Partner Violence and Major Depression in Women: A Community Study of Chinese Americans

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Abstract: This cross-sectional, retrospective study used epidemiological and anthropological methods toward two aims: 1) to examine associations between partner violence and major depression in a community probability sample of women and 2) to provide new data on partner violence in Chinese Americans. In this study, 181 Chinese American women were interviewed, with 178 completing structured sections on CIDI 2.1 major depression and on partner violence history. Results indicate that a history of partner violence is associated with significantly higher rates of lifetime, 12-month, and current major depression in this community population. This effect is specific and independent of other factors. Partner violence also has a dose-response relationship with the severity of major depression episodes, increasing risk for severe and moderate episodes. The strength and specificity of this association, its dose-response effect, and its commonality across different populations suggest a possible causal role for partner violence needing further investigation in research on major depression in women.

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Partner violence has been associated with depression in women of diverse ethnicities and nations (Department of Social Medicine, 1995; Giles-Sims, 1998; Stark and Flitcraft, 1996; Straus and Gelles, 1990). In clinical and self-selected populations, partner violence has been associated with major depression and attempted suicide (Gayford, 1975; Gleason, 1993; Golding, 1999; Stark and Flitcraft, 1996). Large community studies found that severe partner assault increased rates of depressed mood by four times and rates of attempted suicide by five (Straus and Gelles, 1990) and that physical assault by partners was associated with higher depression scores in victims (Mullen et al., 1988; Ratner, 1993; Zlotnick et al., 1998). Ethnographic studies in the Americas (Jenkins, 1991) and Oceania (Counts, 1987; Counts 1990a, 1990b) link wife beating to depressed mood, suicide, and culture-specific mental illness. Regarding ethnic Chinese, being beaten by a spouse was the third most common reason given for attempted suicide by young rural women in China, a group known to have particularly high rates of completed suicide (Pearson et al., 2002). Hong Kong studies have found higher depression scores in abused women living at a shelter (Tang, 1998) and at postnatal follow-up (Leung et al. 2002).

A limitation of research published to date has been that community, probability-sampled studies have used depression scales and self-selected or clinical sample studies have used diagnostic measures with the result that there has been a paucity of literature on the relationship between partner violence and major depression in community populations. This is important because we do not treat depression scores. But we do treat individuals with the illness of major depression, considered the leading cause of disease burden in women worldwide (Murray and Lopez, 1996). In epidemiological studies of depression, scales are economical. However, score "case" thresholds are not validated in most ethnic groups and do not distinguish distress or demoralization from depression of significant duration and clinical impact (Murphy, 1995). To examine the role of partner violence in the etiology and epidemiology of major depression, studies need to use the diagnostic category of major depression, as well as sensitive measures of partner violence.

Other than the study we describe in this paper, there are few published studies that examine partner violence and major depression in probability-sampled community populations. Andrews and Brown (1988) used the Present State Examination to survey working-class women with children who were registered with London GPs. Among 286 women, those who had ever been in a violent relationship were twice as likely to experience a depressive disorder during the three-year study. Partner violence in 21-year-old New Zealand women was associated with increased rates of mood disorders (Danielson et al., 1998). Unfortunately, the authors did not distinguish among the

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mood disorders of major depression, mania, and dysthymia. In the Women Physicians' Health Study, those with partner violence had higher rates of self-diagnosed depression and suicide attempts (Frank and Dingle, 1999).

In this paper, we describe the main quantitative results of a study that was designed with two primary aims. The first was to examine relationships between partner violence and diagnostic cases of major depression in a community, probability sample of women—in this case, Chinese American women. The second aim was to provide preliminary data on the community prevalence, help seeking, and experience of partner violence in Chinese Americans, which was previously unknown (Yoshioka and Dang, 2000). Partner violence was examined in this study on major depression as a specific life event to crystallize attention on a factor often obscured within general life event categories such as marital conflict, interpersonal problems, and family conflict. Identifying partner violence provides finer detail of interpersonal relationships and their relevance to women's major depression. In addition, its practical effect is to expand our conceptual framework of interventions. If partner violence is recognized as a specific factor in major depression, then new possibilities for prevention and treatment unfold in terms of public health strategies, legal interventions, and service provision.

METHODS

Sample Size Calculation

To detect at least a doubled rate of lifetime major depression in women exposed to partner violence and based on a 25% prevalence of lifetime partner violence in community surveys of white women (Straus and Gelles, 1988), it was estimated that at least 160 subjects were needed for $\alpha = 0.05$ (two-tailed) and $\beta = 0.20$.

Procedure

The Harvard Medical School Ethics Committee gave ethical approval to this study. A project advisory board of community members knowledgeable in partner violence and mental illness in Boston's ethnic Chinese was established. Advisors were key informants, commented on interview content and translation, facilitated pilot interview contacts, and were pilot interview subjects. Research team members were Chinese American women fluent in English and Cantonese or Mandarin. They originated from Hong Kong, China, Taiwan, and the United States to represent major Chinese American subgroups regarding language, sociocultural perspective, questionnaire translation, and content validity. They were trained in administering the Composite International Diagnostic Interview (CIDI) according to the CIDI protocol. Further details on team training and instrument translation are provided elsewhere (Hicks, 2002).

Sampling and Recruitment

The Boston Census was used to compile the sampling frame to avoid the systematic bias of telephone listings against immigrants, minorities, and the poor (Straus and Gelles, 1990) and for a complete listing of households. Boston's neighborhoods range from impoverished to wealthy and include Chinatown and student dormitories. Because the census did not identify ethnicity, households with a first or last Chinese-sounding name were identified according to Choi et al. (1993) and the research team. We listed 11,117 households with possible Chinese inhabitants. Each household formed a sampling unit. Selected using computer-generated simple random numbers, 1,848 households were screened for eligibility. A household was defined as eligible if at least 1 current resident met inclusion criteria: female, Chinese American (defined as ethnic Chinese residing in the United States); age 18–65; and able to speak English, Cantonese, or Mandarin Chinese.

Prior to the initial screening contact, households were sent a flyer in English and Chinese with the heading "The Health and Family Life of Chinese American Women" that introduced the study in terms of general health. Households were contacted for eligibility screening by up to 3 home visits or 15 telephone calls. We randomly selected one subject from each eligible household (Kish, 1949). We then tried to contact the subject directly for recruitment. Partner violence and depression were not mentioned at screening or at recruitment to maintain confidentiality, protect women, and decrease selection bias regarding outcomes of interest.

The Interviews

Interviews took place between June 1996 and August 1997. Interviews were done with written, informed consent, in private, at the time and place of the participant's choice, and face-to-face whenever possible. Data were recorded in coded and text form. Observational, ethnographic field notes and quotes were hand recorded by M.H.H. Research workers did not interview subjects within their social circle because previous ethnography by M.H.H. suggested that concern about gossip resulted in underreporting stigmatizing events and that disclosure was increased by using ethnic-matched interviewers distant from the subject's social contacts.

The study used two phases of interviews that connected epidemiological and anthropological methodologies and data. Phase 1 was a structured interview administered to all subjects that gathered a large body of coded data with supplementary text and field notes. Sections of the Phase 1 interview were administered in the following order, usually taking 2 hours: demographics; general health status; health services utilization; the World Health Organization Brief Disability Questionnaire; the Center for Epidemiological Studies Depression Scale (Radloff, 1977; Ying, 1988); life events; social support (Sherbourne and Stewart, 1991); sections of the CIDI 2.1 for DSM IV diagnoses of generalized anxiety disorder,

major depression, dysthymia, PTSD, and substance abuse (World Health Organization, 1997); the University of Michigan CIDI neurasthenia section (Zheng et al., 1997); opinions about culture, family roles, and partner violence; and personal experiences with partner violence. The CIDI is a standardized diagnostic instrument for administration by laypersons, generally considered a reliable, acceptable tool for international epidemiological studies (Wittchen et al., 1991).

After Phase 1, the interview ended for participants screened negative for partner violence. Women who screened positive for partner violence in Phase 1 were then asked to do the semistructured Phase 2 interview. This systematically explored their experience of partner violence in depth using a series of written, open-ended questions. In-depth formats improve reporting sensitivity and validity for bizarre or humiliating events (Straus and Gelles, 1990) and allow flexible exploration of topics. Phase 2 questions evoked narratives of experience with partner violence, help seeking, and sociocultural context. These qualitative data will be presented in papers to come. Data were hand recorded in narrative and coded form. Based on data from Phases 1 and 2, women were categorized as having experienced partner violence according to the definition below.

Definition of Partner Violence

There is extensive discussion of such terms as domestic violence, wife battering, and wife abuse, which will not be explored here. For the purposes of this study, partner violence was chosen to include violence by husbands and partners living together or apart. This study's partner violence criteria incorporated the 9 of 19 Conflict Tactics Scale (CTS) items used by Straus (1990) to define Any Violence, Minor Violence, and Severe Violence. Conflict Tactics Scale Minor Violence includes being pushed, grabbed, shoved, slapped, the target of a thrown object, and no acts of severe violence. Severe Violence on the CTS includes being kicked, bitten, punched, beaten, choked, hit with an object, attempts to hit with an object, threats with a knife or gun, and use of a knife or gun. Because CTS criteria overlook some injurious acts (DeKeseredy, 1995) and threats to harm were considered in the experiential realm of violence, this study also included in Minor Violence threats with an object other than a knife or gun, threats to physically harm something important to her, and violence to objects around her to threaten her. Added to Severe Violence were sexual assault, threats to kill or physically harm her, and threats to kill or physically harm someone close to her. The presence or absence of experiences meeting these criteria for partner violence was based on items embedded within the personal experiences with partner violence section of the Phase 1 interview and on narratives from the in-depth, Phase 2 interview.

Statistical Analyses

Intercooled Stata 5.0 software was used. Significance tests were two-tailed and confidence intervals 95%. Potentially confounding variables were prospectively included in the interview to facilitate statistical analysis of the independent contribution of partner violence to the outcome of major depression. Univariate regression analysis was done for associations between major depression and other variables, weighted for probability of selection from eligible household members. Variables that had hypothetical potential significance or had $p < 0.07$ in univariate regression were included in multivariate analysis using stepwise multivariate logistic regression and χ^2 likelihood-ratio testing for goodness of fit. The following variables were initially included in the multivariate regression, with some then being removed using a stepwise procedure: history of partner violence; history of nonpartner trauma;[3] education; preferred language; ethnic identity acculturation;[4] native versus immigrant; self-rated English fluency (none, poor conversational, moderate conversational, or fluent); and age category.

RESULTS

Sample Characteristics

Three hundred and twenty-three of 1,848 households were eligible for inclusion. Of 323 randomly selected women, 181 were interviewed, giving a response rate of 56%. Eighteen percent of selected women refused. Twenty-six percent did not refuse but an interview was not done, in many cases because we could not gain access to her for recruitment or a relative refused for her. Nonparticipants did not differ in age or education. No women refused after learning during informed consent that violence and psychological health were topics.

One hundred and forty-seven interviews were face to face and 34 were conducted by telephone. M.H.H., who is partially fluent in Mandarin Chinese, completed all English interviews and participated in all Chinese interviews with translation, except for 18 by telephone. This was to maximize observational ethnographic data and to ensure CIDI protocol adherence across interviewers. One hundred and seventy-eight subjects completed the CIDI. Language of interview was English (39%), Cantonese (39%), and Mandarin (22%). Mean age was 34 years (SD = 12). Highest education was less than high school (20%), high school (16%), and over high school (64%). Marital status was never married (36%), married (54%), divorced or separated (7%), and widowed

[3]Nonpartner trauma describes trauma events identified by the posttraumatic stress disorder section of the CIDI. No women in this study reported partner violence trauma in response to the CIDI PTSD items. Hence these events represented sources of trauma *other* than partners.

[4]Ethnic identity acculturation describes whether the respondent's self-designated ethnic identity was categorized as 'more acculturated' to American culture (*e.g.* Asian American) or 'less acculturated' to American culture (*e.g.* Han Chinese). This very rough descriptor of acculturative identity serves the purpose of this paper, with a more thorough, qualitative analysis to follow in a later paper based on women's narratives.

TABLE 1. History of Partner Violence Associated with Prevalence and Severity of Major Depression in 178 Chinese American Women

Variable	*N*	Overall Prevalence[a] % (95% CI)	% (*N*) with partner violence having the variable Total *N* = 26	% (N) without partner violence having the variable Total N = 152	Odds Ratio	95% CI	χ^2	df	*p*
Prevalence of Major Depression									
Lifetime Major Depression[b]	37	19 (14–25)	58 (15)	15 (22)	15.8	5.0–49.9	27.4	3	<0.0001
12-month Major Depression[c]	13	7 (4–12)	19 (5)	5 (8)	4.3	1.3–13.8	6.4	1	0.01
Current Major Depression[c]	4	2 (1–6)	8 (2)	1 (2)	6.3	1.1–37.2	4.1	1	0.04
Severity of Lifetime Major Depression[b,d]							29.3	5	<0.0001
No Major Depression	141		42 (11)	85 (130)	1				
Mild Major Depression	7		4 (1)	4 (6)	3.6	0.4–4.2			0.26
Moderate Major Depression	7		12 (3)	3 (4)	14.8	2.5–86.5			0.003
Severe Major Depression	23		42 (11)	8 (12)	19.9	5.8–68.8			<0.001

[a]Weighted for probability of selection among eligible household members.
[b]Multivariate regression weighted for probability of selection in household and adjusted for education.
[c]Crude odds ratios
[d]According to CIDI 2.1 criteria for severity of worst major depression episode in lifetime.

(3%). Employment was working (53%), student (30%), homemaker (14%), and other (3%). Mean reported household income was $49,196 (range $0 to $468,000). Twenty-one percent were U.S. natives and 79% were immigrants.

Associations Between Partner Violence and Major Depression Prevalence and Severity

The unweighted lifetime prevalence of partner violence was 14% (95% CI = 10–20%, N = 26). The crude relative risk for having major depression in the lifetime was 4.0 times higher in women with a history of partner violence (95% CI 2.4–6.6, $\chi^2 = 25.2$, $df = 1$, $p < 0.0001$). Analysis using the original CTS criteria for partner violence described above (Straus, 1990) did not affect the strength of association. Table 1 shows prevalence rates of lifetime, 12-month, and current major depression, along with their associations with partner violence. Partner violence was associated with greater risk for moderate and severe major depression.

The Dose-Response Relationship

A dose-response relationship was present between partner violence and major depression severity. Severity of the worst lifetime major depression episode was associated with severity of lifetime partner violence ($\chi^2 = 27.2$, $df = 6$, $p = 0.0001$), increased with the number of threats (bivariate regression coefficient = 0.006, $F = 17.2$, $df = 1,174$, $p = 0.0001$) and increased with the number of physical partner violence events (bivariate regression coefficient = 0.06, $F = 12.9$, $df = 1,176$, $p = 0.0004$). Table 2 illustrates the dose-response effect in which women with minor partner violence had rates most increased for moderate major depression and women with severe partner violence for severe major depression.

Univariate Regression Analysis

Univariate regression analysis found associations of lifetime major depression with education ($\chi^2 = 7.7$, $df = 2$, $p = 0.02$), with more acculturated ethnic identity (odds ratio = 2.9, 95% CI = 1.3–6.7, $\chi^2 = 6.2$, $df = 1$, $p = 0.01$), and with preferring to be interviewed in English or Mandarin ($\chi^2 = 6.5$, $df = 2$, $p = 0.04$). Lifetime major depression was not associated with these factors: age, age category, employment, marital status, arranged marriage, personal income, household income, country of birth, native versus immigrant, number of years immigrants lived in the United States, English fluency, religion, current social support, or self-rated general health.

Lifetime major depression was associated with experiencing any CIDI PTSD trauma (odds ratio = 2.6, 95% CI = 1.1–6.0, $\chi^2 = 5.2$, $df = 1$, $p = 0.02$), including childhood sexual trauma (odds ratio = 4.0, 95% CI = 1.1–14.5, $\chi^2 = 4.4$, $df = 1$, $p = 0.04$). No partner violence events were identified by the CIDI PTSD section, despite items for serious physical attack or assault and rape. All partner violence, including such events, was reported later in response to specific questions on partner violence.

TABLE 2. Dose-Response Effect of Partner Violence: Relative Risk Ratios for Major Depression Severity in 178 Women Exposed to Differing Severities of Partner Violence[a]

Major Depression Severity	No Violence	Minor Violence				Severe Violence			
	N = 152	*N* = 11	RRR	95% CI	*p*	*N* = 15	RRR	95% CI	*p*
None	130	5	1			6	1		
Mild	6	1	4.3	0.4 to 43.1	0.21	0			1.0
Moderate	4	2	13.0	1.9 to 88.5	0.009	1	5.4	0.5 to 56.2	0.16
Severe	12	3	6.5	1.4 to 30.6	0.018	8	14.4	4.3 to 48.6	<0.001

[a]Unweighted relative risk ratios from logistic regression analysis. Figures are number of cases.

Lifetime major depression was not associated with these lifetime events: serious injury, serious illness, forced separation from children, self or family endangered by political or social unrest, severe financial problems, or insufficient food for self or family. Lifetime major depression was not associated with these events before age 18: physical harm by a family member, witnessing partner violence, forced separation from a parent, or death of a parent. Statistical power of trends for some events was limited by low event prevalence.

Specificity of Partner Violence Among Partner Relationship Characteristics

We found that partner violence had a pattern of association with lifetime major depression that was distinct from other partner relationship characteristics. Table 3 shows the consistent strong association of specific aspects of partner violence with major depression. In contrast, univariate regression analysis showed no association between major depression and these relationship factors: having a partner with a gambling problem, having a partner with an alcohol problem, satisfaction with their relationship, decision-making power, feeling valued and respected by her partner, being able to talk about most concerns and worries, and being able to compromise when they disagree.

Multivariate Regression Analysis

Independent contributions to the outcome of lifetime major depression were analyzed using multivariate regression as described in the Methods. This was completed for 176 women who provided data on all analyzed variables. Table 4 shows the final model in which partner violence and higher education are independently associated with lifetime major depression. No significant effect was found for nonpartner trauma, preferred language, ethnic identity acculturation, native versus immigrant, English fluency, or age category.

DISCUSSION

In epidemiology, six criteria suggest a causal relationship among variables: 1) strength of association, 2) specificity of association, 3) dose-response relationship, 4) time sequence, 5) consistency of association on replication, and 6) coherence of explanation of the association (Goldstein and Simpson, 1995; Hennekens and Buring, 1987). This study provides evidence for criteria 1–3. We found that partner violence was strongly associated with substantially higher rates of major depression, consistent with findings of its strong association with increased depression scores in clinical and community populations (Mullen et al., 1988; Patel et al., 2002; Straus and Gelles, 1990; Zlotnick et al., 1998) and with increased rates of diagnosed depression in the United States (Frank and Dingle, 1999) and in England (Andrews and Brown, 1988). We found this effect to be distinct from that of other partner relationship, trauma, demographic, and life event factors. In particular, our study provides new information on the dose-response relationship between partner violence and major de-

TABLE 3. Association of Lifetime Occurrence of Partner Violence Variables with the Outcome of Lifetime Major Depression in 178 Chinese American Women[a]

Variable	Odds Ratio	95% CI	χ^2(df = 1)	*p*
Felt fear	16.5	4.6–59.4	18.4	<0.0001
Threats	10.2	3.6–28.8	19.1	<0.0001
Threats to harm her or someone close to her	6.2	1.5–24.7	6.7	0.01
Threats to kill her or someone close to her (*N* = 3)	9.4	0.8–108.2	3.2	0.07
Physical violence	10.8	4.1–28.5	22.8	<0.0001

[a]Univariate logistic regression weighted for probability of sampling in the household.

TABLE 4. Final Model of Variables Independently Associated with Lifetime Major Depression in 176 Chinese American Women[a]

Variable	Odds Ratio	95% CI	χ^2(df)	*p*
History of Partner Violence[b]	15.9	5.2–48.7	26.6 (df = 1)	<0.0001
Education[b]			12.5 (df = 2)	0.002
<High School	1			
High School	5.6	0.5–70.8		0.17
>High School	15.2	1.3–172.1		0.03

[a]Multivariate logistic regression weighted for probability of sampling in the household.
[b]From χ^2 likelihood-ratio testing in multivariate logistic regression. Adjusted for the effect of the other variable.

pression in women, with increased risk that major depression episodes will be moderate or severe. This has not been explored in other studies of major depression.

Regarding the question of time sequence (criterion 4), National Comorbidity Survey data show that having a previous history of major depression does not predict women becoming victims of partner violence in their current relationship (Kessler et al., 2001), correlating with the finding of a prospective study that high depression scores in adolescence do not predict having violent partners in adulthood (Andrews et al., 2000). These studies provide evidence to contradict the hypothesis that depressed women are predisposed to violent relationships and indirectly support the hypothesis that partner violence is a risk factor predisposing women to major depression. Our study replicates the consistent finding of earlier studies described above and reviewed elsewhere (Campbell et al., 1997; Golding, 1999) that partner violence is associated with major depression in women (criterion 5), an association explained coherently in a large, diverse body of literature addressing partner violence in multiple ethnic groups (criterion 6; Department of Social Medicine, 1995; Giles-Sims, 1998; Stark and Flitcraft, 1996; Straus and Gelles, 1990). The consistency of the association between partner violence and depression in multiple populations suggests that our finding of an association between partner violence and major depression in the community may be found in many other groups of women. This needs to be tested in further studies. The strength of the association and its modification by demographic, social, cultural, legal, and historical factors would vary between populations.

Limitations

This sample was small. Therefore prevalence findings, in particular, are exploratory. Lifetime major depression prevalence in this sample was comparable to that of White American women (Blazer et al., 1994; Weissman and Myers, 1978) but higher than in a study of Los Angeles Chinese Americans (Takeuchi et al., 1998). It is unclear whether Los Angeles interviewers were gender matched or whether the fact that they lived near their subjects could have affected reporting. Prevalence differences between the two Chinese American studies could also arise from sociodemographic, migration, and life event differences.

Although the high nonresponse rate could have affected prevalence, nonrespondents to epidemiological surveys have higher rates of lifetime and current psychiatric disorder (Blazer et al., 1994). This, in addition to cultural concerns about stigma and privacy, suggests that our prevalence rates are probably underestimates. Partner violence would be further underestimated because some women were refused for by family members. Enforced social isolation is a component of wife abuse, and isolated women are more often depressed (Stark and Flitcraft, 1996) so nonparticipation by this group would artificially weaken the association between partner violence and depression. An analysis of the validity of the CIDI in diagnosing major depression in this sample suggested that the CIDI may under-recognize major depression episodes if they occur in China or in deprived environments within developed countries (Hicks, 2002). However, there was no evidence or theoretical basis to suggest that this tendency affected the association we found between major depression and partner violence, which was consistent for lifetime, 12-month, and current major depression.

We attempted to decrease recall bias by having partner violence items much later in the structured interview than depression items. But other sources of recall bias may have affected outcomes. Finally, the numerous variables analyzed in this paper (for example, other life events), were prospectively included in the study to account for confounding in the analysis of the association between partner violence and major depression, as well as to provide basic descriptive data. They were not analyzed in hopes of finding associations with major depression, as that method can produce spurious findings. Our finding of higher education associated with major depression is somewhat puzzling. It is not apparent whether this is a spurious association, a true risk factor, a particularity of the demographics and experience of this Chinese Ameri-

can subpopulation, or the result of a reporting bias associated with education. The Los Angeles Chinese American study differed in finding no association of major depression with gender or with education but found associations with marital status and acculturation (Takeuchi et al., 1998).

Partner Violence: An Overlooked Life Event in Depression Research

Violence and trauma as negative life events have frequently been associated with major depression (Brown et al., 1975; Kendler et al., 1995; Takeuchi et al., 1998) but the social relevance of these measures is often unclear. Studies that ask about violence in terms of assault, hitting others, or being hit but not about the relationship between victim and perpetrator limit meaningful interpretation regarding the event's nature, duration of risk, and its place in the victim's social and psychological world. General violence questions may have low sensitivity for partner violence, as suggested by our finding that the PTSD item serious attack or assault did not identify women who later reported severe physical partner violence.

Life event categories such as marital problems, marital disruption, ability to confide in, household difficulties, negative interactions, and problems getting along (Aseltine and Kessler, 1993; Brown and Harris, 1978; Kendler et al., 2001; Zlotnick et al. 2000) might underidentify or dilute a specific depressogenic effect of partner violence. The role of partner violence in the epidemiology and etiology of women's depression is also underestimated by studies that ask only about recent partner violence events and these only in married or cohabiting women. Findings from our study and others (Andrews and Brown, 1988; Campbell et al., 1995) suggest there may be a long-term effect of partner violence on later major depression, which would be missed by studies asking only about recent violence.

How Important Is the Effect of Partner Violence on Major Depression in Women?

An association between partner violence and major depression can be considered important in public health terms if partner violence is relatively common or if it substantially increases rates of major depression. We found a substantial effect in that the odds of having major depression in the lifetime were 15 times greater in women who had experienced partner violence than in women who had not, after controlling for sampling and the effect of education. This finding is consistent with other community studies which find significantly higher numbers of depressive symptoms and suicide attempts in women who experience violence (Mullen et al., 1988; Ratner, 1993; Straus and Gelles, 1990; Zlotnick et al., 1998).

In addition, partner violence is a fairly common event. In this study, 14% of Chinese American women reported partner violence. 12–30% of White North American women experience partner violence (Stark and Flitcraft, 1991; Statistics Canada, 1993; Straus and Gelles, 1980), rates roughly comparable to those in African (Cazenave and Straus, 1990) and Hispanic Americans (Straus and Smith, 1990). Internationally, 10–69% of women in developing and industrialized nations have been assaulted by a partner (World Health Organization, 2002). We therefore suggest that partner violence is an important, common, and specific risk factor for major depression in women. The incorporation of partner violence variables in research on major depression is critical to delineate its role in depression's etiology and course. By doing so, prevention and intervention strategies used for violence, such as those described recently by the World Health Organization (2002), may become evident tools for addressing major depression, an illness causing high morbidity, burden, and mortality.

CONCLUSIONS

Partner violence was strongly and specifically associated with increased rates and severity of major depression in Chinese American women, with a dose-response effect. This study expands previous data on partner violence and depression by showing partner violence to be associated with major depression in a community probability sample of women.

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