



Published in final edited form as:

AIDS Behav. 2012 January ; 16(1): 179–188. doi:10.1007/s10461-011-9885-2.

Gender Power Control, Sexual Experiences, Safer Sex Practices, and Potential HIV Risk Behaviors Among Young Asian-American Women

Hyeouk Chris Hahm,

School of Social Work, Boston University, 264 Bay State Road, Boston, MA 02215, USA,
hahm@bu.edu

Jieha Lee,

Department of Social Welfare, Soongsil University, 511 Sangdo-dong, Donjak-Gu, Seoul, South Korea, jiehalee@gmail.com

Kathryn Rough, and

Department of Health Sciences, Boston University, 635 Commonwealth Avenue, Boston, MA 02215, USA, krough@bu.edu

Steffanie A. Strathdee

Division of Global Public Health, Department of Medicine, University of California, San Diego, Institute of the Americas 10111 N. Torrey Pines Rd., La Jolla, CA 92093-0507, USA,
sstrathdee@ucsd.edu

Abstract

We examined the prevalence of three domains of sexual behaviors among young Asian-American women: sexual experiences, safer sex practices, and potential HIV risk behaviors. We also investigated the impact of gender power control on these domains. Among sexually experienced women, 51% reported using condoms during their most recent sex act, 63% reported inconsistent condom use, and 18% reported ever having forced sex. Multiple logistic regression analyses revealed that women's perceived lower relationship power control was not associated with vaginal sex or safer sex practices, but it was powerfully associated with forced sex and all three potential HIV risk behaviors. This study demonstrates that control within young Asian-American women's intimate relationships exerts different associations depending on the type of sexual behavior. The application of the Theory of Gender and Power should be employed with prudence when designing HIV interventions for this population.

Keywords

HIV risk behaviors; Condom use; Gender power relationship; Asian-American women; Asian-Americans; HIV/AIDS; Asian culture

Introduction

Asian-American women are emerging as a group newly vulnerable to HIV infection. Although Asian-Americans comprise 4% of the US population and Asian-American women constitute 1% of female AIDS cases in the US [1], their estimated annual increase of HIV

was the highest among all racial/ethnic groups between 2002 and 2004, increasing by 14.3% according to data from 33 states. In the same time period, Black, White, and Hispanic women showed proportional declines in HIV rates [2]. Heterosexual contact accounted for 80% of all HIV transmissions among Asian-American women, compared to White (65%), Black (74%), and Hispanic women (69%). One factor possibly contributing to the high proportion of heterosexual HIV transmission is Asian-American women's lack of power in interpersonal relationships with men. Accordingly, this study aims to investigate the relationship between gender power control and a range of sexual behaviors associated with increased HIV risk among young Asian-American women.

Gender Power Control, HIV Risk Behaviors, and Asian-American Women

Accumulating evidence demonstrates that gender power inequality has played a role in elevating women's HIV risk. The Theory of Gender and Power (TGP) is useful in conceptualizing women's vulnerability to becoming infected with HIV [3,4]. TGP is characterized by structures that exist at both societal and institutional (e.g. school, work, family, interpersonal relationships) levels. The three interrelated structures that characterize TGP are (1) *the sexual division of labor*, (2) *the sexual division of power*, and (3) *the structure of cathexis*. Applying TGP to the relationship between gender power control and HIV risk behaviors in Asian-American women is a logical choice because of well-defined gender roles in a hierarchical and patriarchal Asian cultural context.

Traditional Asian cultures emphasize a clear sexual division of labor between men and women. Asian women are expected to fulfill the caretaking needs of family members without compensation [5]. In contrast, men are expected to take part in paid labor outside the home and, as a result, women are often left dependent upon men for money and resources. Asian men's control of financial assets intensifies the sexual division of power because it acts as a means to maintain power and control over women. In addition, decision-making in Asian social settings has a vertical structure in which women are placed in lower positions of authority [6]; these structural inequalities force women to assume the subservient role in dyadic relationships with men [7,8]. For instance, the cultural expectation for women's submissiveness may provide men with more control over the types and the frequency of sexual behaviors [8]. This may limit Asian women's sexual autonomy and ability to negotiate sexual behaviors, possibly putting them at risk of HIV infection.

The structure of cathexis theorizes that individuals perceive and conform to societally prescribed gender roles and behavioral norms. Individuals may become emotionally attached to these social norms and may show strong emotional reactions to any deviance from the norm. For instance, Asian women are expected to abstain from open sexual discussion and expected to have a strong sense of accommodation [9]. In Asian society, violation of this norm may bring shame to the individual as well as her entire family. Chin's study found that the Asian cultural values of accommodating others and gender role expectations seemed to impact women's sexual discussions related to HIV risk, thus discouraging condom use among Asian-American women [10].

Specifically, Pulerwitz and colleagues' Sexual Relationship Power Scale (SRPS), is derived from several theoretical perspectives including TGP [11,12]. SRPS is comprised of two subscales: decision making dominance (DMD) and relationship control (RC). Recent studies tend to frequently utilize the RC scale alone rather than the full version of SRPS, as exemplified by two studies on South African women [13,14]. In his study of women offenders in the US, Knudsen also noted that using only the RC measure will elucidate its unique associations with HIV risk behaviors [15].

To our knowledge, no study has used SRPS to examine the role of RC in HIV risk behaviors among Asian-American women. Gaining an understanding of RC's role in HIV risk behavior is critical because growing evidence shows that gender power inequalities among first generation immigrant men and women are common [16,17]. These inequalities are evidenced by prevalence of domestic violence against women and gender power disparities in many Asian-American ethnic communities [5,18]. While evidence of violence against women among first generation Asian immigrants is well documented [16–18], we know little about whether children of these Asian-American immigrants (1.5 or second generation) still share traditional values of women's subservient role. More importantly, we do not know whether the degree of relationship control is associated with their various sexual behaviors known to increase HIV risk. The Asian-American Women's Sexual Health Initiative Project (AWSHIP) is the first study to investigate the association between women's relationship control and wide range of sexual behaviors among Chinese, Korean, and Vietnamese women who are children of immigrants.

In addition to TGP, Bronfenbrenner's Ecological Systems Theory was used as an additional theoretical framework for the current study. Ecological Systems Theory posits that individuals' actions are affected by a set of interconnected domains of influence (individual, dyad, family, and community) [19]. Bronfenbrenner argues that an individual's behavior must be examined within the context of his or her environment. Bronfenbrenner's Ecological Systems Theory has been widely used as a framework to investigate safer sex practices and potentially HIV risk behaviors [20,21]. Gender power control is considered a dyadic (interpersonal relationship) variable. Therefore, we selected our covariates (individual, family, and community related factors) based on this model to better elucidate the association between gender power control (dyad factor) and the different domains of sexual behaviors. In this paper, the terms "relationship control," "relationship power," and "perceived relationship control" are used interchangeably.

The goals of this study were (1) to describe the prevalence and characteristics of three domains of sexual behaviors among Asian-American women: (a) sexual experiences, (b) safer sex practices (condom use practices), and (c) other potential HIV risk behaviors, and (2) to investigate the influence of gender power control on each of these three domains of sexual behaviors while controlling for individual, family, and community related factors. Addressing these issues will help design effective measures to maximize healthy sexual behaviors and to minimize HIV risk behaviors among Asian-American young women.

Methods

Outreach and Recruitment

This study is part of a larger cross-sectional study (AWSHIP) designed to examine the prevalence and characteristics of HIV risk behaviors and the factors associated with those behaviors among Asian-American women. The data was collected from January 2010 to July 2010, and a total of 448 Asian-American women between the ages 18 and 35 were screened for eligibility. To be eligible, participants had to be: (1) a single woman; (2) between the ages of 18 and 35; (3) self-identifying as Chinese, Vietnamese, Korean or a mix of these ethnicities; (4) a child of an immigrant (either 1.5 or second generation); (5) a current resident of the greater Boston Area. Of the 448 women screened, 2.0% were either ineligible or 7.3% never followed through with the survey appointments after initial contact, resulting in a total of 410 completed surveys.

Special efforts were made to achieve a diversity in socioeconomic strata and a balance across the 1.5 generation (those who were born in the foreign country but grew up in the US) and second generation immigrants (those who were born and grew up in the US).

AWSHIP established strong, ongoing relationships with 18 community agencies, resources, and institutions to facilitate recruitment and to provide locations for the interviews. In order to ensure cultural and linguistic sensitivity to Asian-American communities, outreach workers were composed of trained, bilingual and bi-cultural Chinese, Korean, and Vietnamese women.

Survey Procedure

Trained research assistants conducted face-to-face interviews using Computer-Assisted Survey Interview (CASI) which has been shown to effectively elicit answers to highly sensitive questions, such as those involving substance use and HIV risk related behaviors [22]. In order to accommodate less acculturated Asian-American women, consent forms and CASI surveys were available in five different language versions: English, Chinese (both traditional and simplified versions), Korean, and Vietnamese. A total of 12 translators and back-translators (2 translators and 2 back translators for Chinese, Korean, and Vietnamese) completed the multilingual CASI. Participants were free to choose a convenient interview location such as the research institution, community-based sites, libraries, coffee shops, or the participant's home. The survey took approximately 45–60 min to complete and respondents received \$20 compensation. Boston University's Institutional Review Board (IRB) approved all protocol and procedures.

Measurements

Outcome Measures

Sexual Experiences: *Ever had vaginal sex* was measured by asking participants if they had ever had vaginal intercourse. *Ever had forced sex* was assessed by asking participants if they were ever forced or coerced into sexual contact. Responses were coded as “yes” or “no.”

Safer Sex Practices: *Self-reported condom use at the most recent vaginal or anal intercourse* was coded as “yes” or “no.” *Condom use while drinking or on drugs* was measured by asking participants, “Of those times that you had vaginal or anal sex while drinking or taking drugs, how often did you or your partner use condoms/latex protection?” Responses were dichotomized (0 for “never used condom” and 1 for “some of the time,” “half of the time,” “more than half of the time” or “every time”). This question did not ask separately about drinking and taking drugs. *Consistent condom use in past 6 months* was measured by asking participants to respond “Of the times that you had vaginal or anal sex in the past 6 months, how often did you or your partner use condoms/latex protection?” were scored 1 for “always” and 0 for “never,” “some of the time,” “half of the time,” and “more than half of the time.”

Potential HIV Risk Behaviors: The following three variables were chosen to be categorized as HIV risk related variables because each was associated with higher odds of HIV infection in previous studies [23–26]. *Ever had anal sex* was examined by asking participants if they had ever had anal sex. Answers were coded as “yes” or “no.” *Ever having risky sexual partners* was determined by using a question; “As far as you know, have you ever had vaginal or anal sex with risky partners (i.e. anyone who injected drugs or anyone whose sexual history you didn't know very well)?” Responses were coded “yes” or “no.” *Multiple sex partners in past 6 months* was measured using the following question “How many male sex (anal or vaginal) partners have you had in the past 6 months?” Responses were scored 0 for zero or one sex partner and 1 for more than one sex partners.

Independent Variables

Individual Factors: *Age* was measured in years and coded into two groups; 1 for ages 25 to 28 and 0 for ages 18 to 24. *Birth place* was categorized as either 1 for US born or 0 for foreign born. *Educational attainment* asked participants how many years of schooling they had received. Responses were divided into three groupings: “low” for high school diploma or less were coded as 1, “medium” for some or completed undergraduate work were coded as 2, and “high” for graduate level of education were coded as 3. *Religiosity* was measured by asking a question “How important is religion to you?” For this study, the responses “fairly important” and “very important” were scored together as 1, and “fairly unimportant” and “not important at all” were scored together as 0.

Family Factor: *Family communication* was assessed using FACES-IV, a family self-report assessment scale developed from the Circumflex Model of Marital and Family Systems [27]. This study used the FACES IV subscale “Family Communication,” a 10 item measure scored on a 5 point Likert scale. Participants were asked to state how strongly they agreed with statements such as: “family members are satisfied with how they communicate,” “family members are good listeners,” “family members can discuss beliefs and ideas,” and “family members try to understand each other’s feelings.” The scores were classified into three levels of family communication: low, medium, and high. Higher scores indicate higher levels of communication within the family.

Community Related Factor: *Community preference* was measured using the following question, “If you could pick, whom would you prefer to associate with in the community?” Mostly Asian was coded 0 to indicate mostly or almost exclusively Asian. Mostly non-Asian was coded 1 for those who prefer community which has equal mixture of Asian and non-Asian, mostly non-Asian, or almost exclusively non-Asian community. For this study, community preference variable was chosen because it is another proxy for the acculturation besides US or foreign-born status, and higher level of acculturation was found to be associated with higher level of sexual activity among young Asian-American women [28].

Dyad Factor: *Sexual relationship control* was administered using SRPS, which measures perceived power within a relationship [11]. Participants indicated the degree to which they agreed with the following statements on a four point Likert scale with questions including “doing and wearing what the partner wants,” and “the partner choosing who I spend my time with.” We analyzed results from the 12 items of the SRPS RC-M subscale ($\alpha = 0.83$). The SRPS DMD subscale was excluded due to a substantially lower alpha in our sample ($\alpha = 0.60$), and because SRPS RC-M alone has been widely used [13]. As suggested by Pulerwitz and colleagues [12], the SRPS scores were split into three evenly divided categories (low, medium, and high), whereby women with higher scores were considered to have greater relationship power.

Statistical Analysis

Of the 410 total Asian-American women who completed surveys, analyses were restricted to women aged 18–28 ($N = 355$) because we were particularly interested in the sexual behaviors of young women. We used χ^2 tests to compare the prevalence of sexual behavior outcomes among women by three levels of gender power relationship control (Table 2). Finally, we fit a series of multiple logistic regression models to estimate the relative contribution of gender power relationship control on the three domains of sexual behavior while controlling for individual, family, and community related factors (Table 3).

Results

General Characteristics of Sample

Our sample was 355 Asian-American women aged 18–28 (mean, 21.3; SD, 2.5). The highest proportions of young women were Chinese ($n = 203$, 57.2%), followed by Koreans ($n = 70$, 19.7%), Vietnamese ($n = 54$, 15.2%), and mix of these ethnic groups ($n = 28$, 7.9%). The majority of women were born in the US ($n = 230$, 64.8%), rather than in foreign countries. Those who had some college or college graduate degree comprised 76.1% ($n = 270$). In terms of family factor, approximately 55% ($n = 196$, 55.2%) reported having a low level of family communication. Approximately 43% ($n = 153$, 43.1%) preferred to relate mostly Asian communities, and 57% preferred to relate mostly Non-Asian communities ($n = 202$, 56.9%). In terms of SRPS, participants were evenly distributed into three groups: low ($n = 95$, 32.8%), medium ($n = 94$, 32.4%), and high ($n = 101$, 34.8%).

The Prevalence and Characteristics of Sexual Behavior

Table 1 describes the prevalence of the three domains of sexual behaviors within our sample. Among the total sample, 59% reported vaginal sex ($n = 209$, 95% CI: 53.9, 64.2) and 18.3% reported anal sex ($n = 65$, 95% CI: 14.3, 22.4).

Among sexually experienced women, 18% reported a forced sex experience ($n = 38$, 95% CI: 12.8, 23.2). Only half of the women reported using a condom during their last vaginal or anal sexual encounter ($n = 106$, 50.7, 95% CI: 43.9, 57.6), and less than four out of ten reported consistent condom use in the past 6 months ($n = 68$, 37.2, 95% CI: 30.1, 44.2). Approximately 30% of sexually experienced women did not use condoms during sex when they were under the influence of alcohol or drugs during sex ($n = 36$, 29.0, 95% CI: 20.9, 37.1).

Associations between SRPS and Sexual Experiences, Safer Sex Practice, and Potential HIV Risk Behaviors

Table 2 describes the prevalence of three domains of sexual behaviors based on the level of SRPS. In this bivariate analysis, women whose current or most recent relationships scored low on the SRPS (indicating substantial male dominance and control) were not more likely to report a higher prevalence of vaginal sex. Similarly, the SRPS level was not associated with the proportion of any of safer sex practices (condom use at recent sex, condom use while under the influence of alcohol or drugs, and consistent condom use in the past 6 months). However, low SRPS was associated with potential HIV risk behaviors. Among women with low SRPS, 34.0% (95% CI: 20.4, 47.5) reported having multiple sex partners, compared with 27.7% (95% CI: 16.5, 38.9) of those with medium SRPS and 10.6% (95% CI: 3.0, 18.2) with high SRPS. Similarly, among women with low SRPS, 46.6% (95% CI: 33.3, 59.8) reported ever having had a potentially risky sexual partner, compared with 35.6% (95% CI: 24.4, 46.9) of those with medium and 25.7% (95% CI: 15.5, 35.9) of those with high SRPS.

Table 3 depicts results from multiple logistic regression models examining correlates of levels of SRPS (high, medium, and low) and the three domains of sexual behaviors, controlling for individual, family, and community related factors. Consistent with the bivariate model, there was no evidence that SRPS level was associated with vaginal sex. Similarly, compared to high SRPS, medium and low levels of SRPS were not associated with any safer sex practices. However, SRPS was significantly associated with forced sex (OR = 4.06, 95% CI: 1.45, 11.35, $p = 0.01$) and all three potential HIV risk behaviors. That is, compared to the women who reported high SRPS, women with low SRPS were 2.3 times more likely to report anal sex (OR = 2.25, 95% CI: 1.07, 4.71, $p = 0.032$), 4.9 times more

likely to report having multiple sex partners (OR = 4.85, 95% CI: 1.71,13.67, $p = 0.003$), and 3.5 times more likely to have ever had a potentially risky sexual partner (OR = 3.53, 95% CI: 1.56, 7.98, $p = 0.002$).

Discussion

Our sample of young, unmarried Asian-American women, 59% reported ever having vaginal intercourse. This finding is in accordance with previous studies [29,30] which found that the prevalence of vaginal sex among Asian-American young women is lower than in other ethnic groups. Data from the US Centers for Diseases and Control and Prevention also suggest a substantially higher prevalence of vaginal sex among women of other ethnic groups (White 88%; Black 89%; Hispanic 90%) [31]. Nonetheless, nearly one-fifth of sexually experienced women in our sample reported a lifetime prevalence of forced sex, which is similar to prevalence reported among White and Hispanic women [31].

Our sample showed consistent patterns of unprotected sex practices. We found that the proportions of condom use during their most recent sexual intercourse as well as consistent condom use were similar to reports among African-American women who comprise a higher percentage of female HIV/AIDS cases in the US (55 and 35%, respectively) [32–34]. One plausible explanation for the low levels of condom use among sexually experienced women in our sample may be relationship commitment; three quarters of our sample had only one sex partner in the last 6 months. This may indicate a preference for long-term, monogamous relationships which tend to be associated with less condom use [35,36]. It is also possible that Asian-American women are more concerned about pregnancy prevention rather than contracting HIV/STIs from their long-term, steady partner. Therefore, they may choose to use other forms of contraception, as opposed to condoms.

The pattern of potential HIV risk behaviors among Asian-American women appeared less consistent than their safer sex practices. Approximately one quarter of sexually experienced Asian-American women reported having more than one sex partner in the past 6 months, which is lower than that reported for other US female ethnic groups [37]. However, the proportion ever engaging in anal sex (18%) was similar to that of other ethnic groups [38]. Although our sample included a high proportion of virgins and a relatively low proportion of women who reported multiple sex partners, sexually experienced women in our study had similar or lower levels of safer sex practices compared to other studies of US ethnic minority women. The Asian-American women in our study were also exposed to similar levels of HIV risks, such as anal sex and forced sex. These results challenge the stereotype of Asian-American women as a model minority group who are consistently sexually conservative [39] and suggests that many are a higher risk, yet underserved, population who require more attention from public health practitioners.

Our findings indicate that Asian-American women's vaginal sex practices were *not* associated with lower levels of relationship control, suggesting that all sexual decision-making is *not* necessarily pre-determined by men's controlling behaviors. Similarly, having a highly controlling partner did *not* influence any of the three safer sex outcomes we studied. Examining the cultural context of young Asian-American women reveals several plausible explanations for the lack of a significant association. A majority of the literature utilizing SRPS to examine sexual outcomes employ the vulnerability model, in which women are viewed as passive and disempowered in sexual decision-making [40]. However, the decision of our respondents to forgo condom use may be explained by women's preference to increase their sexual pleasure or to enhance intimacy within their relationship [40]. This argument is particularly relevant to sexually experienced young Asian-American women who are influenced by American culture, rather than traditional prescriptive gender roles,

consequently, perceive themselves as more active sexual agents. Thus, it is possible that sexually experienced Asian-American women are exercising their power in sexual decision-making and actively choosing to forgo condom use with their heterosexual partners. Public health policy-makers and practitioners designing HIV interventions should take into account young women's desires for physical pleasure, intimacy, as well as community related factors [40–42].

Relationship Power Control is Associated with Potential HIV Risk Behaviors

This study demonstrates that women who perceive themselves as having highly controlling male partners were 2–5 times more likely to have engaged in anal sex, have had multiple sex partners, have experienced forced sex, and to ever have had potentially risky sexual partners, even after taking into account individual, family, and community related factors. This finding may be explained by a fear of a controlling male partner's negative response, which would discourage women from exerting their own control or assertiveness. It is also possible that these women may relinquish taking precautions to protect their sexual health (e.g. sexual self-efficacy) [43]. Future studies should test the mediating role of sexual self-efficacy in the relationship between gender power and potential HIV risk behaviors among Asian-American women.

Limitations

Several limitations are worth noting. First, study participants were not representative samples; thus, results may not be generalizable to Asian-American women in other regions, as this data was collected in the state of Massachusetts, in which numbers of academic institutions are highly concentrated. Therefore, our samples were highly educated, a fact which may have been a buffer against domineering sexual partners. However, the associations that we observed held after controlling for education level. Second, sample sizes for Asian ethnic groups were not large enough to allow for comparisons between them. Future studies should disaggregate Asian-American samples to detect within-group differences. Third, our sexual behavior outcome variables were based on self-reports. Asian cultural influences such as sexual conservatism and face-saving behavior may have influenced our participants to under-report sexual behaviors. Nonetheless, AWSHIP administered CASI, which has proven to lessen underreporting of sexual and substance use behaviors among young women [22]. Fourth, we considered multiple sex partners outcomes as one of a potential HIV risk behaviors without taking condom use into account. Fifth, causal relationships cannot be established due to limitations of the cross-sectional research design. A longitudinal study is urgently needed to clarify temporal and causal relationships between relationship control and a wide range of sexual behaviors among Asian-American women.

Conclusions

Overall, this study confirms previous findings that sexually active Asian-American women face as much HIV risk as other ethnic women [44,45]. Conceptualizing sexual behaviors using three domains (sexual experiences, safer sex practices, and potential HIV risk behaviors) helps to clarify the role of relationship control in each domain, thus providing a comprehensive picture of the role of TGP in sexual behaviors. Our study findings suggest that relationship power control within an intimate relationship has a different association with each domain of sexual behavior. Women's lower RC demonstrated the consistent patterns of association with all three potential HIV risk behaviors. Additionally, women with lower control were significantly more likely to participate in stigmatizing potential HIV risk behaviors, which can severely restrict women's agency. However, sexual experiences and safer sex practices were not affected by relationship control.

Our findings suggest that the TGP may have limited application in designing HIV intervention among Asian-American women, particularly in relation to safer sex practices. Therefore, the application of the TGP should be employed with caution, recognizing its associations on various types of sexual behaviors. Our findings support the need to further investigate other plausible explanations for unsafe sexual practices such as the role of pleasure, women's perception of HIV/STI risk within steady and casual sexual relationships, and the idiosyncratic rationale women may employ when forgoing safe sex practices.

Acknowledgments

This study was funded by a Mentored Career Development Award (K01), National Institute of Mental Health (Primary investigator: H.C.H., 1K01 MH086366-01A1). Dr. Strathdee is supported in part through R25 DA025571 and R01DA023877.

References

- Centers for Disease Control and Prevention. [Accessed 19 Jul 2010] HIV/AIDS among women. 2007. <http://www.cdc.gov/hiv/topics/women/resources/factsheets/pdf/women.pdf>.
- Centers for Disease Control and Prevention. Racial/ethnic disparities in diagnoses of HIV/AIDS—33 states, 2001–2004. Atlanta. 2006:121–125.
- Wingood GM, DiClemente RJ. Partner influences and gender-related factors associated with noncondom use among young adult African American women. *Am J Community Psychol*. 1998; 26(1):29–51. [PubMed: 9574497]
- Connell, R. *Gender and power: society, the person, and sexual politics*. Chicago: Stanford University Press; 1987.
- Ho C. An analysis of domestic violence in Asian American communities: a multicultural approach to counseling. *Women Ther*. 1990; 9(1–2):129–150.
- Rimonte N. A question of culture: cultural approval of violence against women in the Pacific Asian community and the cultural defense. *Stan L Rev*. 1991; 42(6):1311–1326.
- Chow ENL. The development of feminist consciousness among Asian American women. *Gend Soc*. 1987; 1(3):284–299.
- Huisman KA. Wife battering in Asian American communities. *Violence Against Women*. 1996; 2(3):260–283. [PubMed: 12295885]
- Okazaki S. Influences of culture on Asian Americans' sexuality. *J Sex Res*. 2002; 39(1):34–41. [PubMed: 12476254]
- Chin D. HIV-related sexual risk assessment among Asian/Pacific Islander American women: an inductive model. *Soc Sci Med*. 1999; 49(2):241–251. [PubMed: 10414832]
- Pulerwitz J, Gortmaker SL, DeJong W. Measuring sexual relationship power in HIV/STD research. *Sex Roles*. 2000; 42(7):637–660.
- Pulerwitz J, Amaro H, De Jong W, Gortmaker SL, Rudd R. Relationship power, condom use and HIV risk among women in the USA. *AIDS Care*. 2002; 14(6):789–800. [PubMed: 12511212]
- Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntyre JA, Harlow SD. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*. 2004; 363(9419):1415–1421. [PubMed: 15121402]
- Pettifor AE, Measham DM, Rees HV, Padian NS. Sexual power and HIV risk, South Africa. *Emerg Infect Dis*. 2004; 10(11):1996–2004. [PubMed: 15550214]
- Knudsen HK, Leukefeld C, Havens JR, Duvall JL, Oser CB, Stanton-Tindall M, Mooney J, Clarke J, Frisman L, Surratt HL, Inciardi JA. Partner relationships and HIV risk behaviors among women offenders. *J Psychoactive Drugs*. 2008; 40(4):471–481. [PubMed: 19283951]
- Bui HN, Morash M. Domestic violence in the Vietnamese immigrant community: an exploratory study. *Violence Against Women*. 1999; 5(7):769–795.
- Rhee S. Domestic violence in the Korean immigrant family. *J Soc Welfare*. 1997; 14(1):63–77.
- Raj A, Silverman JG. Immigrant South Asian women at greater risk for injury from intimate partner violence. *Am J Public Health*. 2003; 93(3):435–437. [PubMed: 12604489]

19. Bronfenbrenner U. Ecological systems theory. *Ann Child Dev.* 1989; 6(1):87–249.
20. Van Horne BS, Wiemann CM, Berenson AB, Horwitz IB, Volk RJ. Multilevel predictors of inconsistent condom use among adolescent mothers. *Am J Public Health.* 2009; 99(S2):S417–S424. [PubMed: 19372530]
21. Voisin DR, DiClemente RJ, Salazar LF, Crosby RA, Yarber WL. Ecological factors associated with STD risk behaviors among detained female adolescents. *Soc Work.* 2006; 51(1):71–79. [PubMed: 16512512]
22. Brown JL, Venable PA. The effects of assessment mode and privacy level on self-reports of risky sexual behaviors and substance use among young women. *J Appl Soc Psychol.* 2009; 39(11): 2756–2778.
23. Lazzarin A, Saracco A, Musicco M, Nicolosi A. Man-to-woman sexual transmission of the human immunodeficiency virus: risk factors related to sexual behavior, man's infectiousness, and woman's susceptibility. *Arch Intern Med.* 1991; 151(12):2411–2416. [PubMed: 1684098]
24. Lock S, Holland R, Macpherson G, Smith J. Risk factors for male to female transmission of HIV. *BMJ.* 1989; 298:415–418. [PubMed: 2495046]
25. Maman S, Mbwanjo JK, Hogan NM, Kilonzo GP, Campbell JC, Weiss E, Sweat MD. HIV-positive women report more lifetime partner violence: findings from a voluntary counseling and testing clinic in Dar es Salaam, Tanzania. *Am J Public Health.* 2002; 92(8):1331–1337. [PubMed: 12144993]
26. Lansky A, Nakashima AK, Jones JL. Risk behaviors related to heterosexual transmission from HIV-infected persons. *Sex Transm Dis.* 2000; 27(8):483–489. [PubMed: 10987457]
27. Olson DH, Gorall DM, Tiesel JW. FACES IV & the circumplex model. 2006 <http://www.facesiv.com/pdf/3.innovations.pdf>.
28. Hahm HC, Lahiff M, Guterman NB. Acculturation and parental attachment in Asian-American adolescents' alcohol use. *J Adolesc Health.* 2003; 33(2):119–129. [PubMed: 12890603]
29. Cochran SD, Mays VM, Leung L. Sexual practices of heterosexual Asian-American young adults: implications for risk of HIV infection. *Arch Sex Behav.* 1991; 20(4):381–391. [PubMed: 1953329]
30. Grunbaum JA, Lowry R, Kann L, Pateman B. Prevalence of health risk behaviors among Asian American/Pacific Islander high school students. *J Adolesc Health.* 2000; 27(5):322–330. [PubMed: 11044704]
31. Mosher WD, Chandra A, Jones J. Sexual behavior and selected health measures: men and women 15–44 years of age, United States, 2002. *Adv Data.* 2005; 362(362):1–55. [PubMed: 16250464]
32. Centers for Disease Control and Prevention. [Accessed 23 Jul 2010] HIV/AIDS and Women. 2010. <http://www.cdc.gov/hiv/topics/women/>.
33. Wingood GM, DiClemente RJ, Harrington KF, et al. Efficacy of an HIV prevention program among female adolescents experiencing gender-based violence. *Am J Public Health.* 2006; 96(6): 1085–1090. [PubMed: 16670238]
34. DiClemente RJ, Wingood GM. A randomized controlled trial of an HIV sexual risk-reduction intervention for young African-American women. *JAMA.* 1995; 274(16):1271–1276. [PubMed: 7563531]
35. Tucker JS, Elliott MN, Wenzel SL, Hambarsoomian K. Relationship commitment and its implications for unprotected sex among impoverished women living in shelters and low-income housing in Los Angeles County. *Health Psychol.* 2007; 26(5):644–649. [PubMed: 17845116]
36. Marín BV, Tschann JM, Gomez CA, Gregorich S. Self-efficacy to use condoms in unmarried Latino adults. *Am J Community Psychol.* 1998; 26(1):53–71. [PubMed: 9574498]
37. Catania JA, Dolcini MM, Coates TJ, Kegeles SM, Greenblatt RM, Puckett S. Predictors of condom use and multiple partnered sex among sexually-active adolescent women: Implications for AIDS-related health interventions. *J Sex Res.* 1989; 26:514–524.
38. Reinisch JM, Hill CA, Sanders SA, Ziemba-Davis M. High-risk sexual behavior at a Midwestern university: A confirmatory survey. *Fam Plann Perspect.* 1995; 27(2):79–82. [PubMed: 7796901]
39. Osajima, K. Asian Americans as the model minority: an analysis of the popular press image in the 1960s and 1980s. In: Ono, K., editor. *A companion to Asian American studies*. Oxford: Blackwell Publishing; 2005.

40. Higgins JA, Hoffman S, Dworkin SL. Rethinking gender, heterosexual men, and women's vulnerability to HIV/AIDS. *Am J Public Health*. 2010; 100(3):435–445. [PubMed: 20075321]
41. Bralock AR, Koniak-Griffin D. Relationship, power, and other influences on self-protective sexual behaviors of African American female adolescents. *Health Care Women Int*. 2007; 28(3):247–267. [PubMed: 17364984]
42. Corbett AM, Dickson-Gómez J, Hilario H, Weeks MR. A little thing called love: condom use in high-risk primary heterosexual relationships. *Perspect Sex Reprod Health*. 2009; 41(4):218–224. [PubMed: 20444176]
43. Bowleg L, Belgrave FZ, Reisen CA. Gender roles, power strategies, and precautionary sexual self-efficacy: implications for Black and Latina women's HIV/AIDS protective behaviors. *Sex Roles*. 2000; 42(7):613–635.
44. Hou SI, Basen-Engquist K. Human immunodeficiency virus risk behavior among White and Asian/Pacific Islander high school students in the United States: does culture make a difference? *J Adolesc Health*. 1997; 20(1):68–74. [PubMed: 9007662]
45. Hahm HC, Lee J, Al Ozonoff MA. Predictors of STDs among Asian and Pacific Islander young adults. *Perspect Sex Reprod Health*. 2007; 39(4):231–239. [PubMed: 18093040]

Table 1

Prevalence of sexual experiences, safer sex practices, and potential HIV risk behaviors

	<i>N</i> (%)	95% <i>CI</i>
Sexual experiences		
Ever had vaginal sex		
Yes	209/354 (59.0)	(53.9–64.2)
No	145/354 (41.0)	(35.8–46.1)
Ever had forced sex		
Yes	38/211 (18.0)	(12.8–23.2)
No	173/211 (82.0)	(76.8–87.2)
Safer sex practices		
Condom use at recent vaginal or anal sex		
Yes	106/209 (50.7)	(43.9–57.6)
No	103/209 (49.3)	(42.4–56.1)
Condom use while drinking or on drugs		
Yes	88/124 (71.0)	(62.9–79.1)
No	36/124 (29.0)	(20.9–37.1)
Consistent condom use in past 6 months		
Yes	68/183 (37.2)	(30.1–44.2)
No	115/183 (62.8)	(55.8–69.9)
Potential HIV risk behaviors		
Ever had anal sex		
Yes	65/355 (18.3)	(14.3–22.4)
No	290/355 (81.7)	(77.6–85.7)
Ever having risk sexual partners		
Yes	74/210 (35.2)	(28.7–41.8)
No	136/210 (64.8)	(58.2–71.3)
More than one sex partner in past 6 months		
Yes	43/184 (23.4)	(17.2–29.5)
No	141/184 (76.6)	(70.5–82.8)

Vaginal sex and anal sex were asked to all the participants; however, other sexual behaviors were asked only those who were sexually experienced
CI confidence interval

Table 2

Percentage of three domains of sexual behaviors among Asian-American women according to the level of relationship power control

	% (95% CI)			<i>p</i> value
	High relationship control	Medium relationship control	Low relationship control	
Sexual experiences				
Ever had vaginal sex	73.3 (64.4–82.0)	76.6 (67.8–85.3)	61.1 (51.1–71.0)	0.047*
Ever had forced sex	10.8 (3.6–18.1)	19.2 (9.9–28.4)	25.9 (14.2–37.5)	0.079
Safer sex practices				
Condom use at recent vaginal or oral sex	52.7 (41.1–64.3)	50.7 (38.9–62.4)	49.1 (35.7–62.5)	0.919
Condom use while drinking or on drugs	68.4 (52.9–83.9)	65.9 (51.3–80.5)	78.1 (65.8–91.3)	0.438
Consistent condom use in past 6 months	40.9 (28.7–53.1)	41.5 (29.2–53.8)	26.5 (13.7–39.3)	0.192
Potential HIV risk behaviors				
Ever had anal sex	19.8 (11.9–27.7)	19.2 (11.0–27.3)	27.4 (18.2–36.5)	0.314
Ever having risky sexual partners	25.7 (15.5–35.9)	35.6 (24.4–46.9)	46.6 (33.3–59.8)	0.044*
More than one sex partner in past 6 months	10.6 (3.0–18.2)	27.7 (16.5–38.9)	34.0 (20.4–47.5)	0.007**

p value calculated using Pearson χ^2 tests for all comparisons of high, medium, and low relationship control
CI confidence interval

* $p < 0.05$,

** $p < 0.01$,

*** $p < 0.001$

Table 3

Adjusted odds ratios (and 95% confidence intervals) from multiple logistic regression models assessing association between relationship power control and odds of three domains of sexual behaviors

Individual factor	Sexual experiences			Safer sex practices			Potential HIV risk behaviors		
	Vaginal sex (N = 290), OR (95% CI)	Forced sex ever (N = 205), OR (95% CI)	Condom use at recent sex (N = 204), OR (95% CI)	Condom use while drinking or on drugs (N = 123), OR (95% CI)	Consistent condom use in past 6 months (N = 180), OR (95% CI)	Anal sex ever (N = 290), OR (95% CI)	Ever having risky sexual partners (N = 205), OR (95% CI)	More than one sex partners in past 6 months (N = 181), OR (95% CI)	
Age									
18–24 (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
25–28	1.19(0.48–2.92)	2.14(0.78–5.85)	0.55(0.24–1.26)	2.38(0.65–8.69)	1.05(0.43–2.55)	2.59(1.16–5.80)	2.85(1.16–6.98)	0.41(0.13–1.33)	
	<i>p</i> = 0.723	<i>p</i> = 0.139	<i>p</i> = 0.155	<i>p</i> = 0.188	<i>p</i> = 0.914	<i>p</i> = 0.021*	<i>p</i> = 0.022*	<i>p</i> = 0.139	
Birth place									
Foreign born (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
US born	1.10(0.62–1.96)	1.12(0.49–2.57)	0.81(0.44–1.49)	0.85(0.33–2.16)	0.58(0.29–1.13)	1.27(0.66–2.43)	1.26(0.64–2.48)	1.98(0.81–4.86)	
	<i>p</i> = 0.746	<i>p</i> = 0.785	<i>p</i> = 0.500	<i>p</i> = 0.725	<i>p</i> = 0.111	<i>p</i> = 0.470	<i>p</i> = 0.501	<i>p</i> = 0.134	
Educational attainment									
High school diploma or less (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Some college or college graduate	3.73(1.72–8.09)	3.37(0.41–27.92)	1.24(0.45–3.38)	0.31(0.03–2.91)	1.31(0.41–4.24)	13.45(1.75–103.29)	3.25(0.86–12.30)	3.20(0.63–16.23)	
	<i>p</i> = 0.001**	<i>p</i> = 0.261	<i>p</i> = 0.677	<i>p</i> = 0.305	<i>p</i> = 0.651	<i>p</i> = 0.012*	<i>p</i> = 0.082	<i>p</i> = 0.161	
Graduate works	5.02(1.45–17.44)	5.83(0.55–61.79)	1.91(0.49–7.45)	0.31(0.03–3.85)	1.83(0.40–8.36)	13.76(1.50–126.43)	1.33(0.24–7.31)	4.03(0.52–31.40)	
	<i>p</i> = 0.011*	<i>p</i> = 0.143	<i>p</i> = 0.351	<i>p</i> = 0.363	<i>p</i> = 0.438	<i>p</i> = 0.021*	<i>p</i> = 0.743	<i>p</i> = 0.184	
Religiosity									
Not important (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Important	0.46(0.26–0.82)	2.22(0.95–5.18)	0.66(0.35–1.26)	1.10(0.42–2.87)	0.83(0.40–1.73)	0.63(0.31–1.24)	1.32(0.64–2.70)	0.44(0.17–1.15)	
	<i>p</i> = 0.009**	<i>p</i> = 0.066	<i>p</i> = 0.207	<i>p</i> = 0.843	<i>p</i> = 0.623	<i>p</i> = 0.180	<i>p</i> = 0.453	<i>p</i> = 0.092	
Family factor									
Family communications									
High (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Medium	1.99(0.88–4.49)	0.31(0.07–1.37)	1.55(0.58–4.18)	2.25(0.44–11.55)	1.84(0.62–5.44)	2.50(0.79–7.90)	1.63(0.47–5.61)	0.68(0.19–2.42)	

	Sexual experiences		Safer sex practices		Potential HIV risk behaviors			
	Vaginal sex (N = 290), OR (95% CI)	Forced sex ever (N = 205), OR (95% CI)	Condom use at recent sex (N = 204), OR (95% CI)	Condom use while drinking or on drugs (N = 123), OR (95% CI)	Consistent condom use in past 6 months (N = 180), OR (95% CI)	Anal sex ever (N = 290), OR (95% CI)	Ever having risky sexual partners (N = 205), OR (95% CI)	More than one sex partners in past 6 months (N = 181), OR (95% CI)
Low	<i>p</i> = 0.100	<i>p</i> = 0.122	<i>p</i> = 0.384	<i>p</i> = 0.333	<i>p</i> = 0.271	<i>p</i> = 0.118	<i>p</i> = 0.441	<i>p</i> = 0.551
	3.06(1.51–6.18)	1.12(0.37–3.44)	1.06(0.45–2.48)	0.71(0.18–2.90)	0.97(0.37–2.54)	3.37(1.22–9.32)	3.37(1.12–10.14)	1.02(0.34–3.03)
	<i>p</i> = 0.002**	<i>p</i> = 0.840	<i>p</i> = 0.895	<i>p</i> = 0.637	<i>p</i> = 0.956	<i>p</i> = 0.019*	<i>p</i> = 0.030*	<i>p</i> = 0.968
Community factor								
Community preference								
Mostly Asian (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Mostly non Asian	1.57(0.87–2.81)	2.08(0.89–4.87)	1.29(0.70–2.35)	2.92(1.14–7.46)	1.65(0.82–3.31)	1.40(0.74–2.66)	2.39(1.19–4.79)	2.30(0.98–5.41)
	<i>p</i> = 0.133	<i>p</i> = 0.091	<i>p</i> = 0.417	<i>p</i> = 0.025*	<i>p</i> = 0.162	<i>p</i> = 0.297	<i>p</i> = 0.014*	<i>p</i> = 0.056
Dyad factor								
High (R)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Medium	1.33(0.65–2.70)	3.38(1.20–9.53)	0.84(0.42–1.67)	0.87(0.31–2.46)	1.04(0.49–2.22)	1.01(0.46–2.18)	2.00(0.91–4.41)	2.97(1.07–8.22)
	<i>p</i> = 0.430	<i>p</i> = 0.021*	<i>p</i> = 0.620	<i>p</i> = 0.789	<i>p</i> = 0.909	<i>p</i> = 0.989	<i>p</i> = 0.086	<i>p</i> = 0.036*
Low	0.80(0.41–1.56)	4.06(1.45–11.35)	0.84(0.41–1.73)	2.65(0.85–8.22)	0.58(0.25–1.34)	2.25(1.07–4.71)	3.53(1.56–7.98)	4.85(1.71–13.67)
	<i>p</i> = 0.518	<i>p</i> = 0.008**	<i>p</i> = 0.639	<i>p</i> = 0.092	<i>p</i> = 0.205	<i>p</i> = 0.032*	<i>p</i> = 0.002**	<i>p</i> = 0.003**

Vaginal sex and anal sex were asked to all the participants; however, other sexual behaviors were asked only those who were sexually experienced. Model built using a series of multiple logistic regression models to estimate the relative contribution of gender power relationship control on the three domains of sexual behavior while controlling for individual, family, and community related factors. *p* value calculated using Likelihood Ratio Tests

OR odds ratio, CI confidence interval, (R) reference group

* *p* < 0.05,
 ** *p* < 0.01,
 *** *p* < 0.001