2003) are of a visible ethnic minority, these groups are underrepresented in research studies on sexuality, leading to concerns with generalizability. Moreover, it is likely that attitudes and values that may be culture-specific and related to sexuality will differ. Individuals of Asian descent comprise one of the fastest growing ethnic groups in both countries. However, there exist philosophical differences, with long historical roots, between Asian and North American cultures regarding family structure and interpersonal relations, which may lead to the adoption of different beliefs as to the meaning of sexual activity (Ng & Lau, 1990). For instance, the acceptance of sexual behavior as procreative in Asian culture versus the North American view of sexuality as recreative is one example of how conflict between belief systems may have significant implications on the individual.

Interestingly, ancient Chinese teachings emphasized an open and receptive attitude toward sexuality. For instance, the classic Yin-Yang doctrine *I-Ching* (*Book*

¹Department of Obstetrics & Gynecology, University of British Columbia, Vancouver, Canada.

²Department of Psychology, University of British Columbia, Vancouver, British Columbia, Canada.

³Department of Psychology, Concordia University, Montreal, Quebec, Canada.

⁴To whom correspondence should be addressed at Department of Gynecology, University of British Columbia, 805 West 12th Avenue, Room 119, Vancouver, British Columbia V5Z 1M9, Canada; e-mail: Lori.Brotto@vch.ca.

of *Changes*) of 1150–249 BC viewed sex as an integral and essential element of nature where man and woman function as two natural forces that are constantly striving for harmony (Ng & Lau, 1990). Taoism regarded appropriate sexual behavior as a contributor to health and longevity, and Confucianism viewed sexual impulse as reflecting the natural order of fulfilling one's filial obligation of marriage, and producing children (Ruan, 1991). According to Confucius, sex was positive as long as it did not interfere with social stability and good interpersonal relations (Ruan, 1991). During the social and political instability of the Ching and Han dynasties (207 BC–220 AD), however, interpretation of the classics began to change, and attitudes toward sexuality became more negative and repressive. Sexual behavior was restricted and forbidden outside of wedlock, and it was viewed as having a solely procreative role. This trend was strengthened during the succeeding dynasties and continued even long after the founding of the People's Republic of China in 1949. Japan and Korea, which also adopted Chinese philosophies, slowly evolved into patriarchal societies (Frenier & Mancini, 1996). In Japan, it was stressed that a woman should obey her parents until her marriage, after which point she followed her husband and his family or faced divorce due to disobedience (Hirayama & Hirayama, 1986). In Korea, young boys were separated from girls to thwart their developing sexual interests (Frenier & Mancini, 1996; Youn, 2001). Korea adopted the rigorous Chinese examination system, which became the new index of social status instead of wealth (Frenier & Mancini, 1996). To this day, many Korean, Chinese, and Japanese parents expect their adolescents to devote themselves entirely to their studies, and any association with sexual activity is frowned upon, as it would interfere with future success (Youn, 2001). At the same time in North America, Masters and Johnson developed their sex therapy (Masters & Johnson, 1970), which emphasized the giving and receiving of pleasure, and was embedded in the notion of sexual freedom. With this historical backdrop, and the divergence between cultures on how sexuality is viewed, one might imagine tension between belief systems in a person exposed to both cultures which the individual must resolve in a way that, to date, has been inadequately explored.

The *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR) acknowledges in its introduction:

Diagnostic assessment can be especially challenging when a clinician from one ethnic or cultural group uses the DSM-IV Classification to evaluate an individual from a different ethnic or cultural group. A clinician who is unfamiliar with the nuances of an individual's cultural frame

of reference may incorrectly judge as psychopathology those normal variations in behavior, belief, or experience that are particular to the individual's culture. (American Psychiatric Association, 2000, p. xxxiv)

Unfortunately, however, there is almost no information in the Sexual Disorders segment of the *DSM-IV-TR* to aid the clinician in determining what role culture might play in a particular individual's expression of sexuality. The results are inaccuracies in assessment and diagnosis, and suboptimal treatment plans for non-Caucasian groups of women. One difficulty in correcting for these inaccuracies is the challenge in separating the effects of culture from the possible effects of biological racial differences. For example, the physical signs of menopause are experienced quite differently in Eastern versus Western cultures in a manner that cannot be solely attributed to biological factors (Astbury-Ward, 2003; Lock, 1998; Sommer et al., 1999). However, the extent to which culture versus biology shapes this expression of symptoms is also unclear, leaving the clinician with little to guide his or her treatment approach.

Despite culture being recognized as an important factor influencing sexuality, a review of all published sexuality articles over the past quarter century found that only 26% reported on the cultural characteristics of the sample, with a mere 7% including ethnicity as a variable of interest (Wiederman, Maynard, & Fretz, 1996). There have been several recent large-scale epidemiological studies of the prevalence of sexual dysfunction in nationally representative samples (e.g., Laumann, Paik, & Rosen, 1999). However, few have considered the role of cultural factors in the development of sexual difficulty. There are a few exceptions; for example, Bancroft, Loftus, and Long (2003) explored the prevalence of distressing sexual problems in Caucasian and African American women obtained from national probability samples. And in what appears to be the most cross-culturally inclusive study, the effects of menopausal status and ethnicity on sexual practices of mid-life women was recently examined (Cain et al., 2003). Analyses were based on data from the Study of Women's Health Across the Nation (SWAN), which examined a variety of health measures in 42 to 52-year-old women transitioning through menopause. The results suggested that ethnic group differences, and not menopausal status, were significant predictors of sexual function. These data included a comparison of Chinese, Japanese, Hispanic, and African American women—groups for which prevalence rates of sexual frequency and difficulty have been inadequately studied because of difficulties in recruitment. Although this study provided important clues about the sexuality of women from non-Caucasian cultural groups, many questions remain

as to how culture impacts the expression of sexual health, behavior, and difficulties in different groups, and how these might be shaped over time.

One way to explore the role of culture is the cross-cultural approach of comparing individuals in North American countries with those residing in Asian countries. In a study of 20,000 individuals in China, 60% of the sample reported sexual satisfaction (Liu, Ng, & Chou, 1992), a statistic similar to those found in Western samples (Fugl-Meyer & Fugl-Meyer, 1999). However, rates of sexual dysfunction are much lower in Asian samples (Kameya, 2001) and the proportion of women attending a sexual dysfunction clinic in China was reported to be a mere 4%, compared to rates of 43% in the United States (Liu & Ng, 1995). It is possible that the low rates of seeking treatment for sexual difficulties might be related to a reluctance to admit to sexual concerns, and this may be associated with the lack of formal sex education in schools and open discussion of sex in the family (Ip, Chau, Chang, & Lui, 2001). For example, a translated version of the Derogatis Sexual Functioning Inventory (Derogatis & Melisaratos, 1979) in Chinese college students revealed this group to be significantly less sexually experienced and more conservative than their American counterparts, with later onset of sexual intercourse, a more narrow repertoire of sexual activities, and lower rates of masturbation, particularly among women (Tang, Lai, & Chung, 1997).

Another way to explore the role of culture, and a method that may have more relevance for healthcare providers in Western countries, is to study acculturation. Cross-cultural data on sexuality indicate that ethnic groups differ. However, what happens when individuals from one culture attempt to integrate with a different culture (as is the case when a woman from China immigrates to Canada)? A process of acculturation takes place whereby aspects of self-identity are modified to accommodate information about and experiences gained from the new culture. Ryder, Alden, and Paulhus (2000) define the culture of birth or upbringing as the "Heritage culture," and the predominant cultural environment of the new setting as the "Mainstream culture." The degree of cultural difference between individuals from the Mainstream and heritage cultures will vary with the degree of acculturation among the immigrant group, and this degree of acculturation will depend on their level of affiliation to both the Heritage and the Mainstream cultures. Given that acculturation involves changes in attitude, behavior, values, and sense of cultural identity, it is possible, at least theoretically, that a measure of acculturation would provide more rich information than cross-cultural group comparisons for sexuality. This is because acculturation measures take a dimensional instead of a categorical ap-

proach, they allow us to look "within" individuals instead of between them, and from a statistical perspective, they may allow researchers to tease apart biological versus cultural contributions to behavior. If acculturation does prove more powerful, then attempts to explore culture for the purposes of clinical diagnosis and management should take into account not only ethnic group membership, but also degree of acculturation.

One example of the role of acculturation in changing attitudes toward sexuality is the finding that female Iranian immigrants to Sweden relinquished their heritage views of female passivity and obligation, and adopted Western views of personal sexual satisfaction (Ahmadi, 2003). Moreover, the finding that Asian college students in North America were found to have more conservative sexual attitudes and less sexual knowledge (Meston, Trapnell, & Gorzalka, 1998), a preference for later ages for initiating all types of sexual behavior (Feldman, Turner, & Araujo, 1999), and more tolerance for rape myths and sexual harassment (Kennedy & Gorzalka, 2002) compared to a Caucasian group may be evidence of less acculturation in this particular sample. Guilt related to sexual issues has been shown to decrease with successive Japanese generations in North America (Abramson & Imai-Marquez, 1982), suggesting a modification of sexual beliefs with acculturation. In some cases, the implications of these cultural differences coupled with little acculturation are quite significant. For example, greater rape myth and sexual harassment tolerance has been shown to lead to increased vulnerability for sexual assault, particularly in the context of racist stereotypes (Kennedy & Gorzalka, 2002).

Ethnic group differences in sexual behavior might also be better understood by taking a closer look at the possible role of acculturation. The SWAN analyses found lower levels of intercourse frequency and sexual touching among Japanese compared to Caucasian and African American women; findings persisted even after demographic variables (e.g., age, marital status, education, employment, and ability to pay for basics) were controlled (Cain et al., 2003). A survey of 2,026 high school students in Los Angeles found Asians more likely to be virgins (73%) than African American (28%), Latino (43%), or Caucasian (50%) students (Huang & Uba, 1992). Similar patterns emerged for college students (Huang & Uba, 1992; McLaughlin, Chen, Greenberger, & Biermeier, 1997; Meston, Trapnell, & Gorzalka, 1996). In addition, Asian women having relationships only with Caucasian partners consistently had more sexual experience than those dating Asians (Cochran, Mays, & Leung, 1991). Measurement of acculturation in these studies might have allowed the researchers to address the question of the

extent to which these ethnic group differences changed over time with increasing acculturation, versus being features of biological race differences.

Reproductive health behavior has also been found to differ between Asian and North American women, with acculturation playing a significant role in shaping behavior over time. For example, whereas first generation Asian women in Canada believed that abstinence during pregnancy would lead to higher intelligence in the child, such beliefs tended to be dismissed in second-generation women (Ellis & Ho, 1982). Asian women currently have the lowest rates of screening for breast and cervical cancer, and for first time utilization of such services (Tu, Taplin, Barlow, & Boyko, 1999). In a recent study, only half of Chinese women had heard of breast self-exam and the Pap test (Yu, Kim, Chen, & Britnall, 2001), and 25% of Asian American women aged 18–35 had never received any reproductive or sexual health services in their lifetime (National Asian Women's Health Organization, 1997). Compared to the British Columbia provincial average, Chinese women had cervical cancer screening rates that were approximately 20% lower (Hislop, Teh, Lai, Labo, & Taylor, 2000). Fortunately, there is evidence that reproductive health behavior increases with acculturation, as level of English fluency, education, and source of health care (Eastern vs. Western medicine) significantly predicted these findings (Yu et al., 2001).

Although attitudes, knowledge, experience, and health behaviors have received some attention in Asian women in North America, the topic of sexual dysfunction has been relatively ignored. Moreover, the extent to which acculturation impacts upon the experience of sexual difficulties has received no empirical attention, despite the clinical finding that women of East Asian cultures reluctantly present for treatment in sex therapy clinics and account for higher dropout rates than other groups (Petra & Keane, 1998). Given that acculturation has been linked to other aspects of sexual health and behavior, it is therefore reasonable to predict that it may play a role in the development and/or expression of sexual dysfunction. Clearly, such information would have important implications for a more broad understanding of sexuality in Asian women.

Across these studies of acculturation, the most common method used was "length of residency" as a proxy for acculturation. However, there are limitations inherent in using such an approach. For example, Meston et al. (1998) found that only 4 of 13 Sexual Knowledge items, 10 of 16 Sexual Attitude items, and 1 of 8 Unrestricted Sexuality Attitude items were related to length of residency, and they concluded that biological determinants might be a

better explanation for observed cultural differences. An alternative explanation might exist, however, given that a multitude of individual factors can affect adaptation to a new culture (e.g., pre-immigration exposure to Western culture, residence in a predominantly ethnic neighborhood, willingness to learn a new language, and amount of contact with individuals from one's Heritage culture), independent of residency length. Additionally, this method does not properly account for individuals who develop a bicultural identity. Consider, for instance, an individual who maintains strong cultural values and traditions from their heritage culture while also assimilating with the customs of the new culture in particular contexts. Use of length of residency also would not capture individual differences in the rate of acculturation, which are not static. It is, therefore, possible that the sole reliance on this proxy measure of acculturation may not capture the full picture.

Another method of measuring acculturation is the bidimensional approach, where heritage and mainstream acculturation dimensions are measured independently. Although somewhat more complex, the bidimensional approach provides a more complete account of cultural change (Berry, 1980). For instance, effects that are correlated in the same direction with both acculturation dimensions can disappear entirely on a unidimensional measure such as length of residency. Moreover, the bidimensional model provides an opportunity to study the ways in which the two cultures interact to predict acculturation effects. The Vancouver Index of Acculturation (VIA; Ryder, Alden, et al., 2000) is a validated self-report instrument for assessing bidimensional acculturation (i.e., heritage and mainstream dimensions), and predicts personality, self-identity, and psychosocial adjustment above and beyond simple demographic variables. The VIA also accounts for more variance and allows for easier interpretation of effects than does a self-report measure of the unidimensional model. To date, the bidimensional model has not been included in investigations of acculturation and sexuality, and this is the primary aim of the current study.

In the current study it was hypothesized that acculturation towards Western ideologies and distance from traditional cultural affiliation might increase liberalism of attitudes. It was unknown, however, how these dimensions would interact to affect attitudes and experiences. For this reason, we have decided to include three methods of measuring culture. Hypotheses regarding findings on sexual dysfunction were less clear. If one accepts that the perception of sexual difficulty ultimately rests upon one's notion of what is normal versus abnormal sexual

function, that perceptions of normality are related to one's sense of self, and that one's sense of self is related to culture (Markus & Kitayama, 1991), it would be reasonable to hypothesize that acculturation shapes the experience of sexual difficulty. Therefore, in addition to exploring attitudes and experience, we included measures of sexual dysfunction and satisfaction. This investigation represents an extension of earlier studies by exploring acculturation measured via (1) a unidimensional proxy measure: length of residency, and (2) a bidimensional measure of acculturation. We also sought to compare these findings to those obtained from ethnic group self-identification to assess whether acculturation provides richer information regarding sexuality. The findings have promise for leading to a better understanding of the relationship between acculturation, sexual attitudes, experiences, and difficulties in women.

METHOD

Participants

First and second year undergraduate students from a large Canadian university were eligible to participate. A total of 385 women returned their questionnaires and, of these, 173 self-identified as Euro-Canadian and 176 self-identified as East Asian. The remaining 36 women were excluded from all analyses. The East Asian group included those who self-identified as Chinese or Taiwanese (84%), Japanese (7%), Korean (6%), or Vietnamese (3%). For the purposes of this paper, only Euro-Canadian and East Asian women (49.6% and 50.4%, respectively) were included in statistical analyses, and the latter group will hereafter be referred to as Asian.

Demographic data are presented in Table I. The Euro-Canadian participants were significantly older ($t[336] = 2.83, p = .005$) and had significantly more education ($t[327] = 4.20, p < .001$) than the Asian group. There were significantly more Euro-Canadian women currently in a relationship ($\chi^2[1] = 4.90, p = .027$) and ever in a relationship ($\chi^2[1] = 26.26, p < .001$), with the longest relationship length also being significantly longer in the Euro-Canadian sample, $t(339) = 2.28, p = .024$. Ethnicity of recent partners was found to differ significantly between groups, with Asian women being more likely to have a same-culture partner for their most recent ($\chi^2[15] = 126.18, p < .001$), second most recent ($\chi^2[13] = 107.30, p < .001$), and third most recent ($\chi^2[13] = 88.46, p < .001$) relationships compared to the Euro-Canadian participants.

Table I. Demographic Variables in Euro-Canadian and Asian Female University Students

Variable	Euro-Canadian (<i>n</i> = 173)	Asian (<i>n</i> = 176)
Mean age in years (<i>SD</i>)**	20.9 (4.2)	19.8 (2.3)
Birth country (% of each group)		
Canada or USA	88.3	30.9
East Asia	1.8	65.7
South Asia	0.0	2.4
West Asia	0.6	0.0
Europe	7.2	0.0
South Africa	1.8	0.6
South America	0.6	0.6
Mean years in Canada (<i>SD</i>)***	19.0 (5.6)	11.9 (6.1)
Religion ^a (%)		
Catholic	28.0	22.6
Protestant	59.0	58.5
Anglican	2.6	1.9
Orthodox Jewish	2.6	0.0
Buddhist	0.0	13.2
Jewish	5.1	0.0
Baptist	2.6	0.0
Other	0.0	3.8
Education, years (<i>SD</i>)***	13.6 (1.3)	13.0 (1.5)
Marital status (%)		
Unmarried	95.3	98.9
Common-law	1.2	0.0
Married	3.5	1.1
% currently in a relationship*	61.0	49.0
% ever in a relationship***	98.0	80.0
Longest relationship duration in months ^b	23.1 (32.8)	16.5 (19.0)
Ethnicity of partner (%)		
Most recent***		
Euro-Canadian	78.0	18.8
East Asian	7.5	75.0
Other	14.5	6.2
Second most recent***		
Euro-Canadian	79.5	24.0
East Asian	4.7	75.9
Other	15.8	0.1
Third most recent***		
Euro-Canadian	75.3	21.4
East Asian	5.4	75.0
Other	19.3	3.6

^aData available for 92 of 349 women on religion.

^bFor individuals reporting ever having a relationship.

* $p < .05$. ** $p < .01$. *** $p < .001$ (significant group differences).

Procedure

A general announcement in several sections of an Introductory Psychology course was made, and students interested in participating received a consent form and questionnaire package to take home and return in a sealed envelope to the research laboratory for course

credit. The battery of questionnaires was estimated to take approximately 90 min to complete.

Measures

Derogatis Sexual Functioning Inventory (DSFI)

The DSFI (Derogatis & Melisaratos, 1979) is a multidimensional self-report inventory with 10 domains. We included the Knowledge (26 items), Attitude (30 items), and Experience (24 items) subscales to provide an overall measure of sexual permissiveness/liberalism. The Knowledge subscale assesses general knowledge about sexual anatomy, physiology, and psychology, where participants indicate true or false to a series of statements. The Attitude subscale assesses liberal attitudes toward a variety of sexual stimuli and issues such as masturbation and oral sex on a 5-point scale from *strongly disagree* to *strongly agree*. The Experience subscale assesses range of lifetime sexual experiences by tallying the number of items that participants report having experienced. The DSFI has been validated in women with and without sexual dysfunction and reliably discriminates between these groups. Overall internal consistency and test–retest reliability are very good.

Brief Index of Sexual Functioning for Women (BISF-W)

The BISF-W (Taylor, Rosen, & Leiblum, 1994) is a 22-item self-report inventory that measures current levels of sexual functioning and satisfaction in women. A recent change in the scoring algorithm for the BISF-W allows seven dimensions (thoughts/desire, arousal, frequency of sexual activity, receptivity/initiation, pleasure/orgasm, relationship satisfaction, and problems affecting sexual function) to be assessed (Mazer, Leiblum, & Rosen, 2000). Norms are available for the composite score, and the instrument has been shown to reliably discriminate sexually functional from dysfunctional women across each of the seven domains.

Detailed Assessment of Sexual Arousal (DASA)

The DASA (Basson & Brotto, 2001) is an unpublished instrument developed for use in clinical settings for women experiencing sexual arousal difficulties. We included this instrument as it is the only one available to measure three different aspects of sexual arousal: (1) subjective sexual arousal, (2) genital sexual arousal (e.g., throbbing/pulsing/wetness), and (3) subjective pleasure arising from direct genital stimulation, as it is consistent

with the recent revision of sexual arousal disorder into subtypes (Basson et al., 2003). Participants are asked to rate their arousal to a variety of genital and nongenital types of stimulation on a Likert scale from 1 (*low*) to 7 (*intense*). The DASA has recently been found to significantly distinguish between women clinically diagnosed with Female Sexual Arousal Disorder (FSAD), genital subtype, and women without sexual complaints (Basson & Brotto, 2003). Efforts to compile psychometric data on the DASA are currently underway.

Sexual Arousability Inventory-Expanded (SAI-E)

The SAI-E (Chambless & Lifshitz, 1985) was used to assess self-reported anxiety evoked in response to various sexual situations. If an individual has not experienced the given sexual situation, she is asked to imagine how anxiety-evoking the stimulus would be. The 28 items are rated along a 7-point Likert scale from -1 (*relaxing/calming*) to 5 (*always causes anxiety/extremely anxiety producing*). The SAI-E has excellent split-half reliability and good construct validity.

Vancouver Index of Acculturation (VIA)

The VIA (Ryder et al., 2000) was used to measure Heritage and Mainstream dimensions of acculturation consistent with a bidimensional model. Item content was initially derived from an item list provided by J. W. Berry, tested in a sample of Chinese university students, refined, and subsequently tested in three different undergraduate samples of Chinese, non-Chinese East Asian, and non-English speaking (excluding East Asian) individuals. The VIA consists of the following 10 domains, with a Heritage and Mainstream item keyed to each domain: traditions (2 items), marriage (2 items), social activities (2 items), comfort with people (2 items), entertainment (2 items), behavior (2 items), practices (2 items), values (2 items), humor (2 items), and friends (2 items). Each item is rated on a 9-point scale ranging from 1 (*strongly agree*) to 9 (*strongly disagree*). Higher scores on the Mainstream dimension reflect more Westernization (if the scale is administered in the West) and higher scores on the Heritage dimension reflect the maintenance of one's cultural values and traditions. Reliability, as measured by Cronbach's alpha, was .91 for the Heritage dimension and .89 for the Mainstream dimension. Concurrent validity is very good ranging from $-.57$ to $-.60$ for the Heritage and from $.51$ to $.60$ for the Mainstream scales. Finally, factorial validity was obtained by a principal components analysis with promax rotation on two Chinese groups, one

East Asian group, and one miscellaneous group, and was found to be excellent (Ryder et al., 2000).

RESULTS

Effects of Self-Identified Ethnic Group (Euro-Canadian vs. Asian) on Sexuality Measures

In the following analyses, age, current relationship status, and longest relationship duration were entered as covariates in multivariate analyses of variance. However, in all cases, none of these demographic variables altered the multivariate effects due to ethnic group comparison. We therefore report the findings without these variables entered as covariate factors.

There was a significant overall multivariate effect for ethnic group on DSFI subscales, $F(3, 264) = 32.48, p < .001$. Follow-up univariate tests revealed significantly higher Knowledge ($p < .001$), Attitudes ($p < .001$), and Experience ($p < .001$) subscale scores in Euro-Canadian compared to Asian women (see Table II).

All women were included in the BISF-W analyses as the scoring algorithm accounts for women who are not currently sexually active. However, a number of

items pertain only to sexually active individuals, and this explains the varying sample sizes across the scale domains. The overall multivariate effect was significant for ethnic group, $F(7, 175) = 3.12, p = .004$. Univariate ANOVAs revealed that Euro-Canadian women reported significantly higher Desire ($p < .001$), Arousal ($p = .003$), Sexual Frequency ($p < .001$), Sexual Receptivity ($p = .007$), and Pleasure with Orgasm ($p = .012$). Neither Relationship Satisfaction nor Problems with sexual function significantly differed between the groups, both $p > .05$.

A total of 101 (58%) Euro-Canadian women and 76 (43%) Asian women reported experiencing penile-vaginal intercourse at least one time in their life, with rates being significantly higher in Euro-Canadian group $\chi^2(1) = 8.06, p = .005$. Because the DASA questionnaire assumes that an individual has experienced penetrative intercourse, only women who reported having ever experienced intercourse were included in the DASA analyses. There was a significant overall multivariate effect for sexual arousal, $F(3, 171) = 6.83, p < .001$. In particular, Euro-Canadian women reported higher levels of mental sexual arousal ($p = .024$) and pleasure evoked from direct genital stimulation ($p < .001$) during the average sexual encounter compared to Asian women, whereas self-reported genital arousal did not significantly differ between groups ($p > .05$).

All women were included in the analyses of the SAI-E. Thus, 149 Euro-Canadian and 103 Asian women were included after missing data were accounted for. The univariate ANOVA was statistically significant, $F(1, 250) = 27.68, p < .001$. Asian women reported significantly greater anxiety in response to anticipated arousal from various sexual stimuli compared to Euro-Canadian group ($p < .001$). Separate univariate ANOVAs were conducted for virgin and nonvirgin women and there was no significant effect of virginal status on these findings.

Effects of Acculturation on Sexual Permissiveness in Asian Women

To explore the effects of acculturation in the Asian sample, a series of multivariate General Linear Models was conducted, given that many of the questionnaire subscales are theoretically and empirically related, and because this controls for Type I error inflation. Heritage and Mainstream acculturation were entered as independent dimensional predictors and each questionnaire (three DSFI scales, seven BISF-W subscales, three DASA subscales, and SAI-E) was separately entered as a dependent variable. Interaction terms were also entered into the

Table II. Comparisons of Euro-Canadian to Asian Female University Students on the Derogatis Sexual Functioning Inventory (DSFI), Brief Index of Sexual Functioning for Women (BISF), Detailed Assessment of Sexual Arousal (DASA), and Sexual Arousability Inventory—Expanded (SAI-E)

Dependent variable	Euro-Canadian, <i>M (SD)</i>	Asian, <i>M (SD)</i>
DSFI-knowledge***	20.8 (2.6)	18.0 (3.0)
DSFI-attitude***	22.9 (14.5)	9.6 (14.4)
DSFI-experience***	17.5 (6.0)	11.7 (8.1)
BISF-desire***	6.2 (2.7)	4.0 (2.7)
BISF-arousal**	6.9 (2.8)	5.6 (3.1)
BISF-frequency***	4.4 (2.0)	3.3 (2.2)
BISF-receptivity**	9.2 (3.2)	7.9 (3.7)
BISF-pleasure/orgasm**	4.8 (2.2)	4.0 (2.5)
BISF-satisfaction	8.5 (3.2)	7.8 (3.5)
BISF-sexual Problems	4.0 (2.5)	4.2 (2.1)
DASA-mental arousal ^a *	5.3 (0.9)	4.9 (0.9)
DASA-genital arousal ^a	5.2 (0.9)	5.1 (0.9)
DASA-pleasure from genital stimulation ^a ***	5.8 (0.8)	5.3 (1.0)
SAI-E***	8.1 (24.5)	26.9 (32.1)

Note. Range of possible scores are as follows: DSFI-knowledge, 0–26; DSFI-attitude, –60 to +60; DSFI-experience, 0–24; BISF-desire, 0–12; BISF-arousal, 0–8; BISF-frequency, 0–6; BISF-Receptivity, 0–15; BISF-pleasure/orgasm, 0–8; BISF-satisfaction, 0–12; BISF-sexual Problems, 0–16; DASA, 0–7.0; SAI-E –20 to 100.

^aOnly nonvirginal participants included in analyses.

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

Table III. Prediction of Sexual Permissiveness, as Measured by the Derogatis Sexual Functioning Inventory (DSFI) Subscales, from Bidimensional Acculturation (Heritage and Mainstream Dimensions) and Unidimensional Acculturation (Years in Canada) in Asian Women

Variable	Bidimensional model				Unidimensional model	
	Heritage		Mainstream		Years in Canada	
	<i>B</i>	η^2	<i>B</i>	η^2	<i>B</i>	Partial η^2
DSFI-knowledge	-1.28	.007	0.01	.001	0.09*	.039
DSFI-attitudes	16.05**	.042	22.07**	.067	0.32*	.019
DSFI-experience	4.98	.012	7.41*	.022	0.01*	.001

* $p < .05$. ** $p < .01$ (significant predictor)

model but were dropped if they did not attain significance. A similar multivariate analysis was conducted for “Years in Canada” as a unidimensional proxy measure of acculturation.

Unidimensional Acculturation

Years in Canada was significantly associated with sexual permissiveness, as measured by the DSFI, $F(3, 137) = 2.84$, $p = .04$, Wilks’ $\lambda = .941$. Specifically, years in Canada was positively related to greater sexual Knowledge, more liberal sexual Attitudes, and more sexual Experiences (Table III).

Bidimensional Acculturation

Overall, there was a significant multivariate main effect for the Mainstream dimension ($F[3, 138] = 3.74$, $p = .013$, Wilks’ $\lambda = .93$), a significant multivariate main effect for the Heritage dimension ($F[3, 138] = 3.13$, $p = .028$, Wilks’ $\lambda = .94$), and a significant multivariate interaction between Mainstream and Heritage dimensions ($F[3, 138] = 3.33$, $p = .022$, Wilks’ $\lambda = .93$) on sexual permissiveness. Both the Heritage dimension alone and the Heritage \times Mainstream interaction were statistically significant predictors of Attitudes, and the Mainstream dimension alone was a statistically significant predictor of Experience and Attitudes (Table III). Asian women with more Mainstream acculturation had significantly more sexual Experiences. To interpret the multivariate interaction, data were graphed in Fig. 1 with values for the Heritage dimension dichotomized at the median into “low Heritage acculturation” and “high Heritage acculturation.” This figure illustrates that women with low Heritage acculturation scores had increasingly liberal sexual Attitudes with increasing Mainstream acculturation, whereas women with high Heritage affiliation scores did

not have such an increase in liberal sexual Attitudes with Westernization.

Effects of Acculturation on Sexual Function in Asian Women

Unidimensional Acculturation

Years in Canada was significantly related to sexual function, as measured by the BISF-W, $F(7, 63) = 3.22$, $p = .006$, Wilks’ $\lambda = .736$. Specifically, more years in Canada was significantly associated with higher levels of

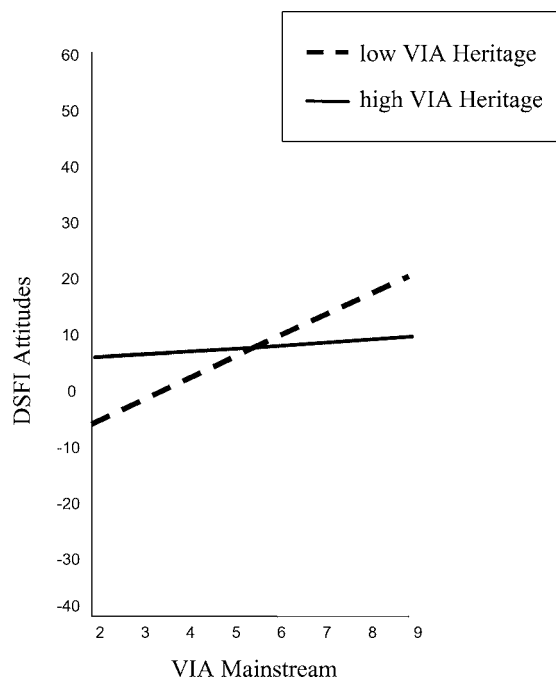


Fig. 1. Effects of Heritage and Mainstream Acculturation on Sexual Attitudes, as measured by the Derogatis Sexual Functioning Inventory Attitude subscale (DSFI-Attitudes) in Asian women.

Table IV. Prediction of Sexual Function and Satisfaction, as Measured by the Brief Index of Sexual Functioning for Women (BISF-W) Subscales, from Bidimensional Acculturation (Heritage and Mainstream Dimensions) and Unidimensional Acculturation (Years in Canada) in Asian Women

Variable	Bidimensional model				Unidimensional model	
	Heritage		Mainstream		Years in Canada	
	<i>B</i>	η^2	<i>B</i>	η^2	<i>B</i>	Partial η^2
Desire	-0.33	.031	0.60**	.101	0.09	.042
Arousal	-0.34	.028	0.69**	.113	0.17**	.132
Frequency	-0.21	.017	0.30	.038	0.02	.002
Receptivity	-0.47	.027	0.42	.023	0.11	.033
Pleasure/orgasm	-0.27	.021	0.30	.028	0.04	.009
Relationship satisfaction	-0.53	.049	0.03	.001	0.07	.017
Problems w/sexual function	-0.04	.001	-0.08	.003	-0.02	.004

***p* < .01 (significant predictor)

sexual arousal (Table IV) but was not related to any other BISF-W subscale.

Bidimensional Acculturation

There was a significant multivariate main effect for the Mainstream dimension ($F[7, 61] = 2.42, p = .029$, Wilks' $\lambda = .78$) but not for the Heritage dimension ($F[7, 61] < 1$, Wilks' $\lambda = .92$), on BISF-W scores. Higher Mainstream scores were associated with higher BISF-W Desire and Arousal subscales (Table IV).

Effects of Acculturation on Sexual Arousal in Asian Nonvirginal Women

Unidimensional Acculturation

Years in Canada was not significantly related to sexual arousal ($F[3, 130] < 1$, Wilks' $\lambda = .998$), as measured by the DASA (Table V).

Bidimensional Acculturation

The multivariate main effect of the Mainstream dimension on sexual arousal was significant ($F[3, 69] = 3.70, p = .016$, Wilks' $\lambda = .86$) whereas the multivariate main effect of the Heritage dimension was not, $F(3, 69) < 1$, Wilks' $\lambda = .99$. Mainstream acculturation was associated with significantly higher scores on mental arousal, genital arousal, and pleasure from direct genital touch (see Table V).

Effects of Acculturation on Sexual Arousability in Asian Women

Unidimensional Acculturation

Years in Canada was significantly related to anxiety from sexual arousability, as measured by the SAI-E, $F(1, 100) = 7.28, p = .008$. Specifically, more years in

Table V. Prediction of Sexual Arousal, as Measured by the Detailed Assessment of Sexual Arousal Subscales, and Prediction of Sexual Arousal—Evoked Anxiety, as Measured by the Sexual Arousability Inventory—Expanded (SAI-E), from Bidimensional Acculturation (Heritage and Mainstream Dimensions) and Unidimensional Acculturation (Years in Canada) in Asian Women

Variable	Bidimensional model				Unidimensional model	
	Heritage		Mainstream		Years in Canada	
	<i>B</i>	η^2	<i>B</i>	η^2	<i>B</i>	Partial η^2
Mental arousal ^a	-0.01	.001	0.27**	.129	0.002	.001
Genital arousal ^a	-0.04	.003	0.24**	.108	-0.003	.001
Pleasure from genital touch ^a	-0.05	.003	0.25**	.094	0.002	.001
SAI-E	2.48	.009	-6.80**	.074	-1.37*	.068

^aOnly nonvirginal participants included in analyses.

p* < .05. *p* < .01 (significant predictor)

Canada significantly predicted lower levels of arousal-evoked anxiety (Table V).

Bidimensional Acculturation

There was a significant main effect for the Mainstream dimension ($F[1, 99] = 7.95, p < .001$) but not for the Heritage dimension ($F[1, 99] = 0.91, p > .05$) on sexual arousability as measured by the SAI-E. Higher Mainstream acculturation scores were associated with significantly lower SAI-E scores (Table V).

DISCUSSION

Overall, there were a number of noteworthy findings pointing to the importance of considering acculturation in Asian women's sexuality, and each of these will be discussed in turn. The data suggest more sexual liberalism in Euro-Canadian compared to Asian female university students, as indicated by significantly more liberal sexual attitudes, knowledge, and sexual experience. Mainstream and Heritage acculturation dimensions significantly interacted to predict sexual attitudes and Mainstream acculturation alone predicted sexual experience. Sexual desire, arousal, frequency, receptivity, and pleasure were all significantly higher in the Euro-Canadian women, whereas there were no significant group differences in relationship satisfaction or sexual problems. Among these variables, Mainstream acculturation was significantly and positively related only to sexual desire and arousal. Looking specifically at sexual arousal, rates of mental sexual arousal and pleasure from genital stimulation were found to be significantly lower in the Asian women, but reports of physical genital arousal did not differ between groups. Degree of Mainstream acculturation significantly predicted each of these three components of arousal in a positive direction. Interestingly, anxiety evoked from imagined sexual arousability was significantly higher in Asian women, regardless of previous intercourse history, with more Westernization leading to lower levels of anxiety.

Bidimensional acculturation, in some cases, predicted questionnaire responses differently from those predicted by length of residency or by ethnic group comparison, suggesting that the measurement of acculturation is useful for understanding subtle patterns in the sexual expression of Asian women in a Western culture. We will now explore in greater detail the findings in which measurement of acculturation was particularly useful.

The significant interaction between Mainstream and Heritage acculturation on sexual attitudes is a novel find-

ing worthy of consideration. The data presented in Fig. 1 suggest influences from both Asian and Western culture in shaping sexual attitudes. Specifically, the degree to which an Asian woman in this sample maintained aspects of her Heritage culture influenced the effects of Westernization on her sexual attitudes. In other words, exposure to Western culture played a meager role in the adoption of more liberal sexual attitudes if a woman maintained strong Heritage ties. On the other hand, if a woman easily relinquished her Heritage culture (low Heritage acculturation score), then increasing Westernization led to adoption of more liberal sexual attitudes. This finding is important for a number of reasons. First of all, it challenges the assumption that Asian women necessarily become sexually liberal with increasing time spent in a Western culture. It is possible for attitudes, sexual or otherwise, to resist change despite residency duration in a new culture. Secondly, given that the Heritage dimension interacted with the Mainstream dimension as a predictor, this provides an example of an effect that could not have been detected either by length of residency, or by ethnic group comparisons, and thus supports the use of bidimensional models of acculturation. It is interesting to note that there was no significant Heritage \times Mainstream interaction for either sexual knowledge or experience, despite ethnic group differences on these variables. This finding suggests that perhaps there is something unique about sexual attitudes that makes the role of the Heritage culture important, whereas for experience, the role of Heritage culture is less important. It might be that sexual attitudes are more resistant to the effects of Westernization because of historical factors that lead to the adoption of those attitudes, whereas behavior might change to be consistent with the behavior displayed in the Mainstream culture. It is a well-known finding in social psychology studies that attitudes and behavior may be discordant (Draycott & Dabbs, 1998). It would be interesting to explore what factors lead to the maintenance of Heritage culture and how these factors interact with Westernization to affect sexual attitudes. A better understanding of this may open opportunities for education regarding pervasive sexual myths and inaccuracies.

There were significant ethnic group differences for desire, arousal, sexual frequency, receptivity, and pleasure, but not for relationship satisfaction or sexual problems. Moreover, level of Mainstream acculturation was significantly related to desire and arousal but not to the other variables. Because years in Canada were unrelated to sexual desire, the significant effect for Mainstream acculturation suggests that the adoption of Western culture, per se, and not merely the passage of time, led Asian women to report higher levels of

desire in their sexual encounters. Taboos against the expression of sexual desire are strong in Asian culture. It is possible that with increasing Westernization Asian women encountered evidence to challenge these taboos, and began to feel more comfortable reporting sexual desire when prompted. Sexual receptivity and pleasure with orgasm, on the other hand, were not significantly related to Mainstream acculturation. It is possible that either of these variables are resistant to Westernization, or that much more acculturation is necessary in order for these experiences to be freely reported. One might speculate that the potential “risk” in admitting sexual receptivity or pleasure from orgasm is presumed higher than that posed by reporting sexual desire.

As noted, despite ethnic group differences in desire, arousal, sexual frequency, receptivity, and pleasure, rates of reported sexual problems did not significantly differ, and there was no significant effect of acculturation on this measure. This was an unexpected finding given that the plausible assumption would be that lower levels of desire and arousal would be associated with higher levels of sexual dysfunction and dissatisfaction. This finding is important and timely given the growing disappointment among clinicians and researchers with regards to labeling a sexual symptom a “dysfunction” when it may not necessarily be associated with distress (e.g., Bancroft et al., 2003). Although it was not measured in the current study, we would guess that level of distress would be associated with poorer sexual functioning among the Euro-Canadian group, whereas these might not have been related among the Asian women. Perhaps there is lower tolerance for sexual symptoms in Euro-Canadian women, prompting them to report dissatisfaction when the same sexual experience is not distressing in their Asian counterpart. Certainly, anthropological data support this speculation as complaints of menopausal symptoms are higher in Caucasian compared to Japanese women, with aging being embraced and celebrated in the latter (Lock, 1998). Another interpretation might be that there is reluctance to report sexual dissatisfaction or sexual problems by the Asian women for any number of reasons—embarrassment or anxiety being two possibilities. Discordance between Western and Eastern approaches to treatment, and an Asian cultural preference for keeping mental illness within the family (Ryder, Bean, & Dion, 2000), may have prevented women from reporting dissatisfaction from these sexual characteristics. Similarly, Caucasian women may overreport symptoms based on myths about what constitutes “normal” sexual function, and a more accepting attitude in Western cultures of declaring psychological difficulty. One myth that might promote such overreporting in Western culture is the belief

that sexual function should go unchanged over the lifespan and relationship duration, encouraging unnecessary pharmacological supplementation when normal changes in desire and arousal are viewed pathologically (Tiefer, 1996).

How does increasing acculturation lead to higher reports of desire and arousal? It is possible that this is a confound of having more sexual experiences—a domain that was also related to Westernization. In other words, more sexual experiences might provide more opportunities for experiencing desire and arousal, and greater ease of identifying desire and arousal when they are present. However, consideration of the sexual arousal findings with the DASA provides stronger support for the role of acculturation. Asian women had lower rates of self-reported mental sexual arousal and pleasure from genital stimulation compared to Euro-Canadian women, but did not differ from this group on awareness of genital arousal. Degree of Mainstream acculturation was significantly related to each of these three arousal domains, whereas years in Canada was not. If the Mainstream acculturation effect in desire and arousal was indeed an artifact of more sexual experiences, then one might expect to find the same pattern of ethnic group differences across the different domains of sexual arousal. There is less subjectivity involved in the assessment of genital arousal (e.g., wetness and throbbing), which could explain why the groups did not differ on this variable. There is also no physiological reason to believe that genital arousal patterns should differ between these cultural groups. On the other hand, mental arousal and pleasure from genital stimulation involve more subjectivity in their assessment, and could be influenced by a reporting bias or reluctance to report. Given that less acculturated women also reported higher levels of anxiety due to sexual arousal (higher SAI-E scores), this argument appears to have some validity.

The finding of significantly greater anxiety evoked from sexual arousal in Asian compared to Euro-Canadian women, and the discovery that this measure was significantly negatively related to Mainstream acculturation, suggest that anxiety may function as a mediator between cultural affiliation and reporting of sexual arousal. In other words, it is possible that Westernization leads to reports of higher sexual arousal and desire because of less anxiety. Pressure placed on Asian young adults to avoid sexual activity and focus on education (Youn, 2001) would support this line of reasoning. The causal relationship may also be reversed, however, in that Westernization leads to greater arousal which in turn leads to less anxiety. With Mainstream acculturation, therefore, sexual experiences become more frequent, anticipatory anxiety in such sexual situations lessens, and perceived arousability as well as

the subjective arousal and pleasure experienced increases. The precise mechanisms by which acculturation affects the relationship between anxiety and arousal is unclear. However, it is obvious that the role of anxiety as a mediator between acculturation and sexual arousal deserves further attention, and may have significant implications for the treatment of both FSAD and anxiety disorders.

Comparisons with other areas of health may also provide insights for interpreting these arousal findings. Low prevalence rates for depression in Chinese samples are commonly found, and symptom presentation appears to be expressed in relatively more somatic ways than in Western samples (for review, see Ryder, Yang, & Heine, 2002). In particular, attention tends to be focused on the merging of physical and psychological experiences in Chinese individuals, and relative to their Western counterparts, there is more of a willingness to report symptoms that reflect such a combination (Ryder et al., 2002). It is possible, therefore, that with acculturation Asian women might begin to attune to the more subjective aspects of sexual arousal and to experience them as separate from the physical experience. Another explanation might be that reporting of subjective arousal and pleasure from genital stimulation is "slower" to acculturate than is genital arousal, and that Asian women "caught up" to Euro-Canadian women in reporting levels of genital arousal so that there were no group differences at the time these data were collected. It is unknown what effect continuing acculturation would have on this variable or if Asian women reach an upper limit of identifying and reporting genital arousal that is comparable to their Euro-Canadian counterparts. It must be borne in mind that desynchrony between actual genital arousal and reporting of subjective arousal in women is common (Rosen & Beck, 1988), but perhaps this effect is stronger in Asian women. Future studies that compare cross-cultural groups in the genital-subjective relationship would help address the question of whether or not this disconnect is more prominent in Asian women. In addition, controversy and lack of agreement in the field for precisely how to define sexual desire and arousal make reaching an answer difficult. Researchers are limited from understanding such conceptualizations by traditional quantitative methods, and qualitative techniques are necessary in order to appropriately assess the meaning given to sexual desire and arousal across cultural groups of women.

There are implications of these group differences and effects of acculturation for our classification of FSAD. Different measures of sexual arousal were included in the current study in response to the current climate of increased attention in the research and clinical literatures on FSAD. Because of the dissatisfaction with the current

DSM-IV-TR criteria for FSAD, which focus exclusively on genital arousal (American Psychiatric Association, 2000), there has been an effort to reclassify this disorder into subtypes of genital arousal impairment (genital sexual arousal disorder) and subjective arousal impairment (subjective sexual arousal disorder; Basson et al., 2003). The current data reveal significant ethnic group differences in the relative reporting of mental arousal and genital arousal, although both types of arousal increased with acculturation. Given that distress did not differ between the groups, one might mistakenly over-diagnose subjective sexual arousal disorder in Asian women, despite a lack of distress, if one resorts to comparison with Euro-Canadian norms. Importantly, these cultural group differences may represent artifacts given that we do not know the extent to which these arousal domains can be reliably separated in Asian women. Although we are unable to address the question of whether or not conceptualizations of sexual arousal differ between Western and Asian women, the findings will hopefully stimulate interest for future research on FSAD to include cross-cultural groups for comparison.

Taken together, the data also suggest that as a measure of acculturation, length of residency may be an incomplete index. Length of residency is a proxy measure that may not convey the richness of changes that accompany immersion into a new culture. Years in Canada alone could not reflect the Heritage \times Mainstream interaction on sexual attitudes, and might lead one to falsely assume that the more years one spends in North America, the more liberal one becomes. Years in Canada was also unrelated to any of the three arousal measures on the DASA and to the desire subscale on the BISEF-W, whereas Mainstream acculturation, which takes into account traditions, language, social activities, values, etc., significantly predicted each of these domains. Others have found no effect of length of residency on interpersonal or intrapersonal sexual behavior, or on sociosexual restrictiveness (Meston et al., 1996).

There are certain limitations with the study design that might impact upon conclusions drawn. Of the questionnaires employed, only the VIA was validated in an Asian sample. None of the sexuality questionnaires have been validated in Asian women, despite their frequent use in diverse cultural groups in the clinical setting. It is possible that cultural effects on interpretation of the questions may have influenced the responses by participants. We attempted to control for English language fluency by excluding any individual who reported on her questionnaire difficulty with written English. Moreover, the DASA is an unpublished instrument that had not undergone rigorous psychometric testing at the time

of data collection. Another potential limitation is that this study was conducted with Canadian students only, and Asian American university students might differ in qualitative ways. However, attitudes toward sexuality were found not to differ between Asian Canadian and Asian American medical students (Leiblum, Wiegel, & Brickle, 2003). Because we did not recruit participants on the basis of sexual dysfunction status, it is possible that there were different proportions of Asian versus Euro-Canadian women who met criteria for a sexual dysfunction. In future research, this variable should either be controlled for or comprise an exclusionary criterion.

Although participants were not recruited from a clinical sample, there are a number of important clinical implications that can be drawn from the data. First, to the best of our knowledge, these are the first data showing effects of acculturation, measured by any method, on sexual difficulty. The Asian women in this sample did not report higher levels of sexual dissatisfaction or sexual problems, despite lower levels of sexual responsivity. This highlights the importance of assessing distress in the diagnosis of sexual problems, as argued convincingly by recent data (Bancroft et al., 2003). Also, the finding that a bidimensional measure of acculturation revealed effects that were not detected by demographic variables (i.e., length of residency) has implications for clinical assessment. The clinician should guard against assuming particular beliefs and attitudes based solely on length of residency among patients, and instead take efforts to assess both Mainstream and Heritage acculturation.

In sum, our findings shed light on the role acculturation plays in women's sexual experience. Most notably, the consideration of acculturation in sexuality is important, and future research as well as clinical work should aim to include assessments of acculturation within the context of a sexual history. Secondly, considerable support was found for the bidimensional conceptualization of acculturation in Asian women, which provides a more complete picture than either a unidimensional measure or ethnic group comparisons. Future research might benefit from exploring these concepts in other ethnic groups undergoing acculturation to see if similar patterns emerge. What impact these processes have on reproductive health and high-risk sexual behavior also deserves more attention and has obvious public health implications. Gaps in our knowledge might best be addressed by cross-discipline collaboration, such as the partnership of social psychology (studying the concept of self), cultural psychology (exploring acculturation), and the social and health sciences (investigating sexuality). Finally, an integration of qualitative with quantitative methodologies, which seeks to acknowledge the meaning

of these cultural differences (Ritsher, Ryder, Karasz, & Castille, 2002), will ultimately prove most useful in contributing to our understanding of the sexual experience.

ACKNOWLEDGMENTS

This research was supported by a Natural Sciences and Engineering Research Council of Canada (NSERC) grant to B. B. Gorzalka. L. A. Brotto was funded by a Predoctoral Killam Fellowship from the University of British Columbia, and A. G. Ryder was funded by a Predoctoral Research Trainee Award from the Michael Smith Foundation for Health Research. We thank Vanja Petrovic for assistance in data collection. We especially thank the Editor and the two anonymous reviewers for their very helpful comments on an earlier draft of this article.

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