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Violence in Childhood, Attitudes about Partner Violence, and Partner Violence Perpetration among Men in Vietnam

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Abstract

Purpose—We assess the association of men's exposure to violence in childhood--witnessing physical violence against one's mother and being hit or beaten by a parent or adult relative--with their attitudes about intimate partner violence (IPV) against women. We explore whether men's perpetration of IPV mediates this relationship and whether men's attitudes about IPV mediate any relationship of exposure to violence in childhood with perpetration of IPV.

Methods—522 married men 18–51 years in Vietnam were interviewed. Multivariate regressions for ordinal and binary responses were estimated to assess these relationships.

Results—Compared to men experiencing neither form of violence in childhood, men experiencing either or both had higher adjusted odds of reporting more reasons to hit a wife (aORs, 95% CIs: 1.43, 1.03–2.00 and 1.66, 1.05–2.64, respectively). Men's lifetime perpetration of IPV accounted fully for these associations. Compared to men experiencing neither form of violence in childhood, men experiencing either or both had higher adjusted odds of ever perpetrating IPV (aORs, 95% CIs: 3.28, 2.15–4.99 and 4.56, 2.90–7.17, respectively). Attitudes about IPV modestly attenuated these associations.

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Conclusion—Addressing violence in childhood is needed to change men’s risk of perpetrating IPV and greater subsequent justification of it.

Keywords

Men's health; Family violence; Vietnam

BACKGROUND

Intimate Partner Violence against Women: Prevalence and Justification

Intimate partner violence (IPV) refers to aggressive or coercive behaviors among dating, cohabiting, or marital partners [1]. Globally, 15%–71% of women report lifetime exposure to physical or sexual IPV [2], and adverse health consequences are common [2–4]. Global advocacy and legislation have ensued to mitigate IPV [5–7].

Attitudes about IPV are one point of intervention, as justifying IPV against women is associated with perpetration and victimization [8]. Beyond the demographic correlates [9–11], exposure to violence in childhood, including witnessing IPV and being hit or beaten, may influence attitudes about IPV into adulthood [12–14]. In poorer settings, the effects of men’s exposure to violence in childhood on their attitudes about IPV, and the reciprocal influences of attitudes and perpetration, are understudied [15]. We assess whether men’s experiences in childhood of witnessing physical IPV against their mother (*witnessing IPV*) and/or of being hit or beaten by a parent or adult relative (*experiencing physical maltreatment*) are associated with justifying IPV against women in Vietnam. We, then, explore whether violence in childhood operates, (1) by increasing the risk of perpetrating IPV, which reinforces its justification, and/or (2) by increasing the tendency to justify IPV, which then elevates the risk of perpetration.

Violence in Childhood

Prevalence and Health Consequences—Children may experience many forms of violence [16]. They may *witness violence between their parents or other adults* and become involved by intervening on the victim’s behalf. Worldwide, approximately 133–175 million children witness IPV annually [17]. Such children often are exposed to *direct physical or sexual maltreatment in the family* [16]. Some of this exposure may result from children being harmed during an incident of IPV. More often, children are the object of corporal punishment, a form of physical maltreatment.

Influences on Attitudes about IPV and IPV Perpetration—Exposure to IPV and maltreatment in childhood may influence formative perceptions of “normal” intimate relationships. According to social learning theory [18], children who witness inter-parental violence or are maltreated come to see such violence as normal [19–20]. Early normalization of IPV against women may then increase the risk of perpetration [21–23]. In turn, perpetrating IPV may reinforce its justification [24]. Thus, justifying and perpetrating IPV may be mutually causal, especially among those exposed to violence in childhood.

In India, men who witnessed father-to-mother or reciprocal physical violence in childhood were more likely to perpetrate IPV [19]. In meta-analyses, experiencing corporal punishment in childhood has been associated with adult aggression and spousal abuse [25]. Among Chinese immigrant men in the U.S., attitudes about IPV have mediated the relationship of physical violence in childhood and prior-year perpetration of IPV [26]. Among women in Nigeria, tolerance for IPV has mediated the relationship of witnessing violence in childhood and experiencing IPV [27]. Yet, the latter two studies were cross-sectional, precluding directional inferences. A panel study in South Africa showed positive bidirectional associations over time between boys' attitudes about and perpetration of IPV [24].

Violence in Childhood in East Asia and Vietnam—In East Asia and the Pacific, the lifetime prevalence of moderate physical maltreatment of children is high (39.5%–66.3%) [28]. In Vietnam, almost one third of women (31.5%) have ever experienced physical IPV, of whom more than half have stated that their children witnessed it [29]. “Corporal discipline” in childhood is used strategically to instruct boys about gendered family hierarchies [30]. About 23.7% of mothers have reported that their children experienced physical maltreatment at least once by their husband [29].

In East Asia and the Pacific, various forms of child maltreatment have been associated with poorer mental and physical health, and higher odds of engaging in risky behavior [22]. In a systematic review of studies with women and men, witnessing inter-parental violence has been associated positively with experiencing IPV and suicide ideation [22]. In Northern Vietnam, women who witnessed father-to-mother physical violence were more likely to justify IPV [31]. Exposure to physical maltreatment in childhood may encourage greater acceptance of IPV [13 26]. In Vietnam, the influence of men's exposure to various forms of violence in childhood on their attitudes about and perpetration of IPV against women is understudied.

Hypotheses

Here, we test whether men's experiences of *witnessing IPV* and *physical maltreatment* in childhood are positively associated with justifying IPV against women in Vietnam. We then explore whether (1) men's ever perpetration of IPV mediates this relationship, and (2) men's attitudes about IPV against women mediate any relationship of their exposure to violence in childhood with their IPV perpetration.

METHODS

Sample

This cross-sectional survey was conducted in My Hao district, Hung Yen province, Vietnam (population 97,733) [32]. Married men and women 18–51 years in 74 villages across 12 communes and one district city were eligible for participation. Using a cluster-sampling design, villages were paired by the size of the married population, and 20 pairs of villages were selected with probability proportional to the total married population in the pair relative to the total married population in all 74 villages. Thus, village pairs with a higher

proportion of the total married population in all villages were more likely to be selected. For privacy, villages within selected pairs were assigned randomly to the men's and women's samples. In each village, 27 households with at least one eligible respondent were selected randomly, and one eligible individual was selected randomly per household. Of 532 men selected, 98.1% (n=522) were interviewed. Other surveys of men in Vietnam have similar response rates [33].

Ten *attitudinal questions on physical IPV against women* asked "[i]n your opinion, does a man have a good reason to hit his wife" if she: (1) "does not complete her household work to his satisfaction," (2) "disobeys him," (3) "refuses to have sexual relations with him," (4) "asks him whether he has other girlfriends," (6) "goes out without telling him," (7) "burns the food," (8) "neglects the children," (9) "rudely argues with him," and (10) "argues with her parents-in-law," as well as (5) "he finds out that she has been unfaithful." Possible responses were "yes," "no," and "don't know." Questions on *perpetration of physical IPV* asked whether men had ever committed the following acts against their current wife: (1) "slapped her or thrown something at her that could hurt," (2) "pushed her, shoved her, or pulled her hair," (3) "hit her with your fist or something that could hurt her," (4) "kicked her, dragged her, or beat her up," (5) "choked or burned her on purpose," and (6) "threatened to use or used a gun, knife, or other weapon against her." Possible responses were "yes" or "no." Questions on *childhood exposure to violence* asked "when you were a child," "did you ever see or hear your mother being hit by your father (or her husband or boyfriend)" and "...were you ever hit or beaten by your mother, father, or another adult relative?" Possible responses were "yes," "no," and "don't know."

Ethical Considerations

The Institutional Review Boards of Emory University and the Center for Creative Initiatives in Health and Population in Hanoi, Vietnam, approved the study. The Vietnam Union of Science and Technology Associations (VUSTA) and My Hao District Health Center granted permission to conduct the study in Vietnam and in My Hao. Verbal informed consent was confirmed before starting the survey. Interviewers were advanced students at the Hanoi School of Public Health with prior survey experience and two days of training on the questionnaire for this study. Interviewers were gender-matched with participants to enhance disclosure. The survey was administered in private rooms at the commune health station to maintain privacy. Respondents were reimbursed for their travel expenses.

Variables

Outcomes—For attitudes about IPV against women, we created a 0–6 summative scale from 6 of the 10 attitudinal items (3,4,5,6,8,9) that we confirmed using factor analysis to be reliable indicators of a unidimensional construct [34]. The 0–6 and 0–10 scales were highly correlated (Pearson's $r=0.96$). Inferences using the two scales were similar, but associations for variables of interest were slightly attenuated with the 0–10- scale (available on request). For this analysis, we trichotomized the 0–6 scale to differentiate men who (1) found *no good reason* ("no" to all 6 items), (2) *some good reasons* ("yes" to 1–2 items), or (3) *many good reasons* ("yes" to 3–6 items) to hit a wife. For lifetime perpetration of physical IPV, we

captured whether (=1) or not (=0) the man reported ever committing any of the above six acts against his wife.

Exposure—From questions about witnessing IPV and physical maltreatment in childhood, we created one variable capturing exposure to (1) neither, (2) either but not both, and (3) both. Ninety percent of the 273 men who witnessed IPV or were physically maltreated in childhood experienced the latter alone. Eight men who experienced violence and responded "don't know" to witnessing violence were coded "either, not both." Three men who did not witness violence and responded "don't know" to experiencing violence were coded "neither."

Confounders / Control Mediators

Confounders: The respondents' age in years captured unmeasured period and life-course exposures. Childhood residence before age 12 (grew up in another town versus lived in same commune as a child) captured other childhood experiences. Three men who did not know or specify their childhood residence were coded as living in the same commune as a child.

Control Mediators: Adult socioeconomic mediators included the respondent's age relative to his wife (same [reference], older, younger), living arrangement (living with neither in-laws nor natal family [reference], living with either/both), number of children ever fathered, completed grades of schooling, schooling relative to wife (same [reference], more, less), income relative to wife (same [reference], more, less), and household wealth index. For respondents with missing data on own (n=2) or wife's (n=15) schooling, we imputed the average number of completed grades in the observed sample (9.58 and 9.62, respectively). The household wealth index was the score, categorized into tertiles, derived from a principle components analysis of 14 assets and amenities (e.g., computer, flushing toilet; full list available on request).

Analysis

Rao-Scott chi-square tests and t-tests were used to estimate the relationships of childhood exposure to violence with covariates. Using ordinal logistic regression, we estimated three models for the association of childhood exposure to violence with the attitudinal outcome: (1) unadjusted, (2) adjusted for confounders and control mediators, and (3) adding perpetration of IPV as a potential mediator. In Model 3, the proportional odds assumption was met and there was no evidence of multicollinearity [35]. Estimates are interpreted as the (log) odds of finding more versus fewer good reasons for a husband to hit his wife (3–6 versus 1–2 versus 0) per unit change in the explanatory variable. We used logistic regression to estimate three models for the association of men's exposure to violence in childhood with their lifetime perpetration of physical IPV: (1) unadjusted, (2) adjusted for confounders and control mediators, and (3) adding attitudes about IPV as a potential mediator. Analyses were conducted using SAS-callable SUDAAN 11.0 (RTI, Research Triangle, NC) to account for the complex survey design.

RESULTS

Sample Characteristics

Almost one fourth of the men neither witnessed IPV nor were physically maltreated in childhood (Table 1). Over half experienced one but not both, and almost one fourth experienced both. On most attributes, men exposed to one or neither form of violence in childhood were similar (Table 1); yet, men exposed to one form were younger, on average, and more often were older than their wife, and living in the wealthiest households. Compared to their counterparts, men exposed to both forms of violence in childhood were younger and had fewer children, on average. They also *more often* were living in the wealthiest and joint households, had more schooling, and compared to their wives, had more schooling, earned more, and were older.

Attitudes about and Perpetration of Physical IPV against Wives

More than one fourth of men reported to have ever perpetrated physical IPV against their wife (Table 2). A dose-response relationship between exposure to violence in childhood and IPV perpetration was apparent. More than one fourth of men agreed that a husband has good reason to hit his wife if she *rudely argues with him* (47.2%), *has been unfaithful* (46.5%), or *neglects the children* (25.7%). Compared to men exposed to neither form of violence in childhood, those exposed to one form less often found good reason to hit a wife if she *goes out without telling him* (5.1% vs. 8.6%), and those exposed to both forms more often found good reason to hit a wife if she *has been unfaithful* (56.3% vs. 37.0%). Compared to men exposed to one form of violence in childhood, men exposed to both forms more often found good reason to hit a wife if she *has been unfaithful* (56.3% vs. 46.4%) or *goes out without telling him* (10.0% vs. 5.1%). Otherwise, men's responses on the individual attitudinal items did not differ.

Overall, 19.7% of men agreed that a husband has good reason to hit his wife in three or more situations (Table 2). Compared to men exposed to neither form of violence in childhood, men exposed to one or both forms more often agreed that a husband has at least one good reason to hit his wife (68.6% and 69.4% versus 55.0%).

Multivariate Results

Attitudes about IPV—Compared to men exposed to neither form of violence in childhood, men exposed to one or both forms had higher unadjusted proportional odds of reporting such attitudes (Model 1, Table 3). These associations changed little with adjustments for confounders and control mediators (Model 2). In Model 3, men's perpetration of physical IPV was associated with 2.57 times the proportional odds of finding more good reasons for a husband to hit his wife, and exposure to violence in childhood was no longer significantly associated with attitudes about IPV. Men's age, schooling, and household wealth were negatively associated with reporting more good reasons for wife hitting (Models 2 and 3). No other covariates were associated with men's attitudes about IPV.

Perpetration of IPV—Compared to men exposed to neither form of violence in childhood, men exposed to one or both forms had higher unadjusted odds of ever perpetrating physical IPV (Model 1, Table 4). These associations strengthened with adjustments for confounders and control mediators (Model 2). In Model 3, men who found some or many good reasons for wife hitting had higher adjusted odds of ever perpetrating physical IPV than those who found no good reason; yet, both categories of exposure to violence in childhood remained significantly associated with the perpetration of IPV. Otherwise, living with in-laws and being older than ones wife were the only variables significantly associated with perpetration.

DISCUSSION

We explored, in the rapidly changing context of rural Vietnam, how men's exposure to violence in childhood is related to their attitudes about and perpetration of IPV against wives. In models adjusted for confounders and control mediators, men who witnessed physical IPV against their mother and/or who were hit or beaten in childhood by a parent or other adult relative had higher proportional odds of finding more good reasons for a husband to hit his wife. In another study in Vietnam, women witnessing father-to-mother violence in childhood also more often justified IPV in adulthood (not adjusting for confounders) [31]. Our study extends these findings by showing consistencies across gender in the influence of parental violence in childhood on attitudes about IPV. Yet, these associations became insignificant when men's perpetration of physical IPV was added, suggesting that men who perpetrate IPV are more likely to justify it than their counterparts, independent of their childhood exposure to violence.

In models adjusted for confounders and control mediators, men who witnessed and/or experienced violence in childhood had higher adjusted odds of perpetrating IPV. These results corroborate those from South Africa [36] and Uganda [37]. Also, consistent with research in the U.S. [26], men's attitudes about IPV modestly attenuated the associations between men's exposure to violence in childhood and their perpetration of IPV.

Limitations

Because our study was cross-sectional, all findings should be interpreted as associational. We did not measure all forms, nor the frequency and severity, of witnessing IPV and child maltreatment. Thus, our estimated effects likely are lower bounds of the true effects. Still, meta-analytic reviews suggest that experiencing corporal punishment in childhood is associated with various forms of violence in adulthood [25]. Too few men (n=18) had witnessed IPV without experiencing child maltreatment to disentangle their separate effects on the outcomes (results available upon request). The attitudinal questions on IPV against wives neither capture degrees of justification nor contextualized the situations by portraying the wife as "at fault" or "not at fault" [38]. Still, exploratory and confirmatory factor analyses of the 10 attitudinal items showed that the 6 retained items reflected well a unidimensional construct [34]. Validation of this scale in urban Vietnam and elsewhere is warranted.

Contributions

Our study is one of the few examining violence in childhood, attitudes about IPV, and IPV perpetration in a probability sample of men in a low-income setting. Also, we assessed exposure to two forms of violence in childhood. Because these forms of violence often co-occur, assessing only one would inflate its association with attitudes and perpetration [39].

Future Directions

Our findings suggest the need address exposure to violence in childhood, before IPV perpetration occurs. They also suggest pathways from violence in childhood that warrant longitudinal study (Figure 1). Namely, exposure to violence in childhood may be associated with a higher risk of perpetrating IPV directly, and indirectly through justifying IPV. In turn, the perpetration of IPV may lead to ex post facto justification of it. The “direct” pathway from violence in childhood to perpetration in our study suggests altered stress responses [4], which may elevate the risk of perpetrating IPV. Longitudinal studies are needed to disentangle the relationship between attitudes about and perpetration of IPV over time, and to assess whether trauma-associated stress in childhood underlies these relationships.

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List of Abbreviations and Acronyms

IPV	intimate partner violence
Witnessing IPV	witnessing IPV against mother
Experiencing physical maltreatment	hitting or beating by a parent or adult relative

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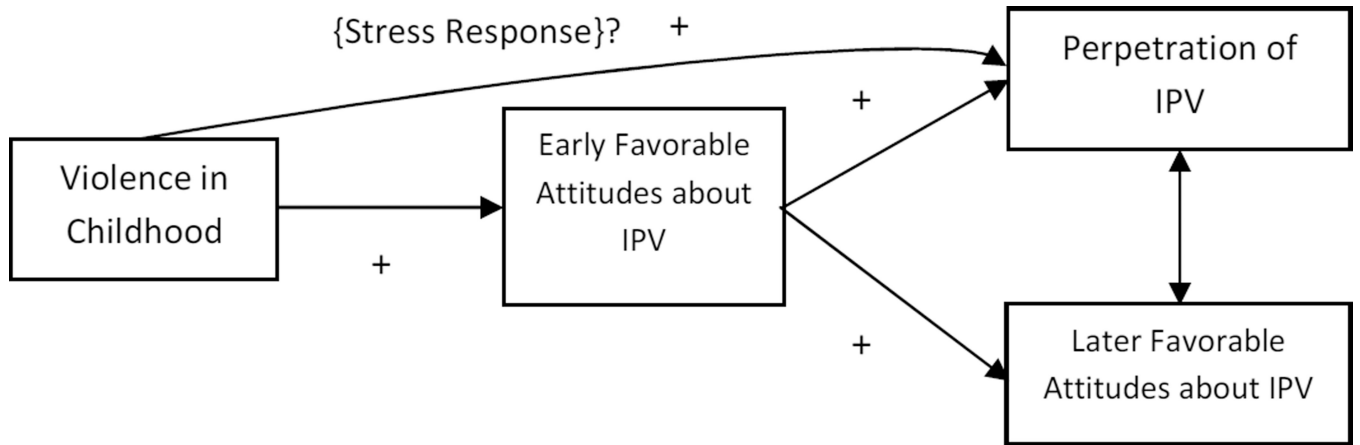


Figure 1. Violence in Childhood: Summary Pathways of Influence on Attitudes about and Perpetration of IPV

Sociodemographic Characteristics, Overall and by Type of Exposure to Violence in Childhood, N=522 Married Men 18–51 Years, My Hao district, Vietnam

Table 1

	By exposure to violence in childhood:				P-Value	
	Total (N=522)	Both ^a (N=122)	One ^b (N=273)	Neither ^c (N=127)	both vs. neither	one vs. the other
Percent of population (%)	24.4	50.9	24.7			
Covariates/Control Mediators						
Childhood residence (%)						
Same residence	95.9	95.6	95.5	96.9	0.517	0.287 0.961
Other residence	4.1	4.4	4.5	3.1		
Age, years	35.9	31.7	36.8	38.4	<0.001	0.016 <0.001
Living situation (%)					0.001	0.124 0.014
In-laws, natal family, or both	37.0	47.5	35.6	29.6		
Neither in-laws or natal family	63.0	52.5	64.4	70.4		
Number of children ever born	1.9	1.6	2.0	2.1	<0.001	0.312 <0.001
Completed grades of schooling (%)					<0.001	0.090 <0.001
0–7 grades	38.6	23.1	40.1	50.6		
8–12 grades	47.1	55.6	47.0	38.9		
>12 grades	14.3	21.3	12.9	10.5		
Schooling relative to wife (%)					0.001	0.662 0.010
Less education	24.4	19.4	25.2	27.8		
Same education	49.5	45.6	51.2	50.0		
More education	26.1	35.0	23.7	22.2		
Age relative to wife (%)					0.005	0.008 0.033
Younger	11.0	6.9	11.1	14.8		
Same	14.3	10.6	17.1	12.4		
Older	72.9	81.3	71.0	68.5		
Don't Know	1.8	1.3	0.9	4.3		
Household Economic Index (%)					0.029	0.018 0.087

	By exposure to violence in childhood:				P-Value	
	Total (N=522)	Both ^a (N=122)	One ^b (N=273)	Neither ^c (N=127)	both vs. neither	one vs. neither
Lowest Tertile	32.8	30.6	29.3	42.0		
Middle Tertile	35.4	29.4	38.9	34.0		
Highest Tertile	31.9	40.0	31.7	24.1		
Income relative to wife (%)					0.001	0.218
More	41.3	47.5	39.5	38.9		0.012
Less	10.2	13.8	10.5	6.2		
Same	39.5	34.4	39.5	44.4		
Don't Know	9.0	4.4	10.5	10.5		

^a Exposed to both witnessing IPV against mother and physical maltreatment

^b Exposed to either witnessing IPV against mother or physical maltreatment, but not both

^c Exposed to neither witnessing IPV against mother nor physical maltreatment

Prevalence of perpetrating physical IPV in adulthood and of finding 'good reason' for a husband to hit his wife in specific situations, overall and by type of exposure to violence in childhood, N=522 married men 18– 51 Years in My Hao district, Vietnam

Table 2

	By exposure to violence in childhood:						P-Value			
	Total (N=522)		Both ^a (N=122)		One ^b (N=273)		Neither ^c (N=127)			
	%	95% CI	%	95% CI	%	95% CI	both vs. neither	one vs. neither		
Lifetime Perpetration of Physical IPV										
Yes	28.1	(24.7, 31.7)	36.3	(31.5, 41.3)	31.1	(26.7, 35.9)	13.6	(9.4, 19.2)	<0.001	0.037
No	72.0	(68.3, 75.3)	63.8	(58.7, 68.5)	68.9	(64.1, 73.3)	86.4	(80.1, 90.6)		
Finding Good Reason to Hit a Wife if:										
She refuses to have sexual relations with him	4.0	(2.2, 7.0)	1.3	(0.5, 3.2)	4.8	(2.4, 9.3)	4.9	(2.6, 9.4)	0.057	0.921
She asks him whether he has other girlfriends	3.7	(2.3, 5.9)	4.4	(2.2, 8.7)	3.0	(1.4, 6.3)	4.3	(2.5, 7.5)	0.979	0.094
He finds out that she has been unfaithful	46.5	(41.9, 51.2)	56.3	(48.1, 64.1)	46.4	(40.4, 52.5)	37.0	(30.3, 44.4)	0.001	0.054
She goes out without telling him	7.2	(5.0, 10.1)	10.0	(5.8, 16.7)	5.1	(3.5, 7.4)	8.6	(5.9, 12.6)	0.627	0.017
She neglects the children	25.7	(21.1, 31.0)	30.6	(23.3, 39.1)	24.8	(18.7, 32.0)	22.8	(18.9, 27.3)	0.070	0.568
She rudely argues with him	47.2	(42.0, 52.4)	51.9	(44.8, 58.9)	47.0	(39.7, 54.4)	42.9	(36.1, 49.9)	0.069	0.368
Overall									0.016	0.002
Agree with none	34.6	(30.0, 39.5)	30.6	(23.9, 38.3)	31.4	(25.9, 37.5)	45.1	(37.4, 53.0)		
Agree with 1–2 items	45.7	(42.3, 49.2)	44.4	(37.3, 51.7)	51.5	(47.2, 55.8)	35.2	(29.0, 42.0)		
Agree with 3 or more items	19.7	(16.2, 23.7)	25.0	(18.9, 32.3)	17.1	(12.5, 22.9)	19.8	(15.7, 24.6)		

^a Exposed to both witnessing IPV against mother and physical maltreatment

^b Exposed to either witnessing IPV against mother or physical maltreatment, but not both

^c Exposed to neither witnessing IPV against mother nor physical maltreatment

Odds ratios from ordered logistic models of the relationship between childhood exposure to violence and attitudes about IPV against women (0, 1–2, 3–6 good reasons to hit a wife), N=522 married men 18–51 years in My Hao district, Vietnam

Table 3

	(1)	(2)	(3)
	OR (95% CI)	OR (95% CI)	OR (95% CI)
	p	p	p
Exposure to Violence in Childhood			
Experienced or witnessed violence (ref: neither)	1.41 (1.03, 1.93)	* 1.43 (1.03, 2.00)	* 1.21 (0.86, 1.69)
Experienced and witnessed violence (ref: neither)	1.74 (1.13, 2.67)	** 1.66 (1.05, 2.64)	* 1.33 (0.83, 2.14)
Lifetime Perpetration of IPV in Adulthood			
Perpetrated physical IPV as an adult (ref: no)			2.57 (1.93, 3.41) ***
Covariates/Control Mediators			
Childhood residence other (ref: same town)		0.58 (0.32, 1.07)	0.59 (0.31, 1.14)
Age, years		0.96 (0.94, 0.98)	*** 0.96 (0.94, 0.98) ***
Living with in-laws or natal family (ref: neither)		0.80 (0.58, 1.10)	0.85 (0.61, 1.19)
Number of children ever born		1.05 (0.89, 1.22)	1.05 (0.90, 1.23)
Completed grades of schooling (ref: 0–7)			
8–12		0.84 (0.62, 1.15)	0.85 (0.64, 1.13)
>12		0.49 (0.33, 0.75)	*** 0.55 (0.36, 0.84) **
Schooling relative to wife (ref: same)			
More		1.04 (0.74, 1.44)	0.98 (0.72, 1.33)
Less		0.82 (0.64, 1.05)	0.80 (0.63, 1.02)
Age relative to wife (ref: same age)			
Younger		1.42 (0.83, 2.42)	1.45 (0.83, 2.55)
Older		1.20 (0.80, 1.81)	1.29 (0.87, 1.93)
Household Economic Index (ref: middle tertile)			
Lowest tertile		1.03 (0.78, 1.36)	** 1.00 (0.76, 1.33) ***
Highest tertile		0.60 (0.44, 0.81)	0.57 (0.42, 0.77)
Income relative to wife (ref: same)			
More		1.13 (0.72, 1.76)	1.11 (0.71, 1.74)
Less		1.39 (0.76, 2.54)	* 1.36 (0.77, 2.40)

Note. Models also control for “don’t know” responses for age and income relative to wife.

1000
;500
p
*
0.01;p
**

Table 4

Odds ratios from logistic models of the relationship between childhood exposure to violence and lifetime perpetration of physical IPV against women, N=522 married men 18–51 years in My Hao district, Vietnam

	(1)		(2)		(3)	
	OR	(95% CI)	p	OR	(95% CI)	p
Exposure to Violence in Childhood						
Experienced or witnessed violence (ref: neither)	2.88	(1.91, 4.34)	****	3.28	(2.15, 4.99)	****
Experienced and witnessed violence (ref: neither)	3.62	(2.38, 5.51)	****	4.56	(2.90, 7.17)	****
Attitudes in Adulthood about IPV against Women						
Found <i>some</i> (1–2) good reasons to hit a wife (ref:none)				2.38	(1.73, 3.26)	****
Found <i>many</i> (3–6) good reasons to hit a wife (ref:none)				4.50	(2.74, 7.41)	****
Covariates/Control Mediators						
Childhood residence other (ref: same town)	0.68	(0.36, 1.28)		0.78	(0.41, 1.48)	
Age, years	1.01	(0.98, 1.03)		1.02	(0.99, 1.05)	
Living with in-laws or natal family (ref: neither)	0.68	(0.51, 0.92)	**	0.71	(0.50, 1.01)	*
Number of children ever born	0.88	(0.67, 1.16)		0.85	(0.63, 1.14)	
Completed grades of schooling (ref: 0–7)						
8–12	0.87	(0.60, 1.25)		0.95	(0.68, 1.32)	
>12	0.49	(0.30, 0.78)	**	0.59	(0.37, 0.95)	*
Schooling relative to wife (ref: same)						
More	1.28	(0.86, 1.91)		1.32	(0.99, 1.76)	
Less	1.20	(0.89, 1.62)		1.28	(0.88, 1.86)	
Age relative to wife (ref: same age)						
Younger	1.18	(0.73, 1.93)		1.06	(0.64, 1.77)	
Older	0.74	(0.51, 1.07)		0.69	(0.48, 1.00)	*
Household Economic Index (ref: middle tertile)						
Lowest tertile	2.03	(0.63, 6.59)		2.37	(0.66, 8.48)	
Highest tertile	1.18	(0.89, 1.58)		1.17	(0.88, 1.56)	
Income relative to wife (ref: same)						
More	1.20	(0.73, 1.95)		1.36	(0.86, 2.14)	
Less	1.25	(0.92, 1.70)		1.23	(0.89, 1.68)	

Note. Models also control for "don't know" responses for age and income relative to wife.

* p 0.05;

*** p 0.01; p 0.001