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Intimate Partner Violence in China:

Risk Factors and Health Consequences in a National Population-Based Survey

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Words in text (excluding references, abstract, title, tables): 3,000;
4,000 w/ references and abstract

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Contributors

William L. Parish developed the study, analyzed the data, and developed later drafts of the paper. Tianfu Wang analyzed the data and prepared multiple drafts of the paper. Edward O. Laumann reviewed the analysis and multiple drafts of the paper. Suiming Pan collected the data and reviewed drafts of the paper.

Acknowledgements

Primary support was provided by the National Institute of Child Health and Human Development grant #RO1 HD34157 to Dr. Parish. Additional support was provided by the University of Chicago/NICHD Population Research Center (P30 HD18288) and University of N. Carolina/NIH Fogarty Center (P30 AI50410).

Human Participant Protection

The study was approved by the University of Chicago, Social Sciences IRB and a single assurance Review Board at Renmin University.

Intimate Partner Hitting in China:

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Abstract

Objectives. This study estimated the national prevalence of, identified risk factors for, and explored the health sequelae of intimate partner hitting in China, including both directionality and severity of hitting.

Methods. The study included 1,665 women and 1,658 men who had a steady partner from a nationally representative sample of the adult population of China between ages 20 and 64. Binomial and multinomial logistic regression analyses, adjusted for sample design, assessed risk factors.

Results. Irrespective of severity, 34.0% (95% CI=28.1, 40.4) of women and 18.2% (95% CI=13.8, 23.8) of men were hit during the lifetime of their current relationship. Severe hitting was 12.4% (95% CI=9.6, 15.8) for women and 4.9% (95% CI=2.7, 11.5) for men. Significant risk factors for partner hitting included sexual jealousy, alcohol consumption, low male socioeconomic status, and regions other than the coastal provinces. Severe hitting was a significant risk factor for adverse health outcomes for both men and women.

Conclusions. Much as in other societies, intimate partner hitting is common in China, and it is correlated with adverse health outcomes for both male and female victims.

Intimate Partner Hitting in China:

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Studies of intimate partner violence have expanded to developing countries, with results suggesting that intimate partner violence is pervasive across all societies.[1-4] In these studies, risk factors for intimate partner violence include young age, poverty, low social status, women's disempowerment, stress in daily life, alcohol consumption, and jealousy. Intimate partner violence often produces both short-term and long-term negative physical and mental health sequelae.[1, 3, 5-7] In China, intimate partner violence has gradually captured more attention.[8-15] However, there has been no representative survey data to provide national estimates. This paper provides the first national prevalence estimates for China with a nationally representative survey of Chinese adults. For both men and women, the paper identifies risk factors for, and health sequelae of, intimate partner hitting.

Methods

Data Collection

Data come from a sample survey on health and family life completed in 2000. With the exclusion of Tibet and Hong Kong, the sample is nationally representative of the adult population of China between ages 20 and 64. Following standard procedures for complex samples, the probabilistic sample was drawn from 14 strata and 48 primary sampling units with probabilities of selection proportional to population size at each of the four sampling steps down to the individual (for details, see xxx; URL to be provided).[16]

Participants responded to an hour-long computer-based interview. Most interviewers were trained mid-aged social workers and researchers who remained with the project throughout the interview period of one year. For the sake of privacy, interviews took place outside the homes of the respondents, normally a private room in a hotel in big cities or a meeting facility in villages and smaller towns. Most questions used in this paper were answered when the interviewer was in control of the computer, though questions about sexual dysfunctions were answered while the respondent controlled the computer. Respondent and the interviewer were of the same sex.

Measurement

Respondents were asked "For whatever reason, has your partner ever hit you (not including in a joking or playful way)?" And, conversely, "… have you ever hit your partner?" More literally, the question was whether your partner has "moved his hand to hit (*da*) you," which could include slapping, hitting, or beating. The possible response categories for both of the questions were, "yes, in last 12 months," "yes, but more than 12 months ago," and "never." This paper combines the first two categories to analyze any hitting during the lifetime of the current relationship. Among respondents answering that they were ever hit by their partner, we also asked, "Did your partner ever hit you hard?" The question added the detail that "hard hitting" included attacks resulting in bleeding, bruises, swelling, or severe pain and injuries.

Respondents also answered questions about four sets of health outcomes: (a) happiness in the past year on a four-point scale, ranging from "very happy," to "very unhappy" –- recoded with all happy responses as 0 and all unhappy responses as 1, (b) health condition, ranging from "poor" to "very good" on a 5-point scale – recoded with "very good" and "relatively good" as 0 and the other three ("fair", "not very good", and "poor") as 1, (c) frequency of feeling depressed and/or bored during the last three months – recoded with "often" and "sometimes" as 1 and "never" as 0, and (d) experience of one or more of six possible problems during sex that lasted two months or more during the past year – for men and women, these dysfunctions including lack of interest in sex, inability to achieve orgasm, inability to find pleasure in sex, and performance anxiety in sex and additional erectile dysfunction and premature ejaculation for men and inadequate lubrication and pain during sex for women.

Statistical Analysis

We apply weights that increase the proportion of people in their 20s, 50s, and 60s in the sample to the same levels as in the national census. These weights also include population weights known from the sample design. With these adjustments, the percentage distribution by demographic characteristics (age, occupation, urban residence, education) closely parallel data in the national census. Using svy methods in

STATA 8.0, we adjust standard errors for sample stratification (sampling strata independently) and clustering (sampling individuals within each of 48 primary sampling units).[17]

We use commonly identified risk factors of intimate partner violence in logistic regression analyses, including sexual jealousy between partners, relative income of partners, alcohol consumption, and socioeconomic status of the partner.[1-4] We also control for women's age, geographic region, and residential location. In the questionnaire, the question about jealousy was, "Have you ever felt insecure, "green eyed" (chi tsu), or even jealous about your partner?" Conversely, the respondent reported whether his/her partner had ever felt this way about him/her. We code the responses of often and occasionally as 1 and the responses of rarely and never as 0. In the analysis of health outcomes, besides severity of hitting, we control for age, education, women's menopause, household income, marital status, and other variables.[18] In existing research, partners often disagree on the level of hitting.[19, 20] We include "male respondent" as a partial control for this phenomenon, and we do separate runs by gender and with gender interacted with each risk factor.

Results

Of 5,000 individuals initially sampled, 3,806 participants completed the interview and provided valid data for analyses, giving a final response rate of 76.1%. Participant and data losses were of three types: refusal to participate of some of the sampled persons (n=857, 17.1%), sampled person always absent, of poor health, too old or young (n=308, 6.2%), and computer/data handling loss (n=29, 0.6%). This paper uses reports from 1,665 women and 1,658 men who had a steady sexual partner at the time of interview. These partners included spouse (95% in a first marriage, 3% in a second marriage) and cohabiting or other type of partner (2%).

In descriptive statistics, about 20% of men and women report jealousy of their partner Table 1). A woman's share of the combined income of herself and her partner is derived from estimates of the income she and he would have earned during the ages 25-45, when hitting is most common (see table notes for details). Since most Chinese women work, their income share is considerable—with about 60%

in the 31-45% range and smaller percentages above and below that range. Socioeconomic status indicates the education and occupational status of the potential hitter – i.e., man when the target is a woman and vice versa. Though the division into high, middle, and low are arbitrary, the results from this division are consistent with other more refined analyses. The South and Southeast Coastal region – from Shanghai to Guangzhou--includes provinces with a booming economy and multiple foreign influences. The North and Northeast region includes both China's heavy-industry rust belt in the Northeast and sites in and around the capital of Beijing. The "inland" region includes central and western China. Urban sites are defined here as locales with less than 15% of the labor force in farming, which produces urban percentages close to the year 2000 Census for China.[21]

In Table 1, the last three rows of the middle prevalence columns provide descriptive results for hitting. Combining men's and women's reports in the final row, 34.0% (95% Confidence Interval [CI]=28.1, 40.4) of women and 18.2% (CI=13.8,23.8) of men were ever hit during the relationship. The two rows above show that in male-to-female hitting it was not the male perpetrator (37.4%; 95% CI=32.9, 42.4) but the female target (30.6%; 95% CI=22.6, 39.9) who underreported hitting ($p<.05$). In separate tabulations, severe hitting was 12.4% (95% CI=9.6, 15.8) for women and 4.9% (95% CI=2.7, 11.5) for men (see the not-for-publication, reviewer's appendix)

Hitting varies by risk factor, particularly for women (Table 1). Sexual jealousy from either or both partners correlates with both male-to-female and female-to-male hitting. For example, any hitting of women increases from 28.7% (95% CI=22.5, 35.7) for no jealousy to 52.6 % (95% CI=40.6, 64.3) when the partners are mutually jealous. The multivariate, adjusted odds ratios suggest that, even with other background conditions included, the jealousy relationships are large across all types of jealousy. Women's income share is less clearly related, and in the adjusted odds ratios income share is non-significant. Her partner's low socio-economic status is related in both the bivariate and adjusted results, however, causing hitting of women to rise from about one-fourth to almost one-half of all women. Both men's and women's alcohol consumption is also a risk factor of hitting their partners, with male-to-

female hitting rising from one-third to almost one-half when he reports bouts of drunkenness. Similarly, male-to-male hitting almost doubles from 16.6% to 31.2% when she reports any alcohol consumption.

Other risk factors include years at risk (indexed by "years with a partner," with peak at 6 to15 years in a relationship) and interior region. Though in the adjusted results rural women are no different from urban women once region is controlled, in the bivariate prevalence results rural women are more often hit.

Much of the women's hitting of men involves mutual hitting (Table 2, final row). Only 3.3% (CI=2.2,4.8) of men were hit without having themselves hit their female partner. In total, 15.0% (CI=11.0,20.1) of couples had mutual hitting, and another 19.0% (CI=16.0,22.3) of all couples had only the man hitting the woman, without retaliation. For male-to-female and mutual hitting, the significant risk factors largely parallel those in the previous table. For female-to-male hitting (last set of columns), in addition to jealousy and region (North/Northeast had the most hitting), women with higher income shares hit their partners less and women consuming alcohol hit more.

For both men and women, health outcomes are related to hitting in a dose response fashion (Table 3). For example, absent partner hitting, only 11.3% (95% CI=6.3, 19.5) of women and 10.4% (95% CI=7.0, 15.2) of men were unhappy with their lives. However, with light hitting, percentages increased to 28.5% (95% CI=19.9. 39.0) and 12.4% (95% CI=4.6, 29.3). With severe hitting, these percentages increase to 37.8% (95% CI=20.6, 58.8) and 34.8% (95% CI=19.2, 54.5). For women, being hit hard increases the odds of suffering adverse health outcomes by a factor of 2 to 4, even net of other background conditions. Similarly, except for sexual dysfunctions, being hit hard increases men's chances of experiencing adverse health outcomes at similar magnitudes.

As a check on the consequences of reporting biases, we redid the logistic analyses in tables 1 and 2 – adding interaction terms for male respondent for all risk factors. Some relationships changed in significant ways ($p<.05$). For example, his jealousy of her was more strongly related to his hitting of her (with or without her hitting back). Nevertheless, despite changes in the details, the broad pattern of

relationships remained similar. For example, the confidence intervals for the jealousy-hitting relationship continued to overlap for all three types of jealousy.

Discussion

This study provides new evidence on the prevalence, risk factors, and sequelae of intimate partner violence in China.

Prevalence

Using a population-based probability sample, this study gives the first national estimates of partner hitting. Among adults 20-64 years of age, 34.0% (95% CI,=28.1, 40.4) of women and 18.2% (95% CI=13.8, 23.8) of men report ever being hit by their current spouse/partner. Nationwide, ignoring regional differences, reports of hitting are highest in the countryside – urban women (26.2%; 95% CI=24.2, 28.4), rural women (37.1%; 95% CI=28.8, 46.2), urban men (16.6%; 95% CI=14.4, 19.0), rural men (18.9%; 95% CI=12.9, 26.9). The figures for urban women are in the middle of the 20-30% range from other studies of Chinese urban women.[8, 9, 14, 22]

Compared with Chinese men, more women have experienced partner hitting, as seen in both directional and severity of hitting reports. While 19.0% (95% CI=16.0, 22.3) of Chinese women were hit without hitting back, only 3.3% (95% CI=2.2, 4.8) of men were hit without retaliation. Another 15.0% (95% CI=11.0, 20.1) of couples report mutual hitting. The same female predominant pattern also holds for severe hitting. While 12.5% (95% CI=9.6,15.8) of women, only 4.5% (95% CI=2.7,8.9) of men report that they were hit sufficiently hard to cause cuts, bruises, or other injuries.

The prevalence of hitting in China is as great as, or greater than, in many other societies. The median for 15 studies from other societies reporting hitting by the current partner is 26% while the median for 44 studies reporting hitting by any partner (current and past) is a similar 25%.[1, 3, 23-29] Combining these two types of statistics for 59 studies from 36 societies, gives a median prevalence of 26% for any hitting. A similar combination of data for 9 studies from 8 societies, gives a median prevalence of 11% for severe hitting. In 57 studies for which age is reported, 37 are for women through age 49. In China among women no more than 49 years of age, the prevalence for hitting are 36% (95%

CI=30, 42) for any hitting and 14% (95% CI=10, 17) for severe hitting. Compared with studies for other societies, Chinese hitting of women by her intimate partner is at the 78th percentile for any hitting and at the 66th percentile for severe hitting.

The difference in women's and men's reports suggest possible under-reporting biases in studies from developing societies. In U.S. studies, men report less hitting than women,[19, 20, 30] possibly because legal and social disapproval of male hitting of female partners causes underreporting by male offenders. In China, in contrast, it is not the male offender but the female victim who underreports hitting. This under-reporting is greatest when she is the victim and does not hit back -- with the prevalence being 22.6% (95% CI=19.7, 25.8) in the men's reports and 15.4% (95% CI=9.7, 23.6) in the women's reports. Women's low report is consistent with the victim being more socially stigmatized than the offender – a pattern that could result when social and legal disapproval of partner hitting has yet to be promoted in society and when men and women continue to accept the premise that women should be hit when they do anything wrong. This under-reporting by women could occur in other developing societies, where it is commonly accepted by both men and women that women should be hit for transgressions (e.g., in raising children or cooking food).[3, 31] If women's under-reporting is common, then, most studies in developing countries – based on women respondents' reports alone – understate the full extent of spousal hitting by several percentage points.

Risk factors

This study has several unexceptional findings. The results replicate the common finding that women are at risk when their male partner is of lower socioeconomic status and when either he or she consumes alcohol.[1-3, 32, 33] The absence of a relationship between women's income share and her freedom from hitting in China (when unmediated by social conditions that are difficult to measure) is also common. [34] The regional effects, with the interior more likely to have hitting than the south and southeast coast is consistent with popular impressions in China.

What is exceptional in the findings is a set of strong links between jealousy and hitting that are more complex than in the existing literature. One line of interpretation in the literature is that jealousy

and hitting are learned behaviors associated with men being acculturated from a young age to believe that men should control women.[35] A second line of interpretation is that jealousy and the attempt to control one's partner is not merely learned but more deeply built into our instincts. Moreover, even while they respond to slightly different cues, women can be just as jealous as men, leading to outbursts by both genders – even if the male outburst is more physically damaging.[36] In China, even in less severe hitting, men are more likely to hit their partner – and particularly more likely to hit their partner without being hit back (Table 2). Nevertheless, in total, the patterns for China are more consistent with the second line of interpretation. Both men and women are jealous, and jealousy is linked to hitting for each of them (Table 1).

However, what is unanticipated in both lines of interpretation is that it is often not one's own jealousy that ignites one's lashing out. Rather, it is often the partner's jealousy (and, probably, nagging) that causes either the man or the woman to strike his/her partner (table 2). For example, in unilateral (unanswered) male-to-female hitting, the odds ratio between his own jealousy and hitting is only 1.48 (95% CI=0.66, 3.29) whereas the ratio between her jealousy and his hitting is 4.22 (95% CI=2.43, 7.32). The differences between these two odds ratios are marginally significant at p=.09. Though statistically non-significant, given the small cell sizes, unilateral female-to-male hitting has a similar pattern. Or, in short, for neither men nor women is the simple story of jealousy and hitting being part of the same control syndrome a sufficient story. Jealousy is centrally involved, but often as provoking hitting from the partner who is accused of sexual infidelity rather than the reverse.

Sequelae

Consistent with previous research, the current study shows that intimate partner hitting has serious short-term and long-term health consequences for the victim.[1, 3, 5-7] Adverse health outcomes increase with increasing severity of hitting. .

Limitations

Given the cross-sectional nature of the data, we can not be certain that jealousy, alcohol consumption, and even occupation are not partially a result rather than cause of past hitting. Moreover,

compared to some surveys, our list of questions on the nature and correlates of hitting are impoverished – including, for example, no measures of emotional and psychological abusive behaviors.[32, 39]

Conclusion

Intimate partner dynamics in China share much with the rest of the world, adding one more populous society to the list of places where this public health issue needs to be addressed. As elsewhere, partner hitting has negative health sequelae. Sexual jealousy joins the list of risk factors that exacerbate partner hitting for both men and women.

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Table 1: Prevalence and Logistic Analysis of Intimate Partner Hitting during Lifetime of Current Relationship

	Sample Distribution				Prevalence				Logistic Analysis			
	women		men		Man Hit Woman		Woman Hit Man		Man Hit Woman		Woman Hit Man	
	raw n	%	raw n	%	%	95% CI	%	95% CI	Adj OR	95% CI	Adj OR	95% CI
Sexual Jealousy												
neither jealous	1,146	80	1,103	76	28.7	(22.5,35.7)	13.3	(9.9,17.5)	--		--	
man jealous	164	6	56	3	47.7	(32.6,63.2)	47.0	(28.6,66.3)	**2.81** *	(2.01,3.94)	**5.81** *	(2.83,11.95)
woman jealous	115	5	278	13	54.9	(47.1,62.5)	31.7	(21.8,43.7)	**4.26** *	(3.23,5.61)	**3.32** *	(1.53,7.21)
both jealous	239	9	220	8	52.6	(40.6,64.3)	33.5	(19.3,51.5)	**4.21** *	(2.16,8.23)	**3.23** *	(1.33,7.85)
Bargaining/Dependency												
Woman's "Income" Share [a]												
0-30%	229	12	321	16	33.9	(29.1,39.1)	16.1	(8.5,28.5)	1.35	(0.93,1.94)	0.85	(0.44,1.62)
31-45%	1,079	60	1,097	59	30.5	(25.3,36.2)	17.7	(14.3,21.7)	--		--	
46-100%	357	28	240	25	41.7	(27.9,56.9)	20.6	(13.9,29.5)	1.27	(0.73,2.23)	1.22	(0.88,1.68)
Stress/Lifestyle												
Partner's Socioeconomic Status[b]												
high	579	15	397	11	25.6	(20.8,31.1)	16.2	(12.0,21.6)	--		--	
middle	976	61	1,044	49	30.5	(25.6,35.9)	18.7	(12.8,26.5)	**1.60** *	(1.19,2.15)	1.50	(0.83,2.72)
low	110	24	217	40	47.9	(37.7,58.4)	18.2	(12.6,25.6)	**3.83** *	(2.68,5.48)	2.28	(0.62,8.40)
Alcohol Consumption												
woman: none	1,143	78	--	--	33.2	(28.0,38.8)	16.6	(12.3,22.1)	--		--	
any	522	22	--	--	40.3	(27.0,55.2)	31.2	(17.5,49.2)	**1.70** *	(1.05,2.74)	2.28	(0.86,6.06)
man: never inebriated	--	--	1,017	57	29.9	(23.1,37.8)	17.3	(13.3,22.3)	--		--	
ever inebriated	--	--	641	43	48.7	(38.9,58.6)	21.6	(14.5,30.8)	**2.61** *	(1.35,5.05)	1.30	(0.76,2.24)
Controls												
Years with Partner												
0-5 years (referent)	284	18	324	18	23.1	(15.3,33.4)	17.3	(12.2,23.9)	--		--	
6-15 years	633	32	609	38	41.5	(34.0,49.3)	26.0	(17.0,37.8)	**2.33** *	(1.33,4.08)	1.40	(0.78,2.51)
16 or more years	748	50	725	44	32.5	(25.4,40.7)	12.8	(9.2,17.6)	2.09	(0.91,4.82)	0.76	(0.39,1.49)
Geographic Region												
south/southeast coast	717	11	699	11	19.3	(15.8,23.4)	10.7	(9.0,12.7)	--		--	
north/northeast	554	23	564	24	28.3	(26.1,30.6)	18.3	(16.1,20.8)	**1.63** *	(1.19,2.23)	**2.00** *	(1.53,2.62)
interior	394	66	395	65	38.5	(29.5,48.4)	19.5	(12.9,28.3)	**2.93** *	(1.75,4.90)	**2.47** *	(1.43,4.27)
Residential Location												
urban	1,312	28	1,314	29	26.2	(24.2,28.4)	16.6	(14.4,19.0)	--		--	
rural	353	72	344	71	37.1	(28.8,46.2)	18.9	(12.9,26.9)	0.86	(0.64,1.14)	0.84	(0.43,1.64)
Gender of Respondent												
woman	1,665	100	--	--	30.6	(22.6,39.9)	18.7	(14.8,23.4)	--		--	
man	--	--	1,658	100	37.4	(32.9,42.2)	17.7	(12.4,24.8)	0.98	(0.67,1.42)	1.09	(0.78,1.52)
Total (men and women's report)	--	--	--	--	34.0	(28.1,40.4)	18.2	(13.8,23.8)				

Notes: raw n = unweighted observations. All other results weighted and adjusted for sample design using svy methods in STATA 8.0. Results based on men's and women's combined reports. "Absence of hitting" is the comparison category in the outcomes for both sets of logistic analysis. *:(and in bold) indicates significantly larger than the referent at $p < 0.05$. "--" indicates the reference category. [a] Woman's percent of man's and woman's joint income, based on estimates (from a regression equation with education, occupation, geographic region, and ever worked) during the age 25-45 working years. [b] Indicates socioeconomic status of partner of potential target of hitting.

Table 2: Intimate Partner Hitting During Lifetime of Current Relationship by Direction of Hitting

	Bivariate Prevalence						Adjusted ORs					
	M hit F (1)		mutual hitting (2)		F hit M (3)		M hit F (4)		mutual hitting (5)		F hit M (6)	
	%	95% CI	%	95% CI	%	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Sexual Jealousy												
neither jealous	17.8	(14.9,21.2)	10.9	(7.7,15.2)	2.4	(1.9,2.9)	--		--		--	
man jealous	11.7	(5.1,24.9)	35.9	(18.9,57.4)	11.1	(4.5,24.5)	1.48	(0.66,3.29)	**6.25** *	(3.63,10.76)	**5.87** *	(2.36,14.65)
woman jealous	29.5	(19.5,42.0)	25.4	(19.5,32.4)	6.3	(2.1,17.8)	**4.22** *	(2.43,7.32)	**5.95** *	(4.08,8.67)	4.07	(0.93,17.80)
both jealous	22.9	(16.8,30.3)	29.7	(16.4,47.6)	3.8	(2.1,6.6)	**3.28** *	(1.91,5.64)	**6.06** *	(2.39,15.38)	1.89	(0.77,4.67)
Bargaining/Dependency												
Woman's "Income" Share												
0-30%	21.9	(18.1,26.3)	12.0	(6.6,20.8)	4.1	(1.8,9.4)	**1.57** *	(1.01,2.43)	1.11	(0.67,1.85)	1.43	(0.71,2.87)
31-45%	16.8	(13.8,20.2)	13.7	(10.5,17.8)	3.9	(2.8,5.4)	--		--		--	
46-100%	22.3	(13.0,35.6)	19.3	(12.9,28.0)	1.3	(0.6,2.8)	1.31	(0.57,3.02)	1.06	(0.66,1.71)	**0.32** *	(0.11,0.96)
Stress/Lifestyle												
Man's Socioeconomic Status												
high	12.5	(8.6,17.8)	13.1	(8.7,19.3)	3.7	(2.4,5.7)	--		--		--	
middle	18.1	(15.8,20.7)	12.4	(8.3,18.2)	4.0	(2.3,6.8)	**2.07** *	(1.42,3.01)	1.24	(0.73,2.12)	1.61	(0.82,3.14)
low	25.5	(18.5,34.0)	22.4	(18.4,27.1)	1.2	(0.4,3.6)	**3.79** *	(2.18,6.59)	**4.46** *	(2.39,8.31)	1.50	(0.27,8.17)
Alcohol Consumption												
woman: none	19.3	(16.5,22.5)	13.9	(9.9,19.0)	2.7	(1.8,4.1)	--		--		--	
any	16.4	(9.1,27.9)	23.8	(12.3,41.1)	7.3	(3.5,14.7)	1.61	(0.99,2.65)	2.19	(0.78,6.12)	**3.97** *	(1.52,10.32)
man: never inebriated	15.8	(11.3,21.6)	14.2	(11.1,17.9)	3.2	(1.8,5.6)	--		--		--	
ever inebriated	30.7	(26.5,35.2)	18.0	(10.1,30.0)	3.6	(1.9,6.6)	**3.21** *	(1.60,6.44)	1.99	(0.99,3.98)	1.53	(0.69,3.40)
Controls												
Years with Partner												
0-5 years	10.7	(5.3,20.5)	12.4	(7.6,19.6)	4.9	(2.7,8.7)						
6-15 years	20.1	(16.2,24.7)	21.4	(14.6,30.2)	4.7	(2.2,9.6)	**2.61** *	(1.07,6.34)	**2.14** *	(1.18,3.91)	1.11	(0.30,4.11)
16 or more years	21.3	(16.9,26.5)	11.2	(8.0,15.6)	1.6	(0.8,3.3)	3.04	(0.92,10.11)	1.13	(0.48,2.69)	0.40	(0.08,2.16)
Geographic Region												
south/southeast coast	11.2	(8.7,14.4)	8.1	(6.6,9.9)	2.6	(1.8,3.7)	--		--		--	
north/northeast	14.4	(12.1,17.0)	13.9	(12.0,16.1)	4.4	(3.2,6.0)	1.40	(0.94,2.08)	**2.25** *	(1.59,3.19)	**2.32** *	(1.36,3.94)
interior	22.0	(17.7,27.0)	16.5	(10.7,24.7)	2.9	(1.6,5.4)	**2.76** *	(1.59,4.78)	**3.48** *	(1.82,6.65)	2.07	(0.93,4.59)
Residential Location												
urban	13.6	(11.8,15.7)	12.6	(10.9,14.5)	3.9	(3.1,5.0)	--		--		--	
rural	21.1	(17.1,25.8)	15.9	(10.5,23.3)	3.0	(1.7,5.2)	0.89	(0.61,1.31)	0.85	(0.50,1.43)	1.11	(0.60,2.04)
Gender of Respondent												
woman	15.4	(9.7,23.6)	15.2	(12.6,18.2)	3.5	(1.9,6.4)	--		--		--	
man	22.6	(19.7,25.8)	14.8	(9.4,22.4)	3.0	(1.9,4.6)	1.17	(0.50,1.97)	0.99	(0.79,1.25)	1.16	(0.72,1.88)
Total	19.0	(16.0,22.3)	15.0	(11.0,20.1)	3.3	(2.2,4.8)						

Note: All results are weighted, with standard errors corrected for sample design. Odds ratios are from a multinomial logistic regression with “absence of hitting” as the referent outcome. Data from combined reports by 3,323 women and men. * (and bold) indicates significantly larger than the referent at $p < 0.05$. "--" indicates reference category. Also see notes to Table 1.

Table 3. Health Consequences of Intimate Partner Hitting during Lifetime of Relationship

	Bivariate Prevalence						Adjusted ORs			
	none		hit light		hit hard		hit light		hit hard	
	%	95% CI	%	95% CI	%	95% CI	OR	95% CI	OR	95% CI
women										
unhappy with life	11.3	(6.3,19.5)	28.5	(19.9,39.0)	37.8	(20.6,58.8)	1.98	(0.79,4.98)	4.08 *	(1.09,15.25)
mental distress	41.3	(32.9,50.2)	55.8	(47.7,63.6)	68.1	(57.6,77.1)	1.78 *	(1.14,2.78)	3.06 *^	(2.19,4.28)
poor health	31.6	(25.1,38.9)	36.2	(27.3,46.2)	49.1	(37.5,60.9)	1.12	(0.65,1.94)	2.33 *^	(1.05,5.17)
sexual dysfunction	37.2	(31.4,43.4)	41.9	(30.6,54.0)	51.8	(29.9,73.0)	1.16	(0.74,1.84)	2.09 *	(1.08,4.06)
men										
unhappy with life	10.4	(7.0,15.2)	12.4	(4.6,29.3)	34.8	(19.2,54.5)	0.98	(0.69,1.40)	5.60 *^	(2.52,12.43)
mental distress	50.7	(42.8,58.6)	54.0	(33.5,73.2)	73.6	(59.3,84.3)	1.18	(0.56,2.48)	2.40 *	(1.12,5.17)
poor health	30.5	(23.1,39.0)	41.8	(28.3,58.5)	55.1	(36.0,72.8)	1.60	(0.71,3.62)	3.69 *	(1.59,8.58)
sexual dysfunction	31.5	(25.2,38.7)	36.6	(24.5,50.6)	45.0	(26.1,65.6)	1.11	(0.59,2.09)	1.95	(0.51,7.36)

Notes: Based on reports from 1,665 women and 1,658 men. The odds ratios are from 8 binomial logistic regressions in which no hitting is the reference category. These logistic regressions included the following: for all -- 10-year age groups, menopause for women, education, and household income; unhappiness with life and depression -- marital status (married, single, cohab, or divorce/widowed), preschool child; poor health -- marital status (married, single, cohabiting, or divorced/widowed); sexual dysfunctions -- genito-urinary symptoms last year, and extramarital affair(s) of male (partner).
* indicates p<.05. ^ indicates "hit hard" greater than "hit light" coefficient at p<.05.

Reviewer's Appendix: Prevalence and Logistic Analysis of Intimate Partner Hitting in Lifetime of Relationship by Severity (to be on web)

	Man Hit Woman				Woman Hit Man				Man Hit Woman						Woman Hit Man					
	Light (1)		Hard (2)		Light (3)		Hard (4)		Light (5)			Hard (6)			Light (7)			Hard (8)		
	%	95% CI	%	95% CI	%	95% CI	%	95% CI	Adj. OR	95% CI		Adj OR	95% CI		Adj OR	95% CI		Adj OR	95% CI	
Sexual Jealousy																				
neither jealous	17.5	(9.6,29.7)	9.3	(7.2,12.1)	11.1	(6.5,18.2)	2.6	(0.8,7.9)	--			--			--			--		
man jealous	14.5	(8.7,23.1)	21.6	(10.3,39.7)	41.7	(14.5,75.1)	12.9	(3.6,37.3)	1.21	(0.53,2.73)	6.74	**3.47** *	(1.86,6.46	3.21	**7.53** *	(2.19,25.85)	21.78	**7.28** *	(1.57,33.77)	
woman jealous	19.4	(6.8,44.4)	20.4	(8.7,40.8)	15.1	(8.3,25.8)	12.8	(6.6,23.4)	1.96	(0.53,7.25)	4.27	**3.53**	(1.16,10.73)	4.23	1.67	(0.52,5.32)	4.04	**5.02** *	(2.55,9.87)	
both jealous	25.8	(13.5,43.6)	29.3	(11.2,57.8)	13.6	(7.7,22.7)	10.6	(5.9,18.4)	**4.10** *	(1.67,10.04)	5.62	**7.91** *	(1.80,34.74)	11.19	1.41	(0.72,2.75)	4.10	**4.02** *	(1.06,15.17)	
Bargaining/Dependency																				
Woman's "Income" Share																				
0-30%	17.7	(8.3,33.8)	12.9	(4.9,29.9)	5.0	(2.9,8.4)	5.4	(2.1,13.1)	1.81	(0.59,5.61)		1.86	(0.16,21.29)		**0.28** *	(0.15,0.55)		0.93	(0.27,3.17)	
31-45%	14.6	(7.8,25.6)	9.2	(4.5,17.9)	15.4	(11.8,19.9)	4.7	(2.9,7.4)	--			--			--			--		
46-100%	25.8	(13.0,44.7)	18.9	(13.7,25.4)	11.8	(4.7,26.9)	5.2	(1.2,20.7)	2.05	(0.82,5.12)	1.18	**2.75** *	(1.13,6.67)	1.84	0.84	(0.32,2.21)	0.42	0.97	(0.30,3.21)	
Stress/Lifestyle																				
Partner's Socioeconomic Status																				
high	11.5	(6.5,19.7)	8.8	(4.6,16.4)	10.8	(7.4,15.7)	6.4	(1.4,24.1)	--			--			--			--		
middle	14.8	(10.3,20.6)	12.2	(9.1,16.2)	13.5	(7.9,22.1)	5.6	(2.6,11.4)	1.50	(0.67,3.33)		1.58	(0.51,4.89)		1.41	(0.79,2.51)		0.93	(0.13,6.75)	
low	30.7	(16.4,49.9)	15.1	(10.6,21.0)	12.5	(8.3,18.5)	3.8	(1.2,11.1)	**3.84** *	(1.54,9.58)		2.80	(0.68,11.56)		1.4	(0.65,3.05)		1.21	(0.06,25.40)	
Alcohol Consumption																				
woman: none	16.0	(8.7,27.6)	11.8	(7.3,18.7)	--		--		--			--			n.a.			n.a.		
any	25.7	(19.2,33.7)	14.5	(6.5,29.4)	--		--		**2.01** *	(1.49,2.70)	3.84	1.21	(0.38,3.85)	4.25	n.a.			n.a.		
man: never inebriated	--		--		10.5	(6.1,17.4)	4.4	(2.6,7.4)	n.a.			n.a.		9.26	--			--		
ever inebriated	--		--		15.9	(12.2,20.5)	5.7	(2.2,13.6)	n.a.			n.a.		0.39	**1.62** *	(1.21,2.19)	7.83	0.91	(0.29,2.86)	
Controls																				
Years with Partner																				
0-5 years	8.2	(2.8,22.1)	8.5	(3.1,21.5)	15.0	(8.8,24.2)	4.6	(1.0,18.3)	--			--			--			--		
6-15 years	20.7	(14.0,29.7)	17.4	(10.5,27.4)	12.1	(7.6,18.9)	10.3	(5.5,18.2)	**3.39** *	(1.32,8.66)		2.84	(0.64,12.67)		0.81	(0.44,1.49)		2.21	(0.65,7.54)	
16 or more years	20.0	(11.4,32.6)	9.7	(5.6,16.4)	12.5	(7.0,21.2)	1.7	(0.9,3.4)	**3.72** *	(1.38,10.02)		2.38	(0.51,11.03)		0.95	(0.49,1.84)		0.46	(0.05,4.04)	
Geographic Region																				
south/southeast coast	9.8	(5.9,15.9)	5.0	(3.5,7.1)	6.9	(4.8,9.7)	5.4	(1.9,14.1)	--			--			--			--		
north/northeast	14.9	(10.6,20.7)	9.4	(6.2,13.8)	12.1	(9.7,14.9)	4.2	(2.8,6.1)	1.58	(0.66,3.78)		**2.44** *	(1.19,4.99)		**1.85** *	(1.05,3.25)		0.85	(0.27,2.65)	
interior	20.7	(10.4,37.0)	14.7	(10.9,19.7)	14.1	(8.5,22.5)	5.2	(2.1,11.9)	**2.77** *	(1.04,7.43)	2.20	**7.87** *	(3.63,17.03)		**2.41** *	(1.03,5.66)	6.10	1.07	(0.24,4.73)	
Residential Location																				
urban (referent)	12.0	(9.2,15.4)	10.4	(8.7,12.4)	11.0	(8.6,14.1)	4.6	(2.6,7.9)	--			--			--			--		
rural	20.5	(10.9,35.3)	13.2	(9.6,18.0)	13.6	(8.5,21.0)	5.1	(2.2,11.1)	0.97	(0.63,1.49)		0.51	(0.22,1.21)		0.90	(0.45,1.80)		1.26	(0.32,4.97)	
Gender of Respondent																				
woman	18.2	(10.9,28.6)	12.4	(9.6,15.8)	--		--		n.a.			n.a.			n.a.			n.a.		
man	--		--		12.8	(9.1,17.8)	4.9	(2.7,8.9)	n.a.			n.a.			n.a.			n.a.		

Notes: Results are from a multinomial logit analysis of reports from the potential target of hitting (1,665 women and 1,658 men). “Absence of hitting” is the comparison category in the outcomes. *:(and in bold) indicates significantly larger than the referent at $p < 0.05$. "--" indicates reference category. Also see notes to Table 1.