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Like parent, like child: Intergenerational transmission of partner violence in Cebu, Philippines

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Abstract

Purpose—This study investigates the prevalence of partner violence perpetration and receipt among a sample of young men and women in the Philippines, as well as the relationship between witnessing inter-parental violence during childhood and current violence in partnerships.

Methods—We used 1994, 2002, and 2005 data from 472 married or cohabiting young adults from the Cebu Longitudinal Health and Nutrition Survey in Cebu, Philippines. This is a longitudinal data set following over 2,000 Filipino women and their index children since the child's birth in 1983–1984.

Results—Prevalence of partner violence perpetration was 55.8% for female and 25.1% for male respondents. Prevalence of victimization was 27.7% for females and 30.5% for males. Forty-five percent of females and 50% of males reported having witnessed their parents/caretakers physically hurt one another during childhood. Multinomial logistic regression analysis showed that witnessing inter-parental violence significantly predicted report of violent act victimization and reciprocal violent acts. Greater parental joint decision-making and being male were independently associated with a lower risk of report of both reciprocal violent acts and violent act victimization. Duration of marriage or cohabitation was associated with report of violent act victimization and reciprocal violent acts. There were gender interaction effects for several factors, including mother's church attendance and household purchase of alcohol at age 11.

Conclusions—Implications for further research and violence prevention programs include early intervention with adolescents and focus on gender differences in violence determinants.

Keywords

Adolescent; Youth; Intimate partner violence; Domestic violence; Intergenerational transmission; Asia; Philippines

Around the world, between 10 and 69 percent of women report having been physically assaulted by a male partner at some point in life[1]. In developing countries, partner

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violence is the most common form of violence to which women are exposed [2]. There is growing evidence of the negative impacts of partner violence on women's mental and physical health, with studies finding links between partner violence and adverse outcomes such as HIV and other STDs, unintended pregnancy, depression, and chronic diseases such as heart disease [3–7].

Studying partner violence in the early relationships of young adults can help to identify ways to prevent long-term cycles of abuse. Research has shown that partner violence is common amongst young adults in early relationships [8–10]. Many of these same studies, primarily in developed country contexts, also suggest a gender difference in partner violence perpetration rates, with young females perpetrating more than their male counterparts [8–12]. Such findings and their interpretation have been controversial for a variety of reasons, including the assumption that the samples and data from population based studies, like those cited here, are similar to those from police and shelter studies [13]. Much of the controversy also stems from assuming that the types and context of violence carried out by women are the same as those by men. Indeed, a recent study from the U.S. illustrates the difference between the context of female perpetration versus victimization. Female victims were more likely than male victims to report higher scores on the Women's Experience with Battering (WEB) Scale, a measure of abuse of power and control and fear factors in intimate relationships [14]; higher scores indicate greater battering victimization.

A recurrent theme in partner violence literature is that exposure to inter-parental violence during childhood may influence violence in the child's own future partnerships. Research in developed and developing country settings shows that growing up amidst inter-parental violence is associated with one's own violence perpetration and victimization [15–23]. Most of the research on intergenerational violence transmission, however, has been limited by use of cross-sectional data. Two exceptions are Ehrensaft et al. and Fergusson et al., who used longitudinal data from the U.S and New Zealand, respectively [17, 24].

Estimates of partner violence against women in the Philippines range from 11 to 26% [25–28] and recent research suggests that levels of any violence (male or female perpetrated) in a partnership may be much higher at 42% [29]. Attitudes accepting violence appear common in this context. Twenty four percent of women report believing that a husband is justified in hitting or beating his wife in at least one situation, particularly when this situation is child neglect [30]. Research exploring the dynamics of partner violence in the Philippines suggests that joint household decision-making and frequent church attendance are associated with decreased risk of violence, while alcohol use by the woman and family history of partner violence are associated with an increased risk [27, 29].

The Philippines presents a unique context for exploring partner violence. Marital dynamics typically involve greater female power than in other parts of Asia and in other areas of the developing world [31]. While the husband is the official household head, the wife holds a fairly high status in the family [32]. Also, as women expand their roles outside of the home and as Filipino society clears old legal hurdles for greater female power in marriage, the power structure in Filipino marriage is shifting. While in the past, only the males in a family were allowed to pursue higher education, women's educational attainment now parallels that

of men [32]. Accordingly, women are now entering into jobs and activities that once were reserved for men. Furthermore, societal norms have gradually shifted more towards gender equality and most of the laws that once forced the wife to be subordinate to the husband have been changed[32].

The understanding of predisposing factors for partner violence, particularly for young adults, is limited in developing country contexts. This study extends previous research by exploring partner violence perpetration and victimization and intergenerational transmission of violence in a longitudinal sample of young adults in the Philippines. The aims of the analysis were to determine: (a) the prevalence and gender differences in partner violence perpetration versus victimization, (b) whether exposure to inter-parental violence during childhood predicts current partner violence, and (c) whether the potential relationship between inter-parental violence exposure and current partner violence varies based on gender.

Methods

Study setting

Cebu, an island and province of the Philippines, has the fastest growing economy in the region. As the home to over two million people, Metro Cebu is the second largest city in the Philippines. Metro Cebu is a highly urbanized center as well as a major port city.

Data Collection

The data reported here are part of the Cebu Longitudinal Health and Nutrition Survey (CLHNS). The CLHNS began following all pregnant women, in their 6th to 7th month of pregnancy in Cebu in 1983–84. Follow-up has continued for these women and the birth cohort (children who were born in 1983–84) in 1991, 1994, 1998–2000, 2002, and 2005. We focus on partner violence data from the young adults interviewed in 2005, when they were, on average, age 21. We use data from the 2002 survey of the children and from the 1994 mothers' survey to look at predictors of partner violence.

The University of North Carolina School of Public Health institutional review board for research involving human subjects approved all survey rounds; the Johns Hopkins Bloomberg School of Public Health Committee on Human Research also approved the 2002 and 2005 surveys. For each survey round, the risks and benefits were explained to participants and written informed consent was obtained. Participants were assured that responses would be kept confidential. All names were stripped from the data, and only assigned identification numbers remained.

The 2005 survey round included 1,912 young adults from the birth cohort. Data analysis was restricted to married or cohabiting respondents for which complete information, including mothers' data, was available. Never married or non-cohabitating respondents were excluded because the vast majority of violent acts were committed in married or cohabiting relationships. There were only seven reports of violent act perpetration or victimization amongst never married or non-cohabitating respondents; in contrast 229 of the 472 final married or cohabiting sample reported violent acts. The number of unmarried respondents

excluded was 1389, leaving 523 married respondents in the sample. For 39 of the married respondents, the mother was not interviewed in 1994, and another 6 of these respondents were lost to follow-up in 2002. Of the remaining 478 respondents with complete information, five were excluded because they were twins and independence of data could not be assumed. One was excluded because the respondent had a same sex partner. The final sample size was 472; 140 respondents were married, and 332 were cohabitating. Married and cohabitating respondents were combined in the analyses; there were no differences in violence outcomes between these relationship categories.

Measure

Current Partnership Characteristics—The 2005 CLHNS contained a series of questions concerning physical violence perpetrated by or against the respondent based on questions from the Conflict-Tactics Scale [33]. The violent actions included the following actions towards someone else in the context of a fight or dispute: (1) Threw something; (2) Pushed, grabbed, or shoved, (3) Hit (not with anything); (4) Hit with something hard, and; (5) Harmed enough to need medical attention. Although lifetime violence was asked, given the age and duration of relationships, we focused on violence between intimate partners in the past year. In addition, both perpetration and victimization as well as frequency was asked for each type of violence. We explored each type of violence as an outcome (see Figures 1 and 2), but found no significant differences based on type of violence. Given the relatively small sample size for multivariate analyses, we focus on physical violence in the last 12 months with three dichotomous measures: 1) Violence perpetration - respondent violent against partner; 2) Violence victimization - partner violent against respondent, and; 3) Reciprocal violence – both respondent and partner report one or more violent acts against the other. Each participant was categorized into one of these three mutually exclusive categories.

We also included the respondent's 2005 report of the duration, in months, of the current marriage or cohabitation.

Maternal and Household Characteristics—Based on the 1994 mother's survey, we developed a household decision-making index, based on the number of major decisions in which the mother and her partner jointly have the final say, as reported by the mother. Questions asked who in the household decides on: buying the children's clothes, children's schooling, taking children to the doctor, buying the wife shoes, gifts for wife's relatives, major household purchases, wife traveling outside Cebu, wife working outside the home, using family planning, and choice of family planning method. These 10 dichotomous items (0=No joint final say, 1=Joint final say) were added together to create an index ranging from 0 to 10 with an alpha coefficient of 0.80. Missing values were typically found when a given decision was not made in the household, and case-wise deletion was applied.

Based on the 1994 mothers' survey, when the young adult was age 11, we included maternal reports of urban or rural residence, household wealth based on asset ownership of TV, VCR, iron, refrigerator, electric fan, bicycle, living room set, air conditioner, bed, bed with mattress, household income, whether the parents purchased any alcohol. Parental alcohol

consumption data was not available, and so alcohol purchase was used as an approximation. Data from when the young adult was 11 was used because the investigators thought this was an influential time point to be exposed to alcohol in the household.; at this time Filipino youth are typically not yet engaging in their own high risk behaviors. Maternal characteristics included number of school grades completed, church going frequency (once a week or more versus less), and age.

Intergenerational Violence—The young adult’s report of witnessing of violence, based on the 2002 CLHNS, was measured based on response to two questions: (1) “Do you remember if either of your parents/caretakers ever hit, slapped, kicked, or used other means like pushing or shoving to try to hurt the other physically when you were growing up?” and if the answer was affirmative; (2) “Who hurt the other physically?” We created a four-level variable (0=no witness of violence between parents, 1= mother, 2= father, 3= both).

Individual Characteristics—Based on the young adults’ reports in the 2002 CLHNS, we included a household decision-making index (alpha coefficient = 0.85), with the same components as those for the mothers, frequent church attendance (once a week or more versus less than once a week), and number of grades completed. With a birth cohort, there was negligible age variation.

Analytic Strategy

Analysis was conducted in three phases. First, we explored the characteristics of the sample, stratified by gender. Next, using chi-square tests and ANOVA models, we examined the associations between the intergenerational, maternal and household characteristics, partnership characteristics and individual characteristics and young adult reports of current violent acts. Finally, we used multinomial logistic regression to examine the risk factors for any physical violence acts in current relationships during the past 12 months. We compared young adults who reported no violent acts, to those who reported violent act perpetration or victimization, or reciprocal violent acts; multinomial logistic regression was used to simultaneously estimate the relationships of the predictors with each violence category. Predictors were entered in blocks in the following order: (1) Individual and intergenerational characteristics; (2) Partnership characteristics, and; (3) Maternal and household characteristics.

Preliminary analyses suggested gender differences in the relationships between the independent and dependent variables. Ideally, given initial analyses, we would have conducted gender-stratified multinomial logistic regression. However, this was not possible due to limited sample size. We instead included a gender term in the models and tested for gender interactions.

Results

Sample characteristics and reporting of violence

Table 1 shows the characteristics of the sample, stratified by gender. Male respondents came from households with a greater number of assets, greater income, and a mother reporting

more frequent church attendance than female respondents. Additionally, marriage or cohabitation duration tended to be shorter for males than females.

There were striking differences between the males and females in terms of violence perpetration. Many more females reported committing violent acts towards their partners, compared to males (55.8% vs. 25.1%, $n=285$ vs. $n=187$, $p=0.0001$). Similar results were found for the respondent's report of "Either respondent or partner violent against other," although the bulk of these cases for female respondents were due to the female violence perpetration of violent acts (55.8% out of 59.3%). Table 2 shows the prevalence of specific types of violent acts by whether the respondent reported violent act perpetration or victimization and by gender.

Forty-five percent of the 285 females and 50% of the 187 males reported having witnessed violence between their parents. There were no statistically significant gender differences in overall report of witnessing violence between parents or in the breakdown of which parent hurt the other.

Bivariate analysis

Table 3 describes factors associated with the respondents' reports of violent act perpetration and victimization, and reciprocal violent acts compared to couples with no violence in 2005. Respondents who reported violent act perpetration in 2005 were significantly less likely to be male (RRR=0.03) and more likely to live in a rural area (RRR=2.81) or to have been with their partner for 25–36 months (RRR= 1.98). Respondent report of violent act victimization was significantly associated with witnessing maternal perpetration (RRR=4.18) and fewer decisions made jointly between parents (RRR=0.82). Report of violent act victimization was also associated with relationship duration of 37 to 48 months (RRR=3.28) and over 48 months (RRR=3.62). Report of reciprocal violent acts was more common if the respondent reported paternal perpetration (RRR=1.89) and relationship duration in any category greater than 12 months (13–24 mo., RRR=3.54; 25–36 mo., RRR=3.79; 37–48 mo., RRR=3.48; Over 40 mo., RRR=5.65), and less common if the respondent was male (RRR=0.58) and had parents who made more decisions jointly (RRR=0.91).

Multivariate analysis

We conducted multinomial logistic regression to better understand respondents' report of violent act perpetration and victimization, and reciprocal violent acts (Table 4). Some of the observed effects in Table 3 were attenuated. Of the intergenerational, individual, maternal and household characteristics, only respondents' gender significantly predicted report of violent act perpetration, with males having a lower risk.

For report of violent act victimization, report of maternal perpetration, paternal perpetration, relationship duration of 37 to 48 months, and relationship duration of over 48 months were independently associated with an increased risk of reporting violent acts. Higher mother's education and greater parental joint decision-making were associated with a lower risk of reporting violent act victimization.

Compared to respondents reporting relationship duration of 12 months or less, longer relationships were related to a higher risk of report of reciprocal violent acts; the longest relationship category, over 48 months, had the highest risk. Also, reports of witnessing paternal perpetration was borderline significantly associated with increased risk of report of reciprocal violent acts. More joint household decision-making was significantly associated with a lower risk of reciprocal violent acts.

We further explored the significance of gender using interactions in the multinomial regressions (data not shown). For report of violent act perpetration, there were significant gender interaction effects for income and mother's age. Compared to males, female respondents were less likely to report perpetrating violent acts with greater household income (OR=0.50, 95% CI 0.27, 0.91) and older mothers (OR= 0.67, 95% CI 0.55, 0.80). Similarly, compared males, females were less likely to report violent act victimization with higher household income (OR=0.46, 95% CI 0.22, 0.97). Finally, males had a lower risk of reporting violent acts if their mothers attended church more often (OR= 0.39, 95% CI 0.16, 0.99) and higher if their mothers reported household purchase of any alcohol when they were age 11 (OR= 2.19, 95% CI 0.94, 5.09), as compared to females.

Discussion

This study builds on previous intimate partner violence research using the CLHNS data set [27, 29, 34], making several new contributions to understanding the nature and determinants of violence in early partnerships of young adults. This is the first study using CLHNS data to look at intergenerational and other predictors of intimate partner violence for both males and females. We also break new ground by looking at the relation between household decision-making during childhood and intimate partner violence.

The current relationships of the respondents were heavily afflicted by violence and there were particularly high rates of female report of violent act perpetration. These violence levels are higher than those found in U.S. and other developed country studies. These report a range of 15–35% perpetration by young males and 28–42% perpetration by young females [8, 9, 11, 35]. Developing country studies on male versus female perpetration in young adulthood are scarce. One study in South Africa, however, suggests that our findings may also be high for females in developing country contexts. Swart et al. found 44% of females and 35% of males reporting violence perpetration [12].

While there were high rates of violence in these relationships, it is important to note that a high proportion of the sample also reported using more positive relationship behaviors. Roughly 50 to 80% of the respondents reported discussing an issue calmly or getting information to back up their side of an argument.

Our finding that witnessing parental violence is associated with a higher risk of report of violent act victimization is consistent with other research [17, 18]. Curiously, however, we did not find a significant relationship between report of violent act perpetration and witnessing violence. This is consistent with some other studies [36] and suggests that those who witness parental violence may be more prone to violent act victimization than

perpetration. They may also be choosing mates who are similar to their parents in the way that they use violence.

Our study found that respondents reporting violent act victimization or reciprocal violent acts tended to be in longer term relationships than those respondents who reported no current violent acts. Several other studies have similarly found that duration of relationship predicts violence among respondents reporting minor violence [37, 38]. It is possible that partnership duration predicts long-term risk of violence or that respondents in newer partnerships are less likely to report physical violence [38].

We identified some evidence of inter-generational gender-specific influences. Most notable was that males had a lower risk of reporting reciprocal violent acts if their mothers attended church more often and a higher risk if their mothers reported household purchase of any alcohol when the respondents were age 11, as compared to females. Other research supports a protective effect of church attendance on partner violence [27, 39, 40] but the mechanism for this effect and the possible gender differences are not well-described. It is possible that witnessing alcohol use by a parent differentially influences violence perpetration in their children. The finding that more parental joint household decisions during childhood is associated with a decreased risk of partner violence is consistent with other research [27, 41]. Similarly, Upadhyay and Hindin showed that when parents reported more joint household decisions, sons reported delaying first sex; this suggests more positive health behaviors, since early sexual activity is linked to high risk health behaviors, such as not using contraceptives [42]. The pattern of the association we found again suggests mate selection based on parental modeling. Respondents from families in which joint decision-making is the norm may choose partners who echo these equitable relationship values. Partners with more equitable relationships may treat each other differently than those with less equitable relationships and be less likely to use violence.

There are potential limitations to this study. First, underreporting of violence is a common research problem. Also, the finding of high female violence perpetration rates could be due to under-reporting by males. A meta-analysis of reporting agreement between partners found that participants tend to self-report less violence perpetration than their partners ascribe to them; this bias was smaller for women than for men [43]. Furthermore, this study does not consider the context of violent actions. Some research suggests that partner violence against women, in contrast to partner violence against men, occurs amidst a context of abuse of power and control. [14] It also does not address the potential difference between frequency of perpetration versus victimization in the reciprocal violence category. For example, it is possible that a woman hit her partner once in the past year, while her partner hit her 20 times; this would have been categorized as “reciprocal” violent acts, with no recognition that most of the violence was perpetrated by the partner.

Other potential limitations are selection bias and bias in report of inter-parental violence. It is possible that report of inter-parental violence was biased by the respondents' experiences with previous dating violence. Also, these relationships are early partnerships and the respondents may be different from those who would have later partnerships. In fact, we know that those who enter partnerships earlier in Cebu are more likely to have completed

fewer years of school and to have mothers who completed fewer years of school, compared to those not already in partnerships; also, females who enter partnerships earlier in Cebu are more likely to have fewer household assets and a lower household income in childhood and to have mothers reporting fewer joint household decisions, compared to those females who are not yet married or cohabitating (data not shown). Other studies have shown that violence risk or levels may be higher in younger versus older age groups [44–46].

Moreover, some studies have found that child abuse and community level violence play a role in intergenerational violence transmission [17, 20]. The current study did not look at such factors.

The primary strength of this study's design is its longitudinal, developing country sample of both males and females. The use of prospective inter-parental violence report is particularly important in reducing the likelihood of respondents rationalizing current relationship violence, a key concern in cross-sectional studies of intergenerational violence. Other strengths include the use of multi-directional current violence and inter-parental violence variables and the ability to look at power dynamics in the childhood household through decision-making.

Our study is among the first in the developing world to explore intergenerational violence transmission with not only a longitudinal sample, but also with both men and women. The findings have key implications for violence prevention work. Early partnerships are an ideal point at which to break family cycles of violence and programs and policies should focus on such young adults. There is also a need to broaden the conceptualization of intimate partner violence with recognition that intergenerational violence transmission knows no gender boundaries. Further research on gender differences in violence determinants is essential, as most research to date has focused on male perpetration and its correlates.

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Table 1

Characteristics of the sample: Cebu, the Philippines, 2005 (n=472)

	Males (n=187)	Females (n=285)
<i>Current partnership characteristics (2005)</i>		
Duration of marriage or cohabitation [†]		
12 months or less	40.1	22.8***
13–24 months	31.6	21.8
25–36 months	16.0	18.3
37–48 months	8.0	17.5
Over 48 months	4.3	19.7
Physical violence in current partnership, last 12 months, %		
Respondent violent against partner	25.1	55.8***
Partner violent against respondent	30.5	27.7
Either respondent or partner violent against other	32.1	59.3***
Both respondent and partner violent against other	23.5	24.2
Neither respondent nor partner violent against other	67.6	40.7***
<i>Intergenerational violence and individual characteristics (2002)</i>		
Recall of parental domestic violence, %		
Either parent hurt the other	50.3	44.9
Mother hurt father	16.0	15.8
Father hurt mother	27.8	25.3
Both hurt each other	6.4	3.9
Household decision-making index for respondent (range 0–10), mean (SD)	1.4 (2.4)	1.4 (2.2)
Age (range 17–19), y, mean(SD)	18.4 (.5)	18.3 (.49)
Years of school completed (range 1–13), mean (SD)	7.4 (2.9)	8.4 (2.9)
Frequent church attendance, %	40.1	48.8 [‡]
<i>Maternal and household characteristics (1994)</i>		
Urban residence, %	25.1	31.6
Household assets, number of items (range 0–12), mean (SD)	4.6 (3.1)	3.7 (3.0)**
Income (range 24.9–4101.7), pesos, mean (SD)	486.7 (466.5)	403.5 (298.8)*
Household purchased any alcohol, %	45.5	44.2
Years of school completed by mother (range 1–16), mean(SD)	6.6 (3.8)	6.3 (3.3)
Mother's age in 1994 (range 25–58), y, mean(SD)	37.1 (6.2)	37.6 (6.4)
Frequent church attendance, mother, %	58.3	51.9
Parental joint decision-making index in 1994 (range 0–10), mother's report, mean (SD)	4.1 (2.6)	4.3 (2.7)

[‡] p 0.10,

* p 0.05,

** p 0.01,

*** p 0.001

¹P value for trend.

Table 2

Report of violent acts by the sample and partners (reported by the sample): Cebu, 2005 (n=472)

	Males (n=187)	Females (n=285)
<i>Respondent to/against partner</i>		
Discussed the issue calmly	58.3	79.3***
Got information to back up side of the argument	48.7	68.8***
Brought in or tried to bring in someone to help settle things	4.8	6.3
Excessively nagged	33.7	61.4***
Yelled or insulted one	40.0	59.0***
Swore at the other one	33.7	57.6***
Sulked or refused to talk about argument	41.2	61.1***
Stomped out of the room	21.9	44.6***
Threw or smashed at something (but not at anyone)	13.4	20.0 [†]
Had something in your hand to throw at anyone, but didn't throw it	19.3	36.5***
Threw something at	9.6	19.7***
Pushed, grabbed or shoved	18.2	40.0***
Hit	14.4	44.0***
Hit with something hard	2.1	11.0***
Harmed enough to need medical attention	0.0	1.0
<i>Partner to/against respondent</i>		
Discussed the issue calmly	57.2	73.0***
Got information to back up side of the argument	51.3	57.2
Brought in or tried to bring in someone to help settle things	5.4	4.6
Excessively nagged	45.5	32.6**
Yelled or insulted one	40.0	40.0
Swore at the other one	35.8	31.2
Sulked or refused to talk about argument	51.3	37.5**
Stomped out of the room	20.3	30.0*
Threw or smashed at something (but not at anyone)	12.8	13.0
Had something in your hand to throw at anyone, but didn't throw it	19.3	18.6
Threw something at	12.8	10.2
Pushed, grabbed or shoved	19.3	20.7
Hit	18.2	15.8
Hit with something hard	4.8	3.5
Harmed enough to need medical attention	0.0	1.4

[†] p 0.10,

* p 0.05,

** p 0.01,

p 0.001

Table 3
 Bivariate multinomial logistic regression analysis results: Relationship violence in the previous 12 months among 472 men and women in Cebu, 2005

	Perpetration		Victimization		Reciprocal	
	RRR [†]	95% CI	RRR	95% CI	RRR	95% CI
<i>Current partnership characteristics (2005)</i>						
Duration of marriage or cohabitation (reference is 12 months or less)						
13–24 months	1.15	0.58, 2.29	1.23	-.32, 4.74	3.54	1.82, 6.91***
25–36 months	1.98	0.96, 4.07 [†]	2.64	0.72, 9.66	3.79	1.80, 7.99***
37–48 months	1.91	0.88, 4.17	3.28	0.89, 12.11 [†]	3.48	1.56, 7.74**
Over 48 months	3.58	1.67, 7.70	3.62	0.89, 14.63 [†]	5.65	2.52, 12.71***
<i>Intergenerational violence and individual characteristics (2002)</i>						
Who perpetrated violence (reference is no violence)						
Mother	1.18	0.60, 2.34	4.18	1.37, 12.70**	1.65	0.86, 3.17
Father	0.97	0.54, 1.75	2.80	0.97, 8.07 [†]	1.89	1.11, 3.19*
Both	1.19	0.35, 4.03	2.25	0.25, 20.36	2.96	1.11, 7.88
Years of school completed	1.08	0.99, 1.18	0.91	0.80, 1.04	1.01	0.93, 1.09
Frequent church attendance	1.15	0.71, 1.86	0.79	0.33, 1.90	1.01	0.65, 1.58
Household decision-making	1.03	0.94, 1.14	1.10	0.93, 1.29	0.95	0.86, 1.05
Male	0.03	0.01, 0.10***	1.19	0.50, 2.81	0.58	0.37, 0.92*
<i>Maternal and household characteristics (1994)</i>						
Mother's age	1.00	0.96, 1.04	1.00	0.94, 1.07	0.97	0.93, 1.00 [†]
Mother's years of school completed	0.96	0.90, 1.03	0.88	0.77, 1.01 [†]	1.02	0.96, 1.09
Maternal church attendance	0.68	0.42, 1.10	1.00	0.42, 2.34	0.92	0.59, 1.45
Parental joint decision-making	1.00	0.91, 1.09	0.82	0.70, 0.97*	0.91	0.83, 0.99*
Purchased any alcohol	1.39	0.86, 2.24	2.30	0.96, 5.52 [†]	1.35	0.86, 2.12
Income	0.90	0.65, 1.26	1.13	0.62, 2.07	1.09	0.80, 1.49
Household assets	0.94	0.87, 1.02	0.93	0.80, 1.08	0.97	0.90, 1.04
Rural	1.70	1.03, 2.81*	1.37	0.56, 3.38	0.66	0.38, 1.12

[†] p 0.10,
* p 0.05,
** p 0.01,
*** p 0.001
[‡] Adjusted relative risk ratio (RRR)

Table 4

Multinomial logistic regression analysis results: Relationship violence in the previous 12 months among 472 men and women in Cebu, 2005^{1,2}

	Perpetration		Victimization		Reciprocal	
	RRR [‡]	95% CI	RRR	95% CI	RRR	95% CI
<i>Current partnership characteristics (2005)</i>						
Duration of marriage or cohabitation (reference is 12 months or less)						
13–24 months	1.06	0.56, 1.96	2.00	0.55, 7.24	3.48	1.67, 7.25 ^{****}
25–36 months	1.38	0.60, 3.18	2.94	0.69, 12.50	3.49	1.63, 7.49 ^{****}
37–48 months	1.14	0.45, 2.85	5.79	1.42, 23.58 [*]	3.03	1.10, 8.35 [*]
Over 48 months	1.80	0.62, 5.17	4.85	1.29, 18.22 [*]	5.20	2.53, 10.67 ^{****}
<i>Intergenerational violence and individual characteristics (2002)</i>						
Who perpetrated violence (reference is no violence)						
Mother	1.29	0.57, 2.91	5.35	1.99, 14.35 ^{****}	1.49	0.87, 2.54
Father	1.07	0.63, 1.82	3.79	1.02, 14.02 [*]	1.72	0.96, 3.06 [‡]
Both	2.02	0.36, 11.38	2.81	0.29, 27.07	3.12	0.80, 12.22
Years of school completed	1.07	0.95, 1.20	0.98	0.81, 1.20	1.02	0.92, 1.13
Frequent church attendance	1.03	0.55, 1.93	1.08	0.45, 2.61	1.03	0.63, 1.69
Household decision-making	0.97	0.87, 1.09	1.21	0.92, 1.60	0.97	0.88, 1.08
Male	0.03	0.01, 0.19 ^{****}	1.71	0.69, 4.25	0.71	0.43, 1.17
<i>Maternal and household characteristics (1994)</i>						
Mother's age	0.99	0.94, 1.05	1.01	0.94, 1.10	1.03	0.95, 1.12
Mother's years of school completed	0.96	0.88, 1.05	0.89	0.78, 1.00 [‡]	1.03	0.95, 1.12
Maternal church attendance	0.77	0.39, 1.55	1.27	0.56, 2.88	0.93	0.56, 1.55
Parental joint decision-making	0.97	0.87, 1.09	0.79	0.64, 0.97 [*]	0.91	0.84, 0.99 [*]
Purchased any alcohol	1.44	0.81, 2.58	1.99	0.83, 4.75	1.16	0.68, 2.00
Income	1.07	0.65, 1.77	1.20	0.61, 2.35	1.19	0.78, 1.82
Household assets	1.01	0.88, 1.16	0.98	0.76, 1.26	0.92	0.82, 1.03
Rural	1.72	0.95, 3.12	2.03	0.80, 1.20	0.78	0.41, 1.47

¹ Adjusted for all other variables in table

² Data clustered by Barangay (neighborhood)

[†] p 0.10,

* p 0.05,

** p 0.01,

*** p 0.001

[‡] Adjusted relative risk ratio (RRR)