Article

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### Abstract

This study investigated the prevalence and impact of childhood sexual abuse (CSA) on future intimate partner violence (IPV) in dating relationship in Hong Kong, China. A total of 1,154 Chinese adult respondents engaged in dating relationships were interviewed face-to-face about their CSA histories, childhood witnessing of parental violence, adult sexual victimization (ASV) by others and IPV victimization with their current dating partner. Self-reports also measured levels of suicidal ideation, self-esteem, and demographic details. Overall, 1.7% reported some form of CSA with a higher percentage being women. No gender differences were found in the prevalence of either ASV

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Dr. Ko Ling Chan, Department of Social Work and Social Administration, The University of Hong Kong, Pokfulam, Hong Kong Email: eklchan@hkucc.hku.hk or IPV. Results showed that CSA had an independent effect on physical IPV and suicidal ideation. The odds of IPV were increased by behavioral and psychological factors of victims such as alcohol and drug abuse, sex with partner, and low self-esteem. The odds of suicidal ideation were also increased by drug abuse, childhood witnessing of parental psychological aggression, and low self-esteem. Clinical implications of results included screening for CSA victims and suicidal victims when treating IPV patients, tailoring treatment according to individual IPV victim's problems, correcting behaviors that are associated with risks of IPV, such as engagement in casual sex and substance abuse, and focusing not only on tangible services but also on the social and psychological aspects that are placing the victims at risk for IPV.

#### **Keywords**

child sexual abuse, adult sexual victimization, dating violence, partner violence, suicidal ideation

## Introduction

Childhood sexual violence (CSA) is a traumatic life experience that creates negative and long-lasting distress both psychologically and interpersonally (Molnar, Buka, & Kessler, 2001), including depression, dissociation, posttraumatic symptomatology, anxiety, isolation, stigmatization, lower selfesteem, and higher rates of both psychological and personality disorders (Miner, Flitter, & Robinson, 2006; Ozbaran et al., 2009; Polusny & Follette, 1995). The psychological sequelae resulting from CSA also lead to many behavioral and social problems such as maladaptive sexual beliefs, inappropriate dating and high-risk sexual behavior (Steel & Herlitz, 2005; Van Bruggen, Runtz, & Kadlec, 2006), acceptance of sex-role stereotypes and poor mate selection (Messman-Moore & Long, 2000; Miner et al., 2006; Van Bruggen et al., 2006), alcohol or drug abuse (Kendler et al., 2000; Ullman, Najdowski, & Filipas, 2009), sexual dissatisfaction, and lower quality of romantic relationships (Briere & Runtz, 1990; Messman-Moore & Long, 1996, 2003; Polusny & Follette, 1995; Walker, Holman, & Busby, 2009), all of which contribute to the increased vulnerability of adult sexual victimization (ASV; Classen, Palesh, & Aggarwal, 2005 [AQ: 1]; Messman-Moore & Long, 2003).

One of the most serious outcomes of CSA is increased suicidality—including suicidal ideation, behavior, plans, threats, attempts or deliberate self-injury (Martin, Bergen, Richardson, Roeger, & Allison, 2004). CSA victims are four

times as likely to inflict self-harm such as suicide attempts or self-mutilation (Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003). Considering gender differences, CSA is strongly and independently associated with suicidality for boys, after controlling for levels of depression, hopelessness, and family dysfunction. For girls, however, the relationship between CSA and suicidality is mediated entirely by their levels of depression, hopelessness, and family dysfunction (Martin et al., 2004).

Another important outcome of CSA is a greater risk of intimate partner violence (IPV) victimization in adulthood (Arata, 2002). Informed by the concept of intergenerational transmission of victimization, victims of CSA may be more likely to view violent victimization as legitimate, placing them at greater risk for victimization as adults (Brownridge, 2006). Both physical and sexual revictimization tend to occur in the form of IPV (Banyard, Arnold, & Smith, 2000; Campbell, Greeson, Bybee, & Raja, 2008; DiLillo, Giuffre, Tremblay, & Peterson, 2001; Hattery, 2009), and this is true for both men and women (Afifi et al., 2009). Women with a history of CSA have reported their intimate relationships to involve more severe forms of violence including hitting, kicking, and beating (DiLillo et al., 2001) and are more likely than non-CSA women to return to an abusive relationship (Hattery, 2009) for internal reasons such as affective and emotional connection to the batterer (Griffing et al., 2005). In fact, in addition to IPV as adults, many CSA victims experience dating violence in their adolescence. Among CSA teenagers, almost half reported some form of physical violence in their dating relationships and 90% reported some psychological violence from their partner (Cyr, McDuff, & Wright, 2006).

Vulnerability to IPV in adulthood among CSA victims is influenced by many risk factors. To cope with the negative emotions resulting from CSA, victims typically engage in harmful tension-reduction behaviors such as substance abuse, dysfunctional sexual behavior, and self mutilation (Briere & Armstrong, 2007). These behaviors, however, create a pathway for future victimization. Substance abuse places victims at a higher risk for IPV (Cunradi, 2009); alcohol use before sex places women at a higher risk of physical violence and sexual coercion by a partner (Zablotska et al., 2009). CSA victims also engage in higher levels of dysfunctional sexual behavior with higher numbers of consensual sexual partners (Krahe, Scheinberger-Olwig, Waizenhofer, & Kolpin, 1999), which heightens their exposure and vulnerability to future IPV (Orcutt, Cooper, & Garcia, 2005). At the individual level, CSA victims generally have lower self-esteem and low self-esteem has been associated with future physical violence victimization by a partner (Papadakaki, Tzamalouka, Chatzifotiou, & Chliaoutakis, 2009).

Both CSA and IPV are fundamentally gendered and women, especially those with a CSA history, are three times more likely to experience IPV than men (Banyard, Williams, & Siegel, 2004; Barnes, Noll, Putnam, & Trickett, 2009; Hattery, 2009; Putnam, 2003). However, environmental factors are just as important. CSA women with limited economic resources are especially vulnerable to IPV in adulthood because they tend to jump into marriage at a young age with an older man for financial security and to escape from their abusive past. However, this often results in another abusive relationship with a man whom they thought would protect them from the violence (Hattery, 2009). Dysfunctional family background and exposure to parental IPV in childhood also place a CSA victim at an increased risk for IPV in adulthood (DiLillo et al., 2001; Jankowski, Leitenberg, Henning, & Coffey, 2002; Thompson, Arias, Basile, & Desai, 2002; Yoshihama & Horrocks, 2010). Possibly influenced by the way their parents use violence and aggression, CSA victims also have more difficulties in communication, intimacy, trust, and sexual functioning (DiLillo et al., 2001).

IPV and suicidal ideation have been shown prevalent among youth in dating relationship (Chan, Straus, Brownridge, Tiwari, & Leung, 2008). Recognizing the prevalence of suicidal ideation and IPV in dating relationship, as well as their correlates with CSA, can lead to the design of effective prevention and intervention strategies. Except for a small number of studies (DeKeseredy & Schwartz, 1998; Stets & Henderson, 1991; White & Koss, 1991) that used representative samples in national surveys, most studies have utilized college and university student samples (Jackson, 1999; Lewis & Fremouw, 2001; Straus, 2004b). Existing studies of the association between CSA and IPV victimization have been based mainly on studies conducted in the American population. Research based on the International Dating Violence Study (Straus, 2004b) showed that the prevalence rates of both IPV in dating relationships and suicidal ideation in Chinese societies were comparable with those obtained in Western societies (Chan et al., 2008). Few Asian studies examining the patterns of CSA and sexual IPV, as well as associated factors, have been conducted. This study is the first to investigate the relationship between CSA, IPV, and suicidal ideation using a representative population of youth engaged in dating relationships in Hong Kong, China. The purpose of the study is to test if the concepts found in Western studies are cross-culturally relevant. We hypothesized that CSA would increase the likelihood of physical and sexual IPV, as well as suicidal ideation in dating relationships, after controlling for covariates including demographics, childhood exposure to IPV, behavioral and psychological factors of victims such as substance abuse, sex with partner, and low-self-esteem.

### Method

### Sample and Sampling

We drew data from a representative population study carried out in Hong Kong in 2004. Households were randomly sampled from the Register of Quarters maintained by the Census and Statistics Department of the Government of Hong Kong using a stratified sample design. Of these, a dating data set of 1,154 respondents were successfully enumerated, representing a response rate of 71%. Eligible subjects for this study were aged 16 or above, gave their informed consent, single (i.e., not currently engaged in a marital or cohabiting relationship and without children), and were Cantonese, Putonghua, or English speakers. Subjects were interviewed face-to-face by interviewers trained to conduct household research interviews. A research unit that specializes in conducting face-to-face household surveys was responsible for employing and training about 100 interviewers. The first author provided additional training on ethical procedures for handling subjects reporting incidents of violence. Participation in the study was voluntary, informed consent was provided, and confidentiality of information was guaranteed. Once respondents were identified as having been abused, they were encouraged to seek help and were provided with the necessary information for referral. The procedures were approved by the ethics committee of the University of Hong Kong.

About 53.7% of the respondents were male and 46.3% were female. The mean age of respondents was 29 years. Respondents' level of education differed significantly in the sample. Comparisons of other demographic factors showed no gender differences. Of the sample, 2.9% were new arrivals from Mainland China and about 40% of them had an income less than US\$5,000. About 96.7% of the men and women were in a committed relationship of at least 2 years. Significantly more men had sex with their current partner. Demographic details are listed in Table 1.

### Measures

*Partner violence*. We used the Revised Conflict Tactics Scale (CTS2) to measure the prevalence of violence in terms of lifetime and the preceding year. The CTS2 covers five aspects of spousal conflict: negotiation, physical assault, psychological aggression, physical injury, and sexual violence, with both satisfactory psychometric characteristics (Straus, Hamby, BoneyMcCoy, & Sugarman, 1996) and high cross-cultural reliability (Straus, 2004a). The internal consistency of the CTS2 scales is generally high, with an alpha coefficient ranging from .79 to .95 (Straus et al., 1996). In terms of criterion validity, an

Characteristics	All (N = 1,154)	Male (n = 620)	Female ( <i>n</i> = 534)	$\chi^2/t$ test
Age (M, SD)	29.10 (11.99)	29.14 (12.20)	29.05 (11.75)	0.900
Education				0.001*
Secondary 3 or below	17.7%	21.3%	13.5%	
Secondary 4 to 7	48.6%	44.5%	53.4%	
Tertiary or above	33.7%	34.2%	33.1%	
New arrival from	2.9%	3.1%	2.6%	0.653
Mainland China				
Unemployed	10.2%	11.5%	8.8%	0.139
Income group				0.134
No income	28.2%	29.8%	26.3%	
HK\$4,999 or below	11.9%	13.0%	10.7%	
HK\$5,000 or above	59.9%	57.2%	63.0%	
Gender of partner				<0.001*
Male	44.5%	3.4%	95.2%	
Female	55.5%	96.6%	4.8%	
Had sex with	48.1%	53.3%	41.8%	0.003*
dating partner				

Table I. [AQ: 5] Demographic Characteristics of Respondents

increasing severity of tactics has been shown to correlate with increasing severity of injury (Coben, Forjuoh, & Gondolf, 1999). The CTS2 was translated into Chinese by the first author and validated using Hong Kong data (Chan, 2004). In this study, the Chinese translation of the CTS2 showed satisfactory reliability ( $\alpha$  ranging from .88 to .96).

We computed the subscales of physical assault, psychological aggression, and sexual violence within a specified time frame before the interview. Recall of such incidences was restricted to two time frames: the preceding year and the lifetime of the relationship. Respondents who reported having had any act of physical assault against their partner in the preceding year or at any point within the lifetime of their relationship were coded as having experienced intimate partner violence (IPV). We applied a similar coding approach to psychological aggression and sexual violence.

*Childhood-witnessed parental violence.* Respondents were asked if they had witnessed psychological aggression, physical assault, or injuries caused between their parents in their childhood. All items of the physical assault, psychological aggression, and injury scales of the CTS2 were listed for their reference. Respondents who reported any parental physical assault or injury

acts were coded as having witnessed parental physical violence or injury; they were also asked to list which acts they had seen. We applied a similar coding approach to psychological aggression.

*Childhood sexual abuse and adult sexual victimization (ASV) by others.* Respondents were asked two items: (a) unwanted touch: if they had ever been forced to touch someone in a sexual way or someone had touched them in a sexual way; (b) forced sex: if they had ever been forced to have anal or oral sex with someone. If a respondent reported having ever experienced one of the two items, he or she would be asked whether that incident happened in his or her childhood (age below 18) or in adulthood (age 18 or above). The victim's relationship with the perpetrator was coded as family members, relatives/ friends, or strangers.

Suicidal ideation. A self-constructed item was used to assess the dimension of suicidal ideation ("I have thought about killing myself"). This consisted of a four-response set ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). We created a binary variable (*strongly disagree*, *disagree*) versus (*agree*, *strongly agree*) to show the occurrence of suicidal ideation.

Self-esteem. We measured the self-esteem of the respondents with the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This is a 10-item Likert-type scale with items answered on a 4-point scale ranging from *strongly agree* to *strongly disagree*. The scores for the 10 items are then summed; the higher the score, the higher the respondent's self-esteem. The internal consistency reliability of the self-esteem scale in this study was 0.73.

### Statistical Analyses

The data analyses followed two stages. The first stage consisted of descriptive analyses, where we assessed the gender differences in sociodemographics and the prevalence of violence by chi-square test and *t* test. The second stage of analysis employed multiple logistic regression to assess the impact of CSA, IPV victimization, and childhood witness of parental violence and to determine their importance in understanding the increased risk of IPV and suicidal ideation. Logistic regression is the appropriate tool to assess the association of a set of independent variables on a dichotomous dependent variable. An odds ratio greater than 1.00 indicates that the independent variable is associated with an increase in the odds of the dependent variable. The reverse is true if the odds ratio is below 1.00. The Hosmer and Lemeshow test was used to assess the goodness of fit of the logistic regression analysis (Hosmer & Lemeshow, 2000). A nonsignificant result implies adequacy of the logistic model. The nominal level of significance was taken as 5%. We used SPSS version 17 for the statistical analysis.

# Results

## Prevalence

Table 2 shows the prevalence of CSA, ASV by others, and IPV. Overall, 1.7% reported some form of CSA (including unwanted touch or forced sex); a significantly higher percentage was women (3.0%) compared with men (0.6%). Comparisons revealed no gender differences in either the nature of the CSA act or the perpetrator–victim relationship. Unwanted touch (65%) was the most common for both genders. The perpetrator of CSA was most likely to be a stranger (90%) rather than someone the victim knew (15%).

No gender differences were found in either ASV by others or IPV. About 1.5% of men and women reported some form of ASV by others in which 41.2% was forced sex. About 67% of the perpetrators were strangers. Prevalence rates of sexual, physical, and psychological violence by intimate partners were all higher than ASV by others. Psychological abuse was the most prevalent form of IPV where over half of the sample reported such abuse in both lifetime (67.6%) and preceding year (53.1%), followed by physical assault (13.7% and 9.8% respectively) and sexual violence (8.6% and 4.7% respectively). Childhood witnessing of parental psychological aggression (27.5%) was more common than witnessing of parental physical violence or injury (6.0%). And lastly, women reported significantly higher suicidality (16.4%) than men (11.3%).

## Cross-tabulation

Table 3 shows the results of a cross-tabulation between IPV, CSA, and various demographic factors. Among respondents who experienced physical IPV in their lifetime, a significant portion experienced CSA (5.5%), had sex with their partner (58.9%), abused alcohol (27.5%) and drugs (12.1%), and had witnessed parental psychological aggression (39.6%) and parental physical violence or injury (12.1%). Of those who experienced IPV in the preceding year, a high concentration had also had CSA (6.2%), were of younger age, witnessed parental physical violence or injury in childhood (12.3%), and had abused drugs (10.8%). A significant percentage of victims of sexual violence by a partner in their lifetime and in the preceding year also had sex with a partner, witnessed parental physical violence or injury in childhood, abused alcohol and drugs, and had lower self-esteem. Younger age of respondents was found among victims of sexual violence in the preceding year. Among respondents who reported having suicidal ideation, a significant portion were CSA victims (5.9%), female (56.2%), alcohol (21.6%) and drug (9.8%) users, had witnessed parental IPV in childhood (12.5% and 48.1% for physical

	All	Male	Female	
	%	%	%	$\chi^2/t$ test
Childhood sexual abuse	1.7	0.6	3.0	0.002*
Perpetrator				
Relatives/friends	10	0	13	
Family members	5	0	6	
Strangers	90	100	88	
Adult sexual victimization (by others)	1.5	1.5	1.5	0.948
Perpetrator				
Relatives/friends	18	11	25	
Family members	6	11	0	
Strangers	67	78	86	
IPV sexual victimization (Lifetime—Total)	8.6	7.4	10.2	0.194
IPV Sexual Victimization (Lifetime—Severe)	2.4	2.2	2.7	0.652
IPV Sexual Victimization (Preceding year—Total)	4.7	3.6	6.1	0.118
IPV sexual victimization (Preceding year—Severe)	1.1	1.1	1.0	0.932
IPV physical victimization (Lifetime—Total)	13.7	16.0	10.8	0.05
IPV physical victimization (Lifetime-Severe)	4.4	5.2	3.4	0.26
IPV physical victimization (Preceding year—Total)	9.8	11.7	7.4	0.065
IPV physical victimization	2.6	3.3	1.7	0.2
(Preceding year—Severe)				
IPV psychological victimization (Lifetime—Total)	67.6	68.7	66.I	0.471
IPV psychological victimization (Lifetime—Severe)	57.3	57.4	57.1	0.944
IPV psychological victimization	53.I	53.6	52.5	0.767
(Preceding year—Total)				
IPV psychological victimization	45.2	44.7	45.8	0.775
(Preceding year—Severe)				
Childhood witness of parental physical	6.0	4.9	7.2	0.195
violence or injury				
Childhood witness of parental	27.5	24.8	30.8	0.075
Suicidal ideation	13.7	11.3	16.4	0.012*

#### Table 2. Prevalence of Sexual Violence and IPV Victimization

violence or injury, and for psychological aggression), and low self-esteem and all were Hong Kong citizens.

## Regression

Before regression analyses were performed, multicollinearity was checked among all independent variables to see if they are highly correlated in a multiple

Table 3. Childhood Sexual Abuse and I	Demogra	aphic Char	acteristio	cs Among I	PV Victir	nization an	d Nonvi	ctimization	Groups	
	, Lif	etime	Prece	ding-Year	, Life	etime	Preced	ling-Year		
	Preva IPV (F	lence of <sup>p</sup> hysical)	of IPV	/alence (Physical)	Prev of IPV	'alence (Sexual)	Prev of IPV	'alence (Sexual)	<u>n</u> <u>n</u>	icidal ation
Characteristics	°N N	Yes	Å	Yes	٩	Yes	Р	Yes	°Z	Yes
Childhood sexual abuse (%) Gender (%)	l.6	5.5*	1.7	6.2*	2.2	8. 1	2.2	0.0	0.8	5.9***
Female	46.2	35.2	45.8	33.8	43.7	52.6	43.8	58.1	45.3	56.2*
Male	53.8	64.8	54.2	66.2	56.3	47.4	56.2	41.9	54.7	43.8
Age (Mean)	28.5	27.6	28.8	25.1***	28.4	29.2	28.6	25.2**	29.3	27.6
Education (%)										
Secondary 3 or below	15.0	14.3	15.3	10.8	14.6	15.8	14.8	12.9	17.9	14.4
Secondary 4 to 7	47.9	50.5	47.8	52.3	48.2	49.1	47.9	54.8	49.0	49.7
Tertiary or above	37. I	35.2	36.8	36.9	37.2	35.1	37.3	32.3	33.I	35.9
New arrival from Mainland China (%)	l.9	0.0	8. I	0.0	8. 	0.0	8. I	0.0	3.2	0.0*
Unemployed (%)	8.6	0.11	8.8	9.2	9.2	10.5	9.3	9.7	10.0	14.4
Had sex with dating partner (%)	46.6	58.9*	47.2	57.8	45.8	80.4***	46.7	90.3***	47.5	52.5
Alcohol abuse (%)	16.4	27.5*	17.0	26.2	16.6	29.8*	16.4	45.2***	12.2	21.6***
Drug abuse (%)	3.3	12.1***	3.8	10.8*	3.7	12.3**	4.0	12.9*	2.7	9.8***
Childhood witness of parental	26.7	39.6*	27.7	35.4	27.6	36.8	28.0	35.5	23.5	<b>48.</b> I ***
psychological aggression (%)										
Childhood witness of parental physical	4.9	12.1**	5.2	12.3*	5.5	12.3*	5.6	16.l*	4.7	I2.5**
violence or injury (%)										
Self-esteem (M)	2.8	2.7*	2.8	2.8	2.8	2.7*	2.8	2.7*	2.8	2.7***

regression model. Variance inflation factor (VIF) measures how much the variance of a coefficient is increased because of collinearity. In this study, all VIFs were smaller than 2, which were lower than the rules of thumb for values of VIF (O'Brien, 2007). No multicollinearity problem was identified.

Table 4 displays the odds ratios between various demographic factors, IPV, and suicidal ideation. After controlling for other factors listed in Table 4, CSA remained significantly associated with suicidal ideation (aOR = 5.134; 95% CI = 1.486, 17.735) and physical IPV victimization in both lifetime (aOR = 4.719; 95% CI = 1.434, 15.531) and preceding year (aOR = 4.657; 95% CI = 1.291, 16.802) time frames, but this was not the case for sexual IPV victimization. Being female significantly increased the odds of sexual IPV victimization in preceding year and suicidal ideation but being male significantly increased the odds of physical IPV victimization in both time frames. Young age was associated with the preceding year's physical and sexual IPV victimization.

Having had a sexual relationship with their partner significantly increased the odds of sexual IPV victimization in both time frames even after controlling for other factors. Alcohol abuse only increased the odds of sexual IPV victimization in the preceding year, whereas drug abuse was associated with lifetime physical and sexual IPV victimization. Childhood witnessing of parental psychological aggression was associated with lifetime physical IPV; however, no effect is found after controlling for other variables. Similarly, witnessing of parental physical violence or injury showed increased odds on both physical and sexual IPV in both time frames but no longer showed a significant effect after controlling for other variables. Self-esteem remained significantly associated with lifetime physical IPV but no longer showed an effect on sexual IPV after controlling for other factors. The odds of suicidal ideation were increased by drug abuse, childhood witnessing of parental psychological aggression, and low self-esteem.

In summary, CSA has an independent effect on physical IPV and suicidal ideation. The odds of IPV were increased by behavioral and psychological factors of victims such as alcohol and drug abuse, sex with partner, and low self-esteem. The odds of suicidal ideation were also increased by drug abuse, childhood witnessing of parental psychological aggression, and low self-esteem. The Nagelkerke  $R^2$  suggested that the models for physical and sexual IPV victimization in both lifetime and preceding year time frames, and suicidal ideation explained 9.8% to 24.9% of the variance. The result of the Hosmer-Lemeshow (H-L) test ranged from 0.142 to 0.631, which showed that the models were adequate.

							-	)		
	Lifetime Pr IPV (Pl	evalence of hysical)	Precedi Prevalen (Phy	ng-Year ce of IPV sical)	Lifetime Pr IPV (S	evalence of exual)	Preceding-Yea of IPV (S	r Prevalence (exual)	Suicidal Ic	deation
Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)
Childhood sexual abuse	3.65* (1.195, 11.147)	4.719** (1.434, 15.531)	3.869* (1.178, 12.706)	4.657* (1.291, 16.802)	0.809 (0.104, 6.299)	0.941 (0.110, 8.028)			7.477*** (2.839, 19.69)	5.134** (1.486, 17.735)
Gender										
Female	0.632	0.571*	0.605	0.529*	I.432	1.772	1.777	2.219*	I.551*	1.720*
	(0.399,	(0.348,	(0.353,	(0.297,	(0.831,	(0.986,	(0.856, 3.69)	(1.003,	(1.1,	(1.080,
	1.002)	0.935)	1.036)	0.941)	2.468)	3.185)		4.911)	2.187)	2.740)
Male	1.000	000 <sup>.</sup> I	1.000	1.000	000 <sup>.</sup> I	1.000	000.1	1.000	000.1	000 <sup>.</sup> I
Age	0.988	0.990	0.935**	0.929**	1.009	1.000	0.938*	0.912**	0.987	0.973
	(0.962,	(0.963,	(0.896,	(0.886,	(0.981,	(0.969,	(0.883,	(0.850,	(0.971,	(0.946,
	1.015)	1.018)	0.976)	0.974)	I.038)	1.032)	0.996)	0.978)	I.003)	(100.1
Had sex with	I.644*	I.492	1.532	1.746	4.843***	4.560***	10.657***	II.624*∺	1.223	1.311
partner	(1.047,	(0.915,	(0.909,	(0.984,	(2.457,	(2.258,	(3.206,	(3.374,	(0.8,	(0.811,
	2.581)	2.433)	2.581)	3.098)	9.547)	9.209)	35.422)	40.045)	I.868)	2.117)
Alcohol abuse	I.934*	I.298	1.729	1.197	2.133*	1.452	<b>4.198</b> ***	2.875**	I.974**	0.945
	(1.161,	(0.739,	(0.956,	(0.622,	(1.163,	(0.743,	(2.006,	(1.265,	(1.283,	(0.518,
	3.223)	2.283)	3.128)	2.302)	3.914)	2.838)	8.782)	6.532)	3.037)	1.726)
Drug abuse	4.016***	2.947**	3.028*	1.996	3.691**	2.742*	3.573*	I.554	3.926***	2.864*
	(1.844,	(1.271,	(1.246,	(0.755,	(1.503,	(1.023,	(1.162,	(0.442,	(2.029,	(1.185,
	8.75)	6.836)	7.359)	5.276)	9.062)	7.345)	10.992)	5.471)	7.596)	6.924)

(continued)

Table 4. Childhood Sexual Abuse and Correlates Associated With IPV Victimization as Reported by Regression Analyses

	Lifetime Pr IPV (Pł	evalence of hysical)	Precedii Prevalenc (Phys	ng-Year ce of IPV sical)	Lifetime Pr IPV (S	evalence of exual)	Preceding-Yea of IPV (S	ır Prevalence Sexual)	Suicidal I	deation
Characteristics	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)	Crude OR (95% CI)	Adjusted OR (95% CI)
Childhood witness of	1.801* (1.138,	1.552 (0.912,	1.432 (0.835,	1.080 (0.567,	l .532 (0.869,	1.400 (0.717,	1.412 (0.663,	1.115 (0.429,	3.016*** (1.962,	2.698*** (1.636,
parental	2.85)	2.641)	2.454)	2.058)	2.701)	2.734)	3.008)	2.900)	4.636)	4.449)
psychological aggression										
Childhood	2.681**	I.505	2.576*	1.739	2.414*	1.204	3.258*	1.722	2.921**	1.00.1
witness of	(1.285,	(0.638,	(1.131,	(0.647,	(1.016,	(0.426,	(1.18, 9)	(0.455,	(1.454,	(0.432,
parental	5.596)	3.552)	5.87)	4.674)	5.735)	3.405)		6.521)	5.869)	2.320)
physical										
violence or										
Self-esteem	0.426*	0.471*	0.549	0.598	0.355*	0.500	0.271*	0.513	0.191***	0.151***
	(0.209,	(0.227,	(0.242,	(0.262,	(0.151,	(0.204,	(0.091,	(0.159,	(0.11,	(0.072,
	0.867)	0.976)	I.243)	I.363)	0.835)	1.224)	0.805)	I.652)	0.331)	0.316)
Nagelkerke R <sup>2</sup>	9.6	8%	10.4	6%	13.	8%	24.9	%6	18.3	%
Hosmer &	0.4	126	0.2	23	0.3	80	0.63	31	0.1	<del>1</del> 2
Lemeshow test										

Table 4. (continued)

Note: IPV = intimate partner violence; OR = odds ratio; CI = confidence interval. \*p < .05. \*\*p < .01. \*\*\* p < .001.

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# Discussion

### Hypotheses testing

The prevalence rate of CSA found in this study was about 1.7%, which lies between the 0.1% to 7.4% found in existing studies of CSA in Chinese societies (Chan, 2009). An overwhelming majority of the perpetrators of CSA were reported to be strangers (90%) rather than someone known to the victim (15%). Although variations in prevalence rates are always found among studies with different definitions and measures of CSA, the relatively low rate of CSA reported in this study could be attributed to the few items used to measure CSA. Moreover, the respondents may not have been willing to disclose CSA perpetrated by someone they knew due to the effect of face and shame in Chinese culture. Shame and saving face are known to be particularly strong factors among Asian individuals in deterring them from disclosing sexual victimization and seeking outside professional help (Chan, 2009). Consistent with past studies, results of this study showed a higher prevalence of CSA in women compared to men (Putnam, 2003). Overall, the most common form of CSA was unwanted touching and the most common of ASV by others was forced sex. Comparisons revealed that ASV by others and IPV were equally prevalent in Hong Kong men and women. Psychological abuse was the most prevalent form of IPV where over half of the sample had been psychologically abused by their partner. Physical abuse was the second most prevalent form of IPV, which is twice as prevalent as sexual IPV, the least common form of IPV.

Confirming our hypothesis, results showed that CSA has an independent effect on physical IPV (Barnes et al., 2009; Van Bruggen et al., 2006). However, we found no association between CSA and sexual IPV, contrary to some studies (Coid et al., 2001; Messman-Moore & Long, 1996). A possible explanation is the relatively low reported prevalence of sexual violence in this study (4.7%)compared to physical (9.8%) and psychological abuse (53.1%). Demographic factors such as gender and age also influenced the risk of IPV. Males seemed to have a higher chance of experiencing physical violence in a dating relationship, which is contrary to some studies (Banyard et al., 2004; Hattery, 2009) but is consistent with some other studies (Straus, 2004b). However, measures employed in this study do not include items measuring the context of violence. It cannot discriminate intent and effect, and thus results in equating a woman pushing a man in self-defense to a man pushing a woman down the stairs (Kimmel, 2002). Interpretation of findings related to the prevalence of physical violence against men has to be carefully made. Consistent with the same studies, women were at particular higher risk for sexual IPV victimization in the preceding year of the study. Younger age was associated with IPV in the preceding year, parallel to a Canadian survey that also found a steady decrease in IPV risk with increasing age (Romans, Forte, Cohen, Du Mont, & Hyman, 2007).

Parallel to other studies, behavioral factors such as substance abuse and sexual behavior also showed an independent effect on IPV (Roozen, Blaauw, & Meyers, 2009). Sexual intercourse with the partner led to higher risks of sexual IPV victimization. This is consistent with extant research on sexual violence in Chinese societies, which shows that students who were subjected to CSA reported higher levels of depression; lower levels of self-evaluated health; higher levels of drinking alcohol, smoking, and engaging in sexual intercourse; suicidal thinking and planning of suicide (Chan, 2009). Alcohol abuse placed victims at a higher risk for recent sexual IPV victimization but drug abuse was associated with both sexual and physical IPV in one's lifetime. However, it is important to note that these factors are highly linked with CSA in the first place. They can be categorized as the aforementioned tension-reduction behaviors (TRBs) that mediate the relation between CSA and prospective IPV. Low self-esteem is associated with the increased odds of physical IPV. Similarly, low self-esteem is also an established outcome of CSA (Messman-Moore & Long, 1996).

Childhood family background is an important mediator in the relationship between CSA and IPV in adulthood (DiLillo et al., 2001; Yoshihama & Horrocks, 2010). However, a negative family environment is likely to have preceded incidents of CSA; therefore, it was very important to control for childhood exposure to IPV to properly assess the relationship between IPV and other demographic factors (Tromovitch & Rind, 2007). In this study, childhood exposure to physical aggression or violence between parents increased the risks for both physical and sexual IPV, which is consistent with other studies (Jankowski et al., 2002; Thompson et al., 2002). However, the significant effects do not persist after controlling for all other factors.

Suicidality is a serious matter and, confirming our hypothesis, results showed that CSA posed an increased risk for suicidal ideation (Martin et al., 2004). Women were also particularly at risk for suicidal ideation. Other risk factors were drug abuse, childhood witnessing of parental psychological aggression, and a low self-esteem. The association between CSA and suicidality could be understood by mediating factors including depression, dissociation, posttraumatic symptomatology, anxiety, isolation, stigmatization, low self-esteem, and psychological and personality disorders (Miner, Flitter, & Robinson, 2006; Ozbaran et al., 2009; Polusny & Follette, 1995), which are possible consequences of CSA. These psychological problems can further lead to various behavioral problems including suicidal behaviors (Filipas & Ullman, 2006; Plunkett et al., 2001).

## Limitations

As hypothesized, while CSA has a significant impact on IPV in adulthood, many other variables also affect the impact of CSA. However, this study does have certain limitations. First, despite confirmation of the significant association between CSA, IPV and suicidality, a cross-sectional comparison cannot draw any causal relationships between IPV and suicidality. In an absence of a temporal dimension, it is unknown whether suicidality precedes IPV or is sequelae of IPV. Second, CSA was only defined by a few items in the interview-unwanted touch and forced sex. It did not include other forms of sexual abuse like vaginal sex. This lack of a detailed assessment could result in underreporting and, thus, a biased prevalence rate. Third, in this study, the measure of suicidal ideation relied on one self-constructed item. This item does not differentiate if subject was having a history of suicidal ideation or an acute suicidal ideation. Nevertheless, the strength of this study is the representative sample of adults in dating relationships and the confirmation of the increased risk of IPV by CSA and the risk factors entailed. While most studies of dating partner violence have utilized college and university student samples, this study provided a representative sample of youth in dating relationships with both male and female self-reports that provided both a gender comparison and an examination of CSA and IPV prevalence in the Hong Kong Chinese dating relationships.

## Implications

Victims of IPV frequently suffer from multiple forms of abuse by their partner—physical, sexual, psychological, and those with CSA histories are particularly more likely to suffer additionally from combinations of negative life factors such as substance abuse, low self-esteem, and suicidal ideation. IPV victims with a history of CSA are clinically different than those without (Griffing et al., 2005), with accumulated traumatization from typically multiple episodes of CSA, they possess a different mindset that makes it more difficult to leave their abusive partner. Therefore it is very important to screen for CSA victims and assess their CSA histories when treating IPV patients. Second, treatment should be tailored to individual IPV victims as they each have their own reasons for staying with the abusive partner and their own concerns about leaving the abusive partner (Alexander, Tracy, Radek, & Koverola, 2009). Third, CSA victims are more likely to abuse alcohol or drugs and engage in higher levels of sexual activities; moreover, results of many studies, including this one, showed that substance abuse and sexual behavior with a dating partner significantly increased the risk of both physical and sexual violence. Therefore, to prevent future IPV among CSA victims, it is important to change behaviors that are associated with risks of IPV, such as engagement in sex with poorly known partners (Orcutt et al., 2005), problematic use of alcohol and drugs that potentially impair victims' decision making and risk detection. Finally, intervention for CSA-IPV patients should focus not only on tangible services such as providing shelter and financial assistance, but also on the social and psychological aspects that are working to put the patients at risk for IPV, such as suicide prevention, better social support, cognitive therapy in understanding the attachment to the batterer, rebuilding a positive self-esteem and outlook on life.

This study not only provided preliminary findings concerning the effect of CSA on future IPV and suicidality in the Chinese population but also has identified specific risk factors associated with the vulnerability to IPV among Chinese men and women. From the experiences of early CSA and current IPV, CSA-IPV victims are buried under layers of trauma, self-blame, and denial that inhibit them to escape violence. This study provides important clinical implications to help CSA-IPV victims to break out of the revictimization cycle and regain a safe and happy life.

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