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ORIGINAL ARTICLE

College Students' Attitudes Toward Intimate Partner Violence: a Comparative Study of China and the U.S.

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Abstract Although attitudes toward intimate partner violence (IPV) have been the subject of many studies, little research has been conducted to comparatively assess public definitions of IPV in Western and non-Western countries. Drawing upon survey data collected from approximately 500 Chinese and American college students, this study compared and contrasted Chinese and American college students in their beliefs about what constitute IPV. Chinese students were found to be less likely to define abusive acts as IPV than their U.S. counterparts. Gender-role attitudes, such as beliefs of male dominance and IPV as crime, were among the most prominent predictors of students' definitions of IPV. Chinese and American college students' attitudes differed not only in what was defined as IPV, but also in what were the factors that shaped such attitudes. Directions for future research and policy were discussed.

Keywords Intimate partner violence · China · The United States · Gender-role attitudes · Comparative study

The global awareness of violence against women has grown significantly over the past several decades. Among various types of violence against women, intimate partner violence (IPV) remains the most common and universal form worthy of public attention and intervention (Garcia-Moreno et al. 2005). Along with this growing social concern is a burgeoning body of research on a variety of aspects of IPV, including its characteristics, causes, effects, and social response to violence. Studying public attitudes toward IPV is warranted as such attitudes are closely related to the use of violence against women (see Flood and Pease 2009, for a review). Indeed, attitudes supporting or justifying violence were found to be associated with IPV perpetration (Anderson et al. 2004; Berkel et al. 2004; Fanslow et al. 2010; Murnen et al. 2002; Nabors et al. 2006; Schumacher et al. 2001; Shen et al. 2012; Stith et al. 2004), as well as responses to violence by victims, people around them (Garcia-Moreno et al. 2005; Saunders and Size 1986), and social institutions such as service providers (Bui and Morash 2008; Lee and Hadeed 2009) and the criminal justice system (Sun et al. 2011a, b, c, 2012b; Wu et al. 2013). Evidence from this broad line of inquiry supports the essential role of attitudes toward violence in many IPV-reduction campaign programs (Flood and Pease 2009), and underscores the necessity of continuing research on IPV-related perceptions.

This study compared and∩ contrasted Chinese and American college students' attitudes toward IPV. We specifically examined students' definitions of IPV, or recognitions of certain types of behaviors as violence. Although there exists a significant body of literature on attitudes toward IPV in the West (e.g., Anderson et al. 2004; Fanslow et al. 2010; Lee et al. 2005) and a growing amount of research on IPV perpetration in Chinese societies (e.g., Chan et al. 2010; Chen and Chen 2009; Hou et al. 2011; Jiang et al. 2006; Shen et al. 2012; Tang 1998; Tang et al. 2002a; Tang et al. 2002b; Xu et al. 2005), studies focusing specifically on attitudes toward IPV in China remain scarce. Even rarer is research conducted from a cross-cultural, comparative perspective that takes into

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account the traditional cultural heritage of China and its unique patterns of social, economic, and political development. This study thus aimed to answer how the critical social problem of IPV is comparatively conceptualized in China and the U.S. and whether Chinese' and Americans' attitudes toward such abusive behavior are shaped by similar or different factors. Answers to these questions can broaden our understanding of how cultural diversity influences social attitudes and shed light on global policymaking.

Additionally, past studies on perceptions of IPV tended to include measures of physical or sexual abuse, without looking at other important types of violence, such as psychological abuse (e.g., Adams-Curtis and Forbes 2004; Angelone et al. 2012; Gallin 1992; Lee and Cheung 1991; Lee et al. 2010; Lee et al. 2005, Speizer 2010; Speizer and Pearson 2011). To address this concern, this study thus examined the definition of IPV in a broader way, including indicators of physical, psychological, and sexual abuse, and investigated whether college students' recognitions of violence vary across different types of IPV. On the independent variable side, we included three groups of predictors, background characteristics, gender-role orientations, and personal and vicarious experiences. Despite their relevance, some of these variables, such as beliefs of male dominance, have not been adequately researched. This study represents a more complete collection and assessment of the correlates of perceptions of abusive behavior.

Drawing upon survey data collected from approximately 500 Chinese and American college students, this study analyzed cross-national variations in perceptions of IPV and in factors influencing such perceptions. It is intended to answer three key questions: (1) Do Chinese and American college students differ in their recognition of abusive behaviors as IPV; (2) What factors affect college students' definitions of IPV; and (3) Are Chinese and American students' definitions of IPV affected by distinctive or similar sets of variables?

The Prevalence of IPV in the U.S. and China

IPV, which refers to various forms of violence that occurred in present or past intimate relationships, is a pervasive problem around the world (Garcia-Moreno et al. 2005). In the U.S., it is estimated that between 8 % and 12 % of women (about 1 million) are battered by their intimate partners each year (Bornstein 2006; Samuelson and Campbell 2005). This figure is consistent with a large-scale national survey conducted by the National Institute of Justice in 2000, which reported that each year 1.5 million women were raped or physically assaulted by an intimate partner and 4.9 million intimate partner rapes and physical assaults against women were perpetrated (Tjaden and Thoennes 2000).

The situation of IPV among college students is particularly grim. In the U.S., 25 % of female and 10 % of male college students reported having experienced IPV (Luthra and Gidycz 2006). In China, IPV is just as pervasive. Hou et al. (2011)) showed a rate of 50 % for psychological violence, 20 %-30 % for physical violence, and 15 % (wives as perpetrators) and 20 % (husbands as perpetrators) for sexual violence among 194 couples in Beijing. Another study in a large city in southern China found that 43 % of the women surveyed reported having been physically or sexually abused by their partner (Xu et al. 2005). Similar to the US, IPV among certain Chinese groups is particularly prevalent: 17.4 % of prenatal and postnatal women, 33 % of college students, and 39 % of teenagers with dating experience suffered from IPV (Chan et al. 2010; Chen and Chen 2009; Ye et al. 2005; Shen et al. 2012).

Due to the significant cultural and social differences between China and the U.S., public response to IPV also differs significantly. In the U.S., IPV constitutes criminal offense and can evoke police intervention. Although traditionally the police did not actively intervene into these incidents, the passage and adoption of mandatory and pro-arrest statutes and policies since the 1980s along with the spread of victim assistance programs and fears for civil liability, has pushed the police to act more responsively toward victims of IPV (Buzawa and Buzawa 2003; Sun 2007). In Mainland China, however, the police do not actively intervene into IPV incidents. Although there are laws and regulations against IPV in China, many police officers regard IPV as private matters beyond police responsibilities and often refuse to accept or process victims' complaints (Sun et al. 2012b). Citizen attitudes toward appropriate responses to IPV also differ between these two countries. For example, Chinese students held significantly lower levels of support for law enforcement approach to handling cases of IPV than American students (Wu et al. 2013).

Factors Influencing Attitudes toward IPV

Although IPV is a widespread social problem in both China and the U.S., the term may be conceptualized and understood differently because of various social and cultural differences in the two countries. For example, traditional patriarchal beliefs in Chinese societies could subject women to subordinate positions that are highly susceptible to violence including IPV (Tang 1998; Tang et al. 2002a). Compared to their Westerner peers, Asian students, including Chinese, were more supportive for traditional gender roles and preferred less aggressive police intervention in domestic violence (Lee et al. 2005; Sun et al. 2011a, b, c). Therefore, factors contributing to the perceptions of whether certain behaviors should be viewed as IPV could be different between Chinese and Americans. In this study, we concentrated on the impact of background

characteristics, gender-role attitudes, and personal and vicarious experiences on college students' definitions of IPV.

Background Characteristics

As a comparative study, the first key background characteristic examined is country of residence. Unfortunately, empirical research that compares Chinese and Americans' perceptions of IPV using the same measurement is rare. Traditionally, because China was a patriarchal society, Chinese men's superiority and women's inferiority were heavily embedded in many aspects of social life (Liu and Chan 1999). Even though Chinese women's social status and rights have significantly improved over the past several decades, one would suspect that the traditional patriarchal ideology still lingers among some groups of the population and continues to shape, to a certain degree, public awareness of IPV. Therefore, we hypothesized that Chinese respondents would have a more restrictive definition of IPV compared to their American counterparts.

Several other demographic characteristics, such as gender, age, race, and socio-economic status (SES), have been frequently investigated in past research. A large number of studies have discovered a gender asymmetry in attitudes toward IPV, with men more likely than women to hold beliefs supporting violence against women and perceive a narrower range of behaviors as IPV (Flood and Pease 2009). Female students worldwide were found more likely than male students to consider domestic violence as a problem, identify domestic violence, and support its worthiness to be reported (Knickrehm and Teske 2001; Lee et al. 2005; 2010; McMullan et al. 2010; Nabors and Jasinski 2009; Obeid et al. 2010; Yamawaki et al. 2012). In the case of China, several studies also found gender differences in perceptions of IPV (Jiang et al. 2006; Shen et al. 2012; Tang and Cheung 1997). This study expected that female students are more likely than male students to define certain behaviors as IPV.

Similar to gender, age appears to be a rather consistent predictor of attitudes toward IPV, with younger people having more tolerant attitudes toward IPV than their older counterparts (Flood and Pease 2009). Boys and young men, in particular, were more likely than older men to endorse IPV perpetration (Anderson et al. 2004; Aromaki et al. 2002; Speizer 2010; Speizer and Pearson 2011). A study done among Chinese women, however, found that age was not a significant predictor of attitudes toward violence (Sun et al. 2012a). Even though we used a college student sample which has a narrow range of age, we hypothesized that younger students would have more restrictive definitions of IPV than older students.

Race and ethnicity can also affect attitudes toward IPV. In the U.S., various studies have shown that whites usually have less tolerant attitudes toward IPV compared to ethnic minorities (Cowan 2000; Lee et al. 2005; Locke and Richman 1999; Mori et al. 1995). Similar results were found in other Western countries such as Canada (Kennedy and Gorzalka 2002), Australia (ANOP Research Services 1995), and New Zealand (Fanslow et al. 2010). No research, however, has examined the effects of ethnicity on perceptions of IPV in China. We hypothesized that racial/ethnic majorities would perceive a broader range of behaviors as IPV than minorities.

As much as race and ethnicity may account for differences in attitudes toward IPV, Socio-economic status (SES) may also be a relevant factor. Several studies have found a negative association between economic and social status at either the individual or community level and risks of exposure to crime, particularly IPV (Jewkes 2002; Markowitz 2003; Schumacher et al. 2001). We postulated that people who have a higher SES are more likely to define certain behaviors as IPV than people with a lower SES.

Another demographic variable to be considered is area where individuals live or grow up. Although studies conducted in the U.S. revealed that urban and rural areas did not differ much in the prevalence of IPV (e.g., Lanier and Maume 2009), a study in China showed that residents in urban and industrial areas had higher risks of IPV than residents in rural areas (Cao 2006). Accordingly, we hypothesized that students from the urban areas would perceive a broader range of behaviors as IPV than their rural counterparts.

Gender-role Attitudes

Surveying both Western and Chinese literature reveals a very consistent and strong relationship between gender-role attitudes and perceptions of IPV. People having traditional gender-role attitudes are more likely to display greater acceptance of violence against women. For example, Stalans and Finn (2006) uncovered that people who favor male-dominant relationships are less likely to believe that husbands' use of violence is intentional and unjustifiable in domestic violence incidents. A study of Turkish college students also found that male respondents who are supportive of patriarchal ideals tend to regard wife beating as more acceptable and blame women for eliciting the confrontation (Sakall 2001). Berkel et al. (2004)) found that compared to religiosity and spirituality, gender-role attitudes are better predictors of orientations toward violence against women among white college students. Additional evidence indicated a relationship between the endorsement of abuse and the propensity for abusiveness (Schwartz et al. 2012) and a connection between traditional gender-role attitudes and acceptance of IPV (Nabors and Jasinski 2009) among male college students in the U.S. In China, women who held favorable attitudes toward traditional gender roles were found more likely to believe that wife-beating was sometimes justified (Xu et al. 2005).

Some studies suggested that the relationship between gender-role attitudes and perceptions of IPV is complicated. For example, Allen et al. (2009)) study of predominantly Hispanic college students found that not all sexist attitudes were supportive of violence against women; benevolent sexism actually had a protective effect against men's violence toward intimate partners. This echoes Nabors and Jasinski (2009)) work, which separated chivalry from traditional gender-role attitudes and found the former to be unrelated to more tolerant attitudes toward IPV against women. These findings suggested the necessity for dissecting different aspects of gender-role attitudes in analysis. This study thus explored the effects of values of male dominance and perceptions of IPV as crime on students' definitions of IPV.

A comparative study of Chinese and American college students found that male dominance values exerted some effects on attitudes toward policing IPV- patriarchal ideologies increased support for traditional or reactive policing in both societies (Sun et al. 2011c). This relationship is also verified in recent empirical studies across the world (e.g., Allen and Devitt 2012; Obeid et al. 2010; Speizer 2010; Yamawaki et al. 2012). Based on these results, one may expect that students who hold male dominance values will have a more restricted definition of IPV. In addition to perceptions of male dominance, research also supported the intuitive assumption that those who support the criminalization of IPV offenders are more supportive of proactive police responses to IPV, while those who are more tolerant of IPV are less favorable (Sun et al. 2011a, b). It was thus hypothesized that students who consider IPV as crime are more likely to define certain behaviors as IPV than their counterparts who do not perceive IPV as crime.

Personal and Vicarious Experience

Some studies found that individuals who had witnessed or experienced IPV are more likely to endorse IPV-supportive attitudes (Garcia-Moreno et al. 2005; Markowitz 2001; Speizer 2010). For example, frequent exposure to IPV can strengthen one's beliefs that justify IPV against women in the developing world (Garcia-Moreno et al. 2005). Flood and Pease's (2009) comprehensive review of literature, however, showed that the causal mechanism between experiencing or witnessing violence and supportive attitudes toward violence might be complicated, with prior experiences of violence leading to both violence-supportive and violence-intolerant attitudes. Similar to witnessing or experiencing violence, knowing victims of IPV or arrests of IPV may also affect individuals' attitudes toward IPV.

Another understudied factor that may shape public attitudes toward IPV is victimization. Crime victims tend to be hold more punitive attitudes toward offenders, thus they may also consider a broader range of abusive behaviors as IPV. We hypothesized that people who have been a victim of crime are more likely to define certain behaviors as IPV than non-victims.

Methods

Research Project and Sites

Data used in this study were part of the information gathered by the International Project of Attitudes toward Criminal Justice (IPACJ), a collaborative project that involved researchers in several Chinese and U.S. universities. The primary purpose of the IPACJ was to comparatively study college students' attitudes toward and experiences with crime and criminal justice in the two countries. The first stage of the IPACJ, which was completed during the fall of 2008, focused on public perceptions of criminal punishment and legal authorities. This study used data collected by the second stage of the IPACJ, which was completed between 2009 and 2010 with a concentration on public opinions on various aspects of intimate partner violence.

One Chinese university and one U.S. university were the research sites of this study. The Chinese university is one of the oldest higher education institutions in China. In 2009 (when the data were garnered), the university furnished 95 doctoral, 157 masters, and 55 undergraduate degree programs to a student population of over 20,000. The U.S. university is a large public institution located in a metropolis in a mid-Western state. In 2009, the school offered over 335° programs across a wide array of disciplines to a student body of approximately 33,000.

Data Collection and Sample

Survey questionnaires were distributed to students at both research sites during the fall of 2009. An English survey instrument consisting of approximately 100 items was first developed and then translated to Chinese by the IPACJ researchers. The Chinese survey was translated back to English by a bilingual scholar and the two English versions were compared and minor revisions were made to enhance the consistency between the Chinese and English questionnaires. The survey instrument was also pre-tested on a small number of Chinese and American students to ensure the validity of the measurement and the understandability of all questions to college students.

Purposive and convenience sampling strategies were used to recruit student participants. At both universities, the data were gathered in classrooms. In the Chinese university, students enrolled in courses provided by the law school were picked out for the survey, while, in the U.S. university,

students registered in courses offered by a criminal justice department were targeted. The study received IRB approval and procedures were followed for informed consent. On average, it took students about 15 to 20 min to finish the survey.

The classroom setting facilitated high response rates. Among the 450 and 340 surveys distributed in China and the U.S., respectively, 342 and 312 were returned, resulting in an initial sample of 654 students. After excluding unusable surveys and cases with missing data from the analysis, a final sample of 491 students, including 239 Chinese and 252 Americans, was generated. An analysis of the data indicated that there were virtually no differences in gender, race, age, and SES between the respondents included and excluded in the analysis sample and the exclusion did not confound the results in any significant way. In addition, even though the U.S. and the Chinese samples were not randomly selected from the student populations, there was a reasonable degree of congruence in terms of student gender, age, and class status between the samples and the populations of sample universities.

Measures

The dependent variable was constructed based on a series of questions asking respondents whether they consider a certain act as abuse. As shown in Table 1, 20 items were devised to measure respondents' attitudes toward various acts of abuse. The response categories for these items included: strongly disagree (1), disagree (2), agree (3), and strongly agree (4). Conceptually, these items can be viewed as capturing three types of IPV, including physical violence (e.g., hitting and throwing objects), psychological violence (e.g., threatening, destructing property, and giving belittling comments), and sexual violence (e.g., forcing sexual intercourse) (Bogat et al. 2005). Analytically, they were uni-dimensional in terms of definition of violence as indicated by the results of primary component analysis (all items loaded onto one factor, which explained 57.4 % of the variance). Therefore, we constructed an additive scale with all the items, with a higher score on the scale indicating a great likelihood of defining behaviors as IPV. The scale had a strong internal consistency, registering a Cronbach's alpha of .96.

[1] There are 55 officially recognized ethnic minorities in China, making up 8.5 % (114 million) of the total population. Most of the minority people live in the south, west, and north of China, particularly in remote and mountainous areas where living conditions are harsh. In this study, we do not know exactly where the ethnic minority students were originally from as the survey instrument only contained an item asking whether the respondent is a racial/ethnic minority or not. Information on the ethnic groups that they belong to or the actual provinces or cities that these minority students are from are not available.

Table 1 Construction of dependent variable

Survey Items: If a date or a partner did the following, it is abuse	Factor Loading	Cronbach's alpha
Held down/physically restrained	.67	.96
Hit or slapped or punched	.80	
Pushed/shoved/grabbed/kicked	.77	
Twisted partner's arm or bent fingers back	.74	
Used weapon (knife or gun) against partner	.78	
Threw objects at partner	.70	
Prevented partner from working	.71	
Took paycheck	.77	
Called names, insulted, swore at, or treated disrespectfully in front of others	.83	
Threatened to physical hurt	.80	
Threatened suicide if partner wants to leave	.76	
Frequently threatened to leave or divorce partner	.70	
Searched through or destroyed/damaged partner's things	.80	
Follow when she/he doesn't know it	.74	
Threatened to stop providing financial support	.68	
Did or said something to spite partner	.67	
Threatened reputation	.77	
Hurt or killed partner's pet (s)	.82	
Not allow partner to visit/talk with family or friends	.84	
Forced sex or sexual activities	.79	

The independent variables were divided into three groups: background characteristics, gender-role beliefs, and personal and vicarious experiences. Background characteristics included country of residence, gender, age, race/ethnicity, SES, and place of origin. Country of residence, gender, race, and place of origin were coded as dummy variables with 1 representing China, female, racial/ethnic minority,[1] and urban area. Age was measured in years. SES was a factor of three items: father's and mother's highest levels of education (from 1=illiteracy to 7=graduate or professional degrees) and household (parents) income. Household income in both countries included eight categories, starting from 1 "less than 1,000RMB/month" to 8 "15,000RMB/month and above" for Chinese respondents and from 1 "less than $20,000/year" to 8 "$140,000/year and above" for Americans. These measurements of incomes were appropriate for and equivalent between the two countries considering the average income and consumption levels in China and the U.S. Factor analysis confirmed that the construction of the SES factor was proper (e.g., one factor was obtained from the analysis with an eigenvalue of 1.88 explaining 62.7 % of variance).

Gender-role attitudes were represented by two variables reflecting attitudinal orientations toward male dominance and IPV as crime. The first variable, male dominance, was measured by summing four items: "Sons in a family should be encouraged more than daughters to go to college," "There are many jobs in which men should be given preference over women," "A father should have more authority than a mother when bringing up children," and "A woman should not expect to go to the same places or have the same freedom as men." Response categories for all four items ranged from strongly disagree (1) to strongly agree (4). The scale had a Cronbach's alpha of .67, suggesting acceptable internal consistency. A high value of the scale indicated greater support for male dominance. A second variable, IPV as crime, was generated from a single item asking respondents whether or not they agreed that "Intimate partner violence should be viewed as a crime" (1=strongly disagree; 4=strongly agree).

The final group, personal and vicarious experiences, consisted of three dummy variables measuring respondent's experience as a crime victim and knowledge of IPV victims and offenders. Respondents were asked: "Have you been a victim of crime?" "Do you know anyone who has been a victim of IPV?" and "Do you know anyone who has been arrested for IPV?" Positive responses to these questions were coded 1. Table 2 reports the correlation matrix and Table 3 displays the descriptive statistics for all variables used in the analysis.

Results

Mean Comparisons

To answer our first research question, we used mean comparison to assess whether Chinese and American students differ in their attitudes toward IPV. As shown in Table 3, Chinese students' group mean for the dependent variable was 51.62, whereas U.S. students' group mean was 56.13. The t-value associated with the mean comparison was statistically significant, suggesting that Chinese students were less likely to define certain behaviors as IPV compared to American students, which is consistent with our hypothesis. In addition to attitudes toward IPV, Chinese students were also significantly different from their U.S. counterparts in their background characteristics (except for age), gender-role attitudes, and personal and vicarious experiences.

Multivariate Regression

We ran OLS regression to further address second and third research questions: What factors affect college students' definitions of IPV, and are Chinese and American students' definitions of IPV affected by distinctive or similar sets of variables? Table 4 displays the results from multivariate hierarchical regression analysis. Model 1 involved only demographic variables, Model 2 included demographic and attitudes variables, and Model 3 consisted of all variables. In Model 1, two variables, country of residence and gender, were significant predictors, with Chinese less likely and female more likely to define certain behaviors as IPV than their American and male counterparts. All demographic variables accounted for 26 % of the variation in IPV definition. Both gender-role attitudinal variables were added into Model 2 and achieved statistical significance. College students who agreed with the notion of male dominance were less likely to define certain actions as abusive, whereas those who viewed IPV as crime were more inclined to perceive certain actions as domestic violence. Country of residence (Chinese) remained as a significant predictor, whereas the gender impact disappeared. All explanatory variables explained 30 % of the variation in IPV definition. The full model (Model 3) was less successful. None of the

Table 2 Correlation matrix of all variables (n=491)

Variables		1	2	3	4	5	6	7	8	9	10	11	12
Definition of abuse	1	1.00											
Chinese	2	-.49	1.00										
Female	3	.04	.11	1.00									
Age	4	.02	.08	-.01	1.00								
Racial/ethnic minority	5	.21	-.47	.04	.02	1.00							
SES	6	.12	-.26	-.08	-.17	.07	1.00						
Urban/place of origin	7	-.10	.23	.09	.08	.10	.06	1.00					
Male dominance	8	-.37	.36	-.22	-.01	-.16	-.10	.04	1.00				
IPV as crime	9	.33	-.35	.10	-.05	.17	.16	.00	-.34	1.00			
Been a crime victim	10	.12	-.13	-.02	-.01	.04	.02	-.08	-.03	.04	1.00		
Know IPV victims	11	.22	-.39	.03	.07	.20	.08	-.07	-.10	.13	.21	1.00	
Know IPV arrests	12	.19	-.40	-.03	.11	.24	.08	-.11	-.08	.17	.20	.40	1.00

Table 3 Descriptive statistics for variables in analysis

Variables	Total (n=491)			China (n=239)			USA (n=252)			
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range	*t-test*
Dependent variables										
Definition of abuse	58.55	13.78	20-80	51.62	12.49	20-78	65.13	11.56	20-80	−12.45**
Independent Variables										
Background characteristics										
Chinese	.49	.50	0-1	–	–	–	–	–	–	
Female	.67	.47	0-1	.72	.45	0-1	.62	.49	0-1	2.39*
Age	23.07	4.55	17-52	23.43	2.48	18-43	22.72	5.86	17-52	1.77
Racial/ethnic minority	.27	.45	0-1	.06	.24	0-1	.47	.50	0-1	−11.82**
SES	.06	.98	−2.90-2.24	-.21	.97	−2.90-2.06	.31	.92	−1.90-2.24	−6.07**
Urban/place of origin	.55	.49	0-1	.67	.47	0-1	.44	.50	0-1	5.11**
Gender-role attitudes										
Male dominance	7.73	2.36	4-15	8.61	2.22	4-15	6.90	2.13	4-13	9.60**
IPV as crime	3.21	.89	1-4	2.89	.89	1-4	3.52	.77	1-4	−8.32**
Personal/vicarious experiences										
Been a crime victim	.17	.37	0-1	.12	.32	0-1	.22	.41	0-1	−3.03**
Know IPV victims	.55	.50	0-1	.35	.48	0-1	.74	.44	0-1	−9.41**
Know IPV arrests	.23	.42	0-1	.06	.24	0-1	.40	.49	0-1	−9.83**

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

personal and vicarious experience variables influenced IPV definition and adding these variables into regression did not improve the explanatory power much, raising R^2 marginally from .30 to .31. Country of residence, male dominance, and IPV as crime continued to affect IPV definition.

Table 4 Multiple regression of IPV definition

Variables	Model 1		Model 2		Model 3	
	Beta	SE	Beta	SE	Beta	SE
Background characteristics						
Chinese	-.53**	1.35	-.40**	1.44	-.39**	1.56
Female	.10**	1.17	.04	1.18	.03	1.19
Age	.06	.12	.05	.12	.05	.12
Racial/ethnic minority	-.05	1.43	-.03	1.38	-.03	1.39
SES	.00	.59	-.01	.57	-.01	.57
Urban/place of origin	.01	1.19	.00	1.15	.00	1.16
Gender-role attitudes						
Male dominance	–	–	-.18**	.26	-.18**	.26
IPV as crime	–	–	.14**	.66	.14**	.66
Personal/vicarious experience						
Been crime victim	–	–	–	–	.06	1.45
Know victim of IPV	–	–	–	–	.03	1.22
Know arrest of IPV	–	–	–	–	-.03	1.45
R^2	.26**		.30**		.31**	
N	491		491		491	

*$p<.05$, **$p<.01$

Table 5 reports the results from separate multivariate regression analysis by country. Chinese and American students' perceptions of IPV were influenced by both distinctive and similar variables. Among background characteristics, for example, gender and age only affected American students' attitudes toward IPV. Although place of origin was significantly related to both Chinese and American attitudes toward abusive behavior, the effects were in opposite directions. Chinese who came from an urban area were more likely to define certain behavior as IPV, whereas Americans who grew up in a rural area were more inclined to perceive certain behaviors as violence.

Both gender-role beliefs variables were associated with perceptions of IPV among the Chinese students, but only one of them was linked to perceptions of IPV among the American students. The endorsement of male dominance negatively affected both Chinese and American recognition of IPV. In addition, the effect of viewing IPV as crime on definitions of IPV is only a Chinese phenomenon. The t-values associated with each pair of corresponding coefficients indicated that the effects of one predictor were significantly different across the two countries: age. Age was related to American students' perceptions of IPV, but is not predictive of

Table 5 Multivariate regression of IPV definition by country

Variables	China		USA		*z*-values for differences between coefficients[a]
	Beta	SE	Beta	SE	
Background characteristics					
Female	-.03	1.79	.14*	1.60	.97
Age	.01	.33	.13*	.12	2.27**
Racial/ethnic minority	.01	3.32	.01	1.55	-.27
SES	-.08	.89	-.03	.79	.64
Urban/place of origin	.15*	1.76	-.18**	1.75	−1.06
Gender-role attitudes					
Male dominance	-.22**	.39	-.18**	.36	.24
IPV as crime	.17*	.93	.09	.94	-.41
Personal/vicarious experience					
Been crime victim	.08	2.69	.01	1.73	-.54
Know victim of crime	.04	1.68	.02	1.77	-.46
Know arrest of IPV	.12	3.60	-.11	1.57	-.70
R^2	.13**		.14**		
N	239		252		

[a] Calculated based on the following equation: $z = b_1 - b_2 / \sqrt{SEb_1^2 + SEb_2^2}$

*$p<.05$, **$p<.01$

Chinese students' perceptions. The explanatory power of the independent variables was lower in the separate models, registering an R^2 of .13 and .14 for both groups, respectively.

Discussion

The study tested whether Chinese and American college students differ in their definition of IPV and whether such variations are influenced by distinctive or similar factors. Three major findings may be summarized from the results of our analysis. First, consistent with our expectation, American students tended to view a wider range of behavior as IPV, compared to their Chinese counterparts. Since the 18th century, multiple waves of women's movement in the U.S. have gradually improved gender equality in society. These movements evolved around various issues of women's property rights, voting rights, reproductive rights, equal employment and pay, and access to higher education and medical professions. Violence against women, including IPV, has also been brought out of the closet and into the public light. Research by feminist scholars and federal legislations (e.g., the Violence Against Women Act of 1994) have further improved public understanding of IPV as a social problem instead of an individual or family issue. These progresses may all contribute to enhanced public consciousness of women's rights and interests and broadened public views on domestic violent behavior.

Although China has experienced significant economic development during the past three decades, social and political development in China still lags behind the developed countries in the world. In many respects, authoritarianism and patriarchal beliefs are still visible components of Chinese culture, which by and large, may account for the more tolerant attitudes toward the subordinate roles of women in the society as well as gendered violence, including IPV.

Second, gender-role attitudes were important predictors of college students' views on IPV. As expected, students who displayed more favorable attitudes toward male dominance were more tolerant of IPV, and those who considered IPV as crime were less tolerant of such violence. It should be noted that when measures of gender-role attitudes were not included in regression analysis, gender difference predicted the perceived scope of activities that constituted IPV. Nonetheless, when measures of gender-role attitudes were included, the effect of gender disappeared, suggesting that the gender impact could be spurious or mediated by difference in gender-role attitudes. Our findings clearly indicated that public views on IPV are not stand-alone phenomena but are highly intertwined with gender-related attitudes. Future research must take relevant social attitudes into consideration when assessing people's perceptions of IPV.

Finally, Chinese and American college students' definitions of IPV were also influenced by some different factors. For example, age and gender predicted American students' attitudes toward IPV but were unrelated to Chinese students' views, whereas perceptions of IPV as crime only affected Chinese students' attitudes toward IPV. Such country variation may reflect different cultural traditions. Chinese students' greater convergence in IPV attitudes along the age and gender lines may reflect the traditional culture that emphasizes group consensus and conformity to social norms. Future studies clearly need to take into consideration country variation in assessing factors that affect attitudes toward IPV.

Before discussing policy implications, several limitations associated with this study should be noted. First, data used in this study were collected from one urban Chinese university and one urban American university. Whether findings of this study could be generalized to other types of universities (e.g., rural and private institutions) as well as the general population is unknown. More research using non-student and random samples should be conducted to further explore public views on IPV. Second, the modest explanatory power of our models suggests that some theoretically relevant variables may be missing from the analysis. For example, culture-specific factors, such as in-law conflict (Chan et al. 2010) and the way in which intimate partners get to know each other (e.g., through parents or match-makers) (Sun Lou et al., 2012) were found to be significant predictors of either perpetration of IPV or attitudes toward IPV in China. These predictors should be examined in future research.

Third, our measures of vicarious experience of IPV are primitive, which may in part account for a non-significant connection between knowing IPV victims and arrests and IPV acceptance. Future research should continue to assess this possible association by tapping into more contextual information of such experience (e.g., the duration and prevalence of being a victim and the information sources of knowing a victim or an abuser). Finally, the Cronbach's alpha for the male dominance scale is .67, which is lower than the generally accepted cut-off value of .70. Future research should continue to improve the internal consistency of the scale by testing and using more conceptually relevant items.

Our findings indicated that if the government would like to enhance public awareness of violent behavior in intimate relationships, then implementing effective policies addressing gender inequality and violence could make a difference. That is, governmental commitment and response to social inequality and discrimination could be instrumental in instilling appropriate perceptions of IPV in the public. College students, particularly Chinese students, are great targets for improving understanding of damaging behavior. They, in turn, could serve as change agents to influence the attitudes of a larger sector of the populace.

Our findings also revealed that American and Chinese college students' attitudes toward IPV were shaped by their individual background characteristics such as age and place of origin. This implies that the enhancement of public awareness of IPV could be achieved by targeting at certain groups among the college student population. Specific efforts, for example, should be made to educate younger American students who grew up in urban areas and Chinese students who grew up in rural areas, to promote more liberal definitions of IPV. Group specific programs may be designed to promote a greater awareness of violent behavior among these students.

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