

Mahua Mandal

**Intergenerational Transmission of Violence in Cebu, Philippines:  
Keeping it in the Family**

## **I. Abstract**

This study investigates the effects of witnessing interparental violence among Filipino youth on their own use and experience of violence with their families. Using data from the Cebu Longitudinal Health and Nutrition Survey, we assessed perpetration and victimization of family violence in the previous 12 months among 21-22 year old youth through 2005 self-reports, and witnessing interparental violence during childhood through 2002 self-reports. We described the prevalence of youths' perpetration-only, victimization-only, and bidirectional experience of intrafamilial intimidation and physical abuse (IPA). We used multinomial logistic regression to explain the effect of witnessing interparental violence on subsequent use and experience of intrafamilial violence. Witnessing interparental violence significantly predicted youth's reports of intrafamilial IPA. For both males and females, witnessing paternal perpetration predicted family violence perpetration and witnessing maternal violence predicts victimization. Among females only, witnessing reciprocal violence between parents also predicted victimization. For males witnessing paternal perpetration, for females witnessing maternal perpetration, and for all youth witnessing reciprocal violence predicted bidirectional family violence. Several explanations for why witnessing interparental violence influenced subsequent youth violence with family members is offered. Implications for addressing youth violence are discussed. Future research deconstructing the pathway between witnessing parents' violence and young adult children's involvement with violence can better inform prevention efforts. If possible, considering which family members this violence occurs with can provide additional insight.

## **II. Background**

Most research on interpersonal violence involving young adults focus on dating violence with limited attention to understanding intrafamilial violence. Additionally, while childhood exposure to violence in one's family of origin is one of the most consistent correlates of experiencing intimate partner violence in later life (Ehrensaft, et al., 2003; Jeyaseelan, et al., 2004; Martin, et al., 2002; Stith, et al., 2000), there is little research on the effects of witnessing interparental violence on young adult children's experience of violence with non-romantic family members. There is also little research on the effects of witnessing interparental violence that is perpetrated by mothers or both parents. Finally, most research on the intergenerational transmission of violence has been conducted in developed countries. This study explores the relationship between witnessing interparental intimate partner violence and young adults' subsequent involvement with family violence in Cebu, Philippines. This study also investigates if the impact of witnessing interparental violence differs based on the sex of the perpetrating parent and the young adult child.

Studies that have examined the relationship between witnessing interparental violence and children's use of violence against their parents, have found a positive relationship between the two (Moretti, Obsuth, Odgers, & Reebye, 2006; Ulman & Straus, 2003). As U.S.-based studies, however, the results cannot be generalized to developing country settings, where family structures and relationships are vastly different. While there is no research on witnessing interparental violence and subsequent family violence among youth in developing countries, a few studies do exist on the intergenerational transmission of intimate partner violence. Evidence from India

indicates that witnessing inter-parental violence plays a significant role in subsequent experience and use of partner violence: A study of 506 married women in Lucknow found that women who witnessed their fathers beating their mothers during childhood were at higher risk of being victims of physical spousal abuse (OR = 2.00; 95% CI = 1.20, 2.53) (Jeyaseelan, et al., 2004). In Uttar Pradesh (U.P.) a study including 4,520 married men showed that males who reported ever witnessing their fathers beat their mother as a child had a 4.7 times higher odds of using physical violence towards their wives in the preceding year (OR=4.66, 95% CI=4.02, 5.46) (Koenig, Stephenson, Ahmed, Jejeebhoy, & Campbell, 2006). Another study in U.P. using a representative sample of 6,902 married men found similar results: compared to those raised in non-violent homes, men from violent homes were much more likely of being physically abusive toward their own wives (OR=3.8, 95% CI = 2.19, 4.58) (Martin, et al., 2002).

Evidence from other countries show mixed results: Analysis using data from 3,389 married or cohabitating women surveyed as part of the 2002 Haiti Demographic and Health Survey showed there was no relationship between witnessing fathers beat their mothers and women's experience of physical abuse from intimate partners (OR=1.27;  $p=NS^1$ ) (Gage, 2005). On the other hand, a study of 472 married or cohabitating young adults in Cebu, Philippines showed that witnessing mother-perpetrated violence predicted subsequent victimization, but not perpetration of partner violence. Additionally, neither father-perpetrated nor reciprocal interparental violence predicted subsequent victimization or perpetration of partner violence (Fehring & Hindin, 2009).

---

<sup>1</sup> NS=Not statistically significant

### ***Family Relations in the Philippines***

The family is an important social institution in the Philippines . The nuclear family is the most common family structure (Medina, 2001), though extended families are not uncommon (Maxwell, 2001). There are more nuclear households in rural areas than in cities. Extended households, which are particularly prevalent in Metro Manila, may include grandparents, aunts, uncles, and cousins (Medina, 2001). 83% of Filipino youth are raised by both their natural parents (Demographic Research and Development Foundation, 2004). Relationships between Filipino parents and children have traditionally been intimate, with a tendency for parents to be protective. Siblings are expected to provide mutual respect and protection, with brothers looking after sisters and older siblings taking care of younger ones, especially when parents are away. The adolescent period among Filipinos has traditionally not been characterized by turbulence and rebelliousness as often seen in the West, though this is a time when sibling rivalry is most intense. As with other aspects of the Filipino culture, however, family relations have also changed. Compared to a few decades ago, children enjoy greater freedom from parental control (Medina, 2001).

### ***Violence Prevalence in the Philippines***

There is high prevalence of interpersonal violence among youth in the Philippines. According to the 2002 Young Adult Fertility and Sexuality Study, a nationally representative study of Filipino youth, 14% of 15-24 year olds said they physically injured someone or were physically hurt by someone in the past three months.

Mahua Mandal

More males than females experienced violence: 16.2% vs. 11.7% had perpetrated, and 15.5% vs. 11.4% had been victims. Perpetration and victimization were strongly and positively correlated, implying that many youth are involved with bidirectional violence (Demographic Research and Development Foundation, 2004).

### ***Data Source***

The source of data for this study is the Cebu Longitudinal Health and Nutrition Survey (CLHNS), an ongoing study of a cohort of Filipino women who gave birth between May 1, 1983 and April 30, 1984. A one-stage cluster sampling procedure was used to select participants for the baseline survey. All pregnant women living in 33 randomly selected communities, or *barangays* (17 neighborhoods in urban areas and 16 villages in rural areas) in Metropolitan Cebu were invited to take part in the study. The baseline interview was conducted with 3,327 pregnant women. Full follow-up continued for these women and their index children in 1991-92, 1994-95, 1998-99, 2002, and 2005 (Adair, et al., 2011; Cebu Study Team, 1989).

Survey instruments for all rounds of data were reviewed and pretested by local staff. Trained interviewers conducted the interviews in the participants' homes. The average interview lasted a total of 2.5 hours, with some interviewers making multiple visits to the households to complete the interviews. All interviewers were highly trained in interviewing techniques and in obtaining reliable data. The project also periodically checked inter-observed reliability (Adair, et al., 2011).

All data were entered into a database by trained staff at the Office of Population Studies, University of San Carols in the Philippines. Staff manually edited the

Mahua Mandal

questionnaires before the data were entered and then cleaned the data with validity checks (Adair, et al., 2011).

### **III. Methods**

#### ***Study Sample***

The study sample was taken from the 2005 index children's (IC) survey, which included 1,912 young adults ages 21-22 years from the birth cohort. 16 ICs were twins and were dropped from the analyses. Additionally, one IC missing data on the dependent variable and 14 ICs missing data on the main independent variable were dropped from the analysis. Remaining missing data were checked to see if they were related to the outcome. The nearest neighbor hotdeck imputation sorting by IC's age, IC's education, and household location was used to replace missing data. The final sample size was 1,881.

#### ***Study Measures***

##### ***Dependent Variable***

The 2005 CLHNS contains a series of questions concerning various types of conflict and violence perpetrated by or against the young adult respondents, based on a Straus' original Conflict Tactic Scale (CTS1) (1979) and the Revised Conflict Tactics Scale (CTS2) (Straus, 1996). The specific items in the CLHNS are: 1) Discussed issue calmly; 2) Got information to back up side of argument; 3) Brought in third party to help settle things 4) Excessively nagged; 5) Yelled or insulted 6) Swore; 7) Sulked or refused to talk; 8) Stomped out of room; 9) Threw or smashed at something; 10) Had something

in hand to throw but did not; 11) Pushed, grabbed, or shoved; 12) Hit one (without an object); 13) Hit one with a hard object; 14) Harmed one enough to need medical attention.

Index children were asked if they had done or experienced each acts when they had a dispute, and if this ever happened with a close friend or a family member, ever happened with a partner, happened in the past year or happened during the last pregnancy, and how frequent it was. This research focuses on violence with a family member in the previous 12 months of the survey. We used following items to make up an *Intimidation and Physical Abuse* (IPA) subscale: 1) Threw or smashed at something; 2) Had something in hand to throw but did not; 3) Threw something at someone; 4) Pushed, grabbed or shoved; 5) Hit someone (not with anything); 6) Hit someone with something hard. (Perpetration Kuder-Richardson 20 [KR-20]=0.73). Victimization KR-20=0.78). A 'positive' event was defined as one or more occurrences of at least one item.

Intimidation and physical abuse is the dependent variable for this study. It is a categorical measures with four unordered categories: 1) Neither perpetrator nor victim (reference category); 2) Perpetrator only; 3) Victim only; and 4) Bidirectional (perpetrator and victim).

### *Independent Variables*

Interparental Violence. The 2002 survey asked ICs if they remembered either parent physically hurt the other during childhood, and if so who hurt the other physically. The main independent variable in this study is a categorical measure with four unordered



categories: 1) Neither parent hurt the other (reference category); 2) Mother-only hurt the father; 3) Father-only hurt the mother; and 4) Reciprocal violence between parents.

Individual Characteristics. Based on their 2002 responses, we included IC's highest grade completed, marital status, current work status, frequency of church attendance, current alcohol consumption, and history of drug use.

Maternal Characteristics. Based on the mother's 2002 responses, we included her age, highest grade completed, frequency of church attendance, and marital status.

Household Characteristics. In cases where the IC was living with the mother household characteristics were based on mothers' 2002 reports. If the IC was not living with the mother or the mother refused to answer, responses about household characteristics were based on 2002 IC's report. We included household location, household size, household alcohol expenditure, and household wealth based on asset ownership of living room set, bed with mattress, electric iron, electric fan, air conditioner, refrigerator, VCR, and color television (Chronbach's  $\alpha=0.82$ ).

### ***Data Analysis***

We adjusted all analyses for the clustered design of the CLHNS. After stratifying by respondents' gender, we first explored the characteristics of the sample through frequency distributions. Next, we used bivariate multinomial logistic regression to examine the associations between the dependent variable and each independent variable.

Finally, we used multivariate multinomial logistic regression to examine the relationship between respondents' reports of family violence perpetration and victimization and predictors. We used a block modeling approach and entered predictors in the following order: 1) IC reports of witnessing inter-parental violence; 2) IC's characteristics; 3) Mother's characteristics; and 4) Household characteristics.

We evaluated multicollinearity of the independent variables using Variance Inflation Factor (VIF). In logistic regression values above 2.50 may indicate multicollinearity (Allison, 1999). The VIF for our study was 1.17.

#### **IV. Results**

##### ***Respondent characteristics***

Table 1 shows the characteristics of the respondents, stratified by gender. There were 892 female ICs and 989 males ICs. A similar percentage of males and females reported witnessing inter-parental violence, with about 13% reporting their mothers hurt their fathers, 23-26% reporting their father hurt their mothers, and 7% reporting both parents hurt each other. Compared to male ICs, females had completed more formal education, were more likely to be married or cohabitating with a partner, less likely to be working, more likely to attend church once or more per week, less likely to drink alcohol, and less likely to have a history of drug use. Females were also less likely to have a mother who was married or cohabitating with a partner. Except for mother's marital status, males and females had similar maternal and household characteristics.

**Table 1** Characteristics of the respondents: Cebu, Philippines, 2002 (n=1881)

	Males (n=989)	Females (n=892)	p- value
<b>Intergenerational violence</b>			
Recall parental DV, % <sup>a</sup>			0.58
Mother hurt father	13.4	13.5	
Father hurt mother	25.9	23.1	
Both hurt each other	7.3	7.1	
Neither parent hurt the other	53.5	56.4	
<b>Individual characteristics</b>			
Years of school completed (range 0-16), mean (SD) <sup>b</sup>	9.8 (3.3)	11.1 (2.8)	<0.001
Married or cohabitating, % <sup>a</sup>	19.3	32.5	<0.001
Worked at time of survey, % <sup>a</sup>	58.1	53.3	0.01
Church attendance, once a week or more, % <sup>a</sup>	40.4	58.7	<0.001
Alcohol consumption, % <sup>a</sup>	74.2	45.0	<0.001
History of drug use, % <sup>a</sup>	22.2	3.4	<0.001
<b>Maternal characteristics</b>			
Age (range 32-66), mean (SD) <sup>b</sup>	44.8 (6.0)	44.8 (6.0)	0.92
Years of school completed (range 0-19), mean (SD) <sup>b</sup>	7.5 (3.9)	7.4 (3.8)	0.69
Married or cohabitating, % <sup>a</sup>	90.5	82.7	<0.001
Church attendance, once a week or more, % <sup>a</sup>	57.9	60.1	0.36
<b>Household characteristics</b>			
Number of persons in household (range 1-18), mean (SD) <sup>b</sup>	6.6 (2.6)	6.8 (2.7)	0.32
Household purchased any alcohol, % <sup>a</sup>	42.5	41.4	0.55
Household asset index (range 0-25), mean (SD) <sup>b</sup>	5.1 (4.4)	5.0 (4.1)	0.86
Rural residence, % <sup>a</sup>	25.9	26.23	0.87

<sup>a</sup>Second-order corrected Rao-Scott chi-square used to test for independence between male and female reports

<sup>b</sup>Adjusted Wald test used to test for equal means

### ***Violence Characteristics***

Table 2 shows the IC's perpetration and victimization of violence with family members. The most common form of violence involvement among both males and females was bidirectional IPA (24.1% and 27.6%, respectively). The least common form was victimization-only, with 4.2% of males and 5.6% of females having experienced IPA in the past year. More females than males were perpetrators-only of IPA ( $p<0.001$ ), as well as had either perpetrated or been victimized in the past year ( $p<0.001$ ).

**Table 2** Violence perpetration and victimization with family members by gender: Cebu, Philippines, 2005 (n=1881)

Intimidation and physical abuse (IPA)	Males (n=989)	Females (n=892)	p-value
Perpetration-only	8.5	22.8	<0.001
Victimization-only	4.2	5.6	0.07
Both perpetration and victimization	24.1	27.6	0.13
Either perpetration or victimization	36.7	55.9	<0.001

<sup>a</sup>Second-order corrected Rao-Scott chi-square used to test for independence between male and female reports

### *Intimidation and Physical Abuse*

#### *Bivariate Analyses*

Tables 3 and 4 show the unadjusted relative risk ratios for IPA experienced among male and female youth, respectively. Among young males, perpetrating IPA was not associated with witnessing inter-parental violence. Not working at the time of the survey and larger household size increased males' risk of perpetration. Being a victim of intimidation and abuse was associated with witnessing maternal perpetration. Bidirectional intimidation and abuse was associated with witnessing paternal perpetration, as well as reciprocal violence between parents. Bidirectional violence was also associated with mother's younger age, larger household size and urban residence.

Among young females, perpetration of IPA was associated with paternal perpetration. Perpetration was also associated with lower education. Both victimization and bidirectional family violence were associated with maternal perpetration and reciprocal interparental violence. Additionally, victimization was associated with being unmarried or non-cohabitating, drinking alcohol, mother's frequent church attendance, and urban residence. Bidirectional violence was associated with being unmarried or non-cohabitating, drinking alcohol and urban residence.

**Table 3** Bivariate multinomial logistic regression of intimidation and physical abuse with family members on witnessing interparental violence among male young adults: Cebu, Philippines, 2005 (n=989)

	Perpetration		Victimization		Bidirectional	
	RRR	95% CI	RRR	95% CI	RRR	95% CI
<b>Intergenerational Violence (2002)</b>						
Recall parental DV (reference is no violence)						
Maternal perpetration	1.30	0.74, 2.30	2.81*	1.29, 6.11	1.62	0.99, 2.65
Paternal perpetration	1.65	0.97, 2.80	1.14	0.39, 3.30	1.56*	1.07, 2.29
Reciprocal	0.99	0.30, 3.24	1.06	0.32, 3.52	2.89**	1.49, 5.60
<b>Individual Characteristics (2002)</b>						
Year of school completed	1.05	0.95, 1.15	0.91	0.80, 1.03	1.01	0.96, 1.07
Married or cohabitating	0.23	0.03, 1.87	0.98	0.21, 4.52	0.50	0.22, 1.10
Worked at time of survey	0.63*	0.41, 0.96	1.49	0.67, 3.33	0.94	0.71, 1.24
Church attendance, once a week or more	0.75	0.46, 1.23	1.18	0.64, 2.16	1.17	0.75, 1.81
Alcohol consumption	0.92	0.57, 1.48	0.84	0.41, 1.73	1.05	0.73, 1.52
History of drug use	1.24	0.74, 2.07	1.04	0.52, 2.08	1.17	0.84, 1.63
<b>Maternal Characteristics (2002)</b>						
Age	1.00	0.95, 1.05	1.01	0.96, 1.06	0.97*	0.95, 0.99
Years of school completed	0.97	0.92, 1.03	0.99	0.90, 1.10	1.01	0.97, 1.06
Married or cohabitating	0.83	0.42, 1.66	0.41	0.12, 1.44	1.09	0.70, 1.69
Church attendance, once a week or more	0.89	0.56, 1.42	0.77	0.39, 1.54	1.14	0.65, 2.01
<b>Household Characteristics (2002)</b>						
Number of persons in HH	1.09*	1.01, 1.18	1.01	0.85, 1.19	1.12**	1.05, 1.21
HH purchased any alcohol	0.98	0.59, 1.63	0.68	0.34, 1.35	0.93	0.66, 1.31
Household asset index	0.97	0.91, 1.02	0.95	0.89, 1.01	0.98	0.94, 1.02
Rural residence	0.96	0.55, 1.68	0.77	0.43, 1.38	0.46**	0.30, 0.70

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Table 4** Bivariate multinomial logistic regression of intimidation and physical abuse with family members on witnessing interparental violence among female young adults: Cebu, Philippines, 2005 (n=892)

	Perpetration		Victimization		Bidirectional	
	RRR	95% CI	RRR	95% CI	RRR	95% CI
<b>Intergenerational Violence (2002)</b>						
Recall parental DV (reference is no violence)						
Maternal perpetration	1.41	0.79, 2.52	2.61*	1.17, 5.85	1.84*	1.11, 3.06
Paternal perpetration	1.78**	1.24, 2.55	1.54	0.76, 3.14	1.30	0.89, 1.91
Reciprocal	1.01	0.54, 1.89	3.42*	1.32, 8.83	1.93*	1.06, 3.50
<b>Individual Characteristics (2002)</b>						
Year of school completed	0.92*	0.85, 0.99	1.11	0.94, 1.32	1.01	0.94, 1.08
Married or cohabitating	1.17	0.79, 1.73	0.19*	0.04, 0.90	0.30***	0.17, 0.52
Worked at time of survey	0.97	0.67, 1.40	1.31	0.74, 2.32	0.95	0.71, 1.26
Church attendance, once a week or more	1.02	0.71, 1.47	1.13	0.67, 1.92	0.92	0.67, 1.25
Alcohol consumption	1.16	0.85, 1.59	2.18**	1.33, 3.58	1.41*	1.05, 1.89
History of drug use	0.77	0.28, 2.12	1.05	0.28, 3.98	0.74	0.28, 1.91
<b>Maternal Characteristics (2002)</b>						
Age	0.97	0.94, 0.99	1.01	0.96, 1.06	0.98	0.96, 1.00
Years of school completed	0.96	0.92, 1.01	0.98	0.93, 1.03	1.01	0.97, 1.06
Married or cohabitating	1.28	0.81, 2.04	0.53	0.25, 1.13	0.92	0.61, 1.38
Church attendance, once a week of more	0.86	0.59, 1.25	2.51*	1.04, 6.05	1.23	0.85, 1.77
<b>Household Characteristics (2002)</b>						
Number of persons in household	1.04	0.97, 1.12	0.87	0.76, 1.01	1.09	1.01, 1.17
HH purchased any alcohol	0.99	0.73, 1.33	0.70	0.39, 1.26	0.95	0.69, 1.31
Household asset index	0.93	0.89, 0.97	1.03	0.98, 1.08	1.00	0.96, 1.03
Rural residence	0.91	0.60, 1.39	0.38*	0.18, 0.78	0.62***	0.45, 0.87
<b>Household Characteristics (2002)</b>						
Number of persons in household	01.04	0.97, 1.12	0.87	0.76, 1.01	1.09	1.01, 1.17
HH purchased any alcohol	0.99	0.73, 1.33	0.70	0.39, 1.26	0.95	0.69, 1.31
Household asset index	0.93	0.89, 0.97	1.03	0.98, 1.08	1.00	0.96, 1.03
Rural residence	0.91	0.60, 1.39	0.38*	0.18, 0.78	0.62***	0.45, 0.87

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ *Multivariate Analyses*

Likelihood ratio tests indicated the full multinomial regression model for both young males' and young females' experience with IPA fit the data significantly better than the null models. Only the final models are shown.

Tables 5 and 6 show the adjusted relative risk ratios for IPA experienced among male and female youth, respectively. After adjusting for covariates, males who witnessed paternal perpetration had a higher risk of perpetrating IPA (RRR=1.70; 95% CI=1.01, 2.87). Working at the time of the survey remained protective of perpetration (RRR=0.59; 95% CI=0.38, 0.92) and increased household size predicted perpetration (RRR=1.10; 95% CI=1.01, 1.19). Witnessing maternal perpetration still predicted males' victimization (RRR=2.79; 95% CI=1.24, 6.29). Witnessing paternal perpetration (RRR=1.50; 95% CI=1.05, 2.14) and reciprocal parental violence (RRR=2.72; 95% CI=1.27, 5.86) remained predictors of young males' experience with bidirectional violence. Finally, being married or cohabitating was protective (RRR=0.45; 95% CI=0.21, 0.99), and increased household size (RRR=1.14; 95% CI=1.05, 1.23) and urban residence (RRR=0.44; 95% CI=0.29, 0.67) increased the risk of bidirectional violence.

Similar to males, females who witnessed paternal perpetration were more likely to perpetrate IPA (RRR=1.60; 95% CI=1.09, 2.38). Higher maternal age (RRR=0.97; 95% CI=0.94, 0.99) and higher household wealth (RRR=0.94; 95% CI=0.89, 0.99) reduced the risk of perpetration. Female youth who witnessed maternal perpetration (RRR=3.02; 95% CI=1.27, 7.18) and reciprocal violence (RRR=3.71; 95% CI=1.54, 8.93) remained more likely to be victims. Marriage or cohabitation remained protective of victimization (RRR=0.16; 95% CI=0.03, 0.70). Alcohol consumption increased the risk of victimization (RRR=1.72; 95% CI=1.03, 2.88), while higher maternal education reduced the risk (RRR=0.91, 95% CI=0.84, 0.99). Finally, witnessing maternal perpetration (RRR=1.93; 95% CI=1.10, 3.37) and reciprocal interparental violence (RRR=1.89; 95% CI=1.05, 3.36) remained predictors of IC's experience with bidirectional violence.

Similar to males, being married or cohabitating reduced the risk (RRR=0.30; 95% CI=0.18, 0.51) while increased household size (RRR=1.08; 95% CI=1.00, 1.16) and urban residence (RRR=0.64; 95% CI=0.45, 0.91) increased the risk of bidirectional violence.

**Table 5** Multivariate multinomial logistic regression of intimidation and physical abuse with family members on witnessing interparental violence among male young adults: Cebu, Philippines, 2005 (n=989)

	Perpetration		Victimization		Bidirectional	
	RRR <sup>‡</sup>	95% CI	RRR <sup>‡</sup>	95% CI	RRR <sup>‡</sup>	95% CI
<b>Intergenerational Violence (2002)</b>						
Recall parental DV (reference is no violence)						
Maternal perpetration	1.32	0.76, 2.28	2.79*	1.24, 6.29	1.49	0.94, 2.36
Paternal perpetration	1.70*	1.01, 2.87	1.24	0.44, 3.50	1.50*	1.05, 2.14
Reciprocal	1.03	0.27, 3.90	1.31	0.41, 4.21	2.72*	1.27, 5.84
<b>Individual Characteristics (2002)</b>						
Year of school completed	1.10	0.98, 1.24	0.90	0.74, 1.09	1.02	0.93, 1.12
Married or cohabitating	0.24	0.03, 1.87	0.82	0.17, 4.04	0.45*	0.21, 0.99
Worked at time of survey	0.59*	0.38, 0.92	1.32	0.61, 2.85	0.95	0.70, 1.29
Church attendance, once a week or more	0.76	0.46, 1.27	1.33	0.71, 2.47	1.18	0.76, 1.85
Alcohol consumption	0.85	0.51, 1.40	0.80	0.37, 1.71	0.97	0.66, 1.43
History of drug use	1.31	0.79, 2.18	0.95	0.47, 1.94	1.24	0.86, 1.78
<b>Maternal Characteristics (2002)</b>						
Age	1.00	0.95, 1.04	1.01	0.96, 1.06	0.98	0.96, 1.01
Years of school completed	0.98	0.91, 1.04	1.05	0.92, 1.18	1.01	0.96, 1.06
Married or cohabitating	0.72	0.33, 1.61	0.45	0.13, 1.52	0.88	0.54, 1.46
Church attendance, once a week or more	0.96	0.58, 1.58	0.74	0.36, 1.53	1.08	0.63, 1.85
<b>Household Characteristics (2002)</b>						
Number of persons in HH	1.10*	1.01, 1.19	1.04	0.89, 1.21	1.14**	1.05, 1.23
HH purchased any alcohol	0.99	0.59, 1.66	0.69	0.33, 1.43	0.87	0.57, 1.35
Household asset index	0.95	0.87, 1.03	0.96	0.88, 1.04	0.95*	0.90, 0.99
Rural residence	0.85	0.47, 1.55	0.69	0.37, 1.27	0.44***	0.29, 0.67

<sup>‡</sup>Adjusted relative risk ratio (RRR); \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$



**Table 6** Multivariate multinomial logistic regression of intimidation and physical abuse with family members on witnessing interparental violence among female young adults: Cebu, Philippines, 2005 (n=892)

	Perpetration		Victimization		Bidirectional	
	RRR <sup>‡</sup>	95% CI	RRR <sup>‡</sup>	95% CI	RRR <sup>‡</sup>	95% CI
<b>Intergenerational Violence (2002)</b> Recall parental DV (reference is no violence)						
Maternal perpetration	1.33	0.72, 2.45	3.02*	1.27, 7.18	1.93*	1.10, 3.37
Paternal perpetration	1.60*	1.09, 2.38	1.65	0.82, 3.33	1.33	0.89, 2.00
Reciprocal	0.89	0.47, 1.69	3.71**	1.54, 8.93	1.89*	1.05, 3.36
<b>Individual Characteristics (2002)</b>						
Year of school completed	0.97	0.89, 1.06	1.06	0.85, 1.33	0.98	0.90, 1.08
Married or cohabitating	1.10	0.72, 1.66	0.16*	0.03, 0.70	0.30***	0.18, 0.51
Worked at time of survey	0.95	0.66, 1.37	1.30	0.70, 2.39	0.93	0.68, 1.28
Church attendance, once a week or more	1.22	0.86, 1.71	0.91	0.51, 1.64	0.82	0.55, 1.20
Alcohol consumption	1.28	0.95, 1.73	1.72*	1.03, 2.88	1.22	0.92, 1.62
History of drug use	0.76	0.30, 1.93	1.00	0.20, 4.88	0.72	0.29, 1.78
<b>Maternal Characteristics (2002)</b>						
Age	0.97*	0.94, 0.99	1.00	0.95, 1.05	0.98	0.96, 1.01
Years of school completed	0.98	0.93, 1.04	0.91*	0.84, 0.99	1.01	0.96, 1.07
Married or cohabitating	1.28	0.80, 2.06	0.57	0.22, 1.46	0.77	0.48, 1.24
Church attendance, once a week or more	1.02	0.70, 1.49	2.20	0.87, 5.52	1.29	0.86, 1.92
<b>Household Characteristics (2002)</b>						
Number of persons in household	1.04	0.97, 1.12	0.85	0.72, 1.01	1.08*	1.00, 1.16
HH purchased any alcohol	0.92	0.69, 1.22	0.76	0.37, 1.56	0.93	0.65, 1.33
Household asset index	0.94*	0.89, 0.99	1.01	0.94, 1.09	0.97	0.93, 1.01
Rural residence	0.83	0.54, 1.28	0.43*	0.19, 0.99	0.64*	0.45, 0.91

<sup>‡</sup>Adjusted relative risk ratio (RRR); \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

## V. Discussion

The results of this study suggest that witnessing interparental violence is a significant and important risk factor for young people's use of and experience with intimidation and physical abuse with family members. Young people who witnessed paternal perpetration of violence were more likely to perpetrate IPA while those who witnessed maternal perpetration were more likely to be victims. Among females only, witnessing reciprocal interparental violence was also a risk factor for familial

victimization. Bidirectional violence with family members was predicted by witnessing reciprocal interparental violence among both males and females, as well as witnessing paternal violence among males and maternal violence among females.

There are several reasons why witnessing interparental violence may influence subsequent youth violence with family members. First, witnessing role models use violence may foster norms that condone violence in conflict resolution. Youth who see violence between parents may accept perpetration and victimization as an acceptable means of family interaction, and then actively engage in family violence. Such youth have “learned” to be violent (Bandura, 1973, 1986). Second, youth who have witnessed interparental violence most likely share households with these parents, and – whether or not they accept or condone this violence – must deal with it. Youth who have daily interactions with (a) violent parent(s) may have no choice but to become involved with violence, either through being victimized by the parent(s), or through actively defending themselves and other family members. Third, it is likely that families with parents that use and experience violence are generally less cohesive and more conflicted, and have maladaptive coping skills. Such home environments likely have a higher level of violence among all family members, and youth further learn and/or deal with violence from other members of the family. It is probable that more than one mechanism is at play.

The fact that both males and females were more likely to perpetrate violence after witnessing paternal perpetration, but more likely to be victims of violence after witnessing maternal perpetration, may speak to qualitative differences in the type and severity of violence used by fathers compared to mothers. A U.S.-based study on

intergenerational transmission of family aggression found that adult children who had witnessed interparental violence were more frequently victims than perpetrators of partner abuse, and the difference between victim and perpetrator depended on the type of interparental violence witnessed. The authors suggested that exposure to relatively mild aggressive acts increases the risk of victimization, while exposure to severe forms of aggression increases risk of perpetration (Cappell & Heiner, 1990). Ansara and Hindin (2009) found that in the Philippines wives were more likely than their husbands to require medical attention due to violence. In line with this, fathers in this study may have perpetrated more severe violence, while mothers may have perpetrated less severe violence, and the differential in severity or form of violence led to youth's different roles in violence involvement.

Witnessing reciprocal violence between parents was a risk factor for bidirectional violence among all youth. Evidence suggests that when intimate partners are in mutually violent relationships they sustain more frequent severe violence and a greater number of injuries than individuals in unidirectional violent relationship (Gray & Foshee, 1997). Given the probable higher intensity of violence in households of youth who witnessed reciprocal interparental violence, it is likely that other members of the family use and experience violence at higher levels well. In short, the more frequent and severe violence one witnesses and is in close proximity to, the more violence s/he is involved with. In this case, the resulting higher level of youth violence is in the form of bidirectional intimidation and physical abuse.

Witnessing paternal perpetration among males and maternal perpetration among females also increased the risk of bidirectional violence. This may be a result of same sex

modeling. Youth may relate particularly well to same sex parents because they have similar gendered experiences. As a result they may be especially susceptible to “learning” violence from same sex parents, and therefore use more frequent and severe violence with family members. This high intensity violence may lead youth to become victims as well. There is some evidence of same sex modeling for violence perpetration, but not victimization (Jankowski, Leitenberg, Henning, & Coffey, 1999; Moretti, et al., 2006). However, these studies are based on non-representative samples in the U.S.

Several factors in addition to interparental violence had a strong effect on young adult children’s involvement with intrafamilial violence. Among males, not working at the time of the survey increased the risk of perpetrating family violence. This may be explained by increased level of stress and social isolation experienced by unemployed males (Stets, 1991; Williams, 1992).

While witnessing maternal perpetration was the only risk factor for intrafamilial victimization among males, there were several factors strongly related to violence victimization among females. Being married or cohabitating with a partner was protective of, and alcohol use and urbanization were risk factors for, victimization. Young married or cohabitating females living separately from their families of origin are less likely to have to address or attempt to resolve matters around sharing space, delegation of household and family responsibilities, or their freedom of movement. As such, females are also less likely to have conflict with their families of origin or be subject to family violence.

Alcohol use is often correlated with violence perpetration (Duke, Giancola, Morris, Holt, & Gunn, 2011; Milgram, 1993; Moore, Elkins, McNulty, Kivisto, &

Handsel, 2011; Wells, 2006), but there is evidence that using alcohol increases the risk of victimization as well (Felson & Burchfield, 2004; Stickley & Carlson, 2010). Those who consume alcohol may be more susceptible to victimization because, particularly among youth, drinking can increase the potential for provocative behaviors (Felson & Burchfield, 2004). While our study finds that alcohol use increased the risk of family violence victimization among females only, Felson and Burchfield found that in the U.S. alcohol was a greater risk factor for male victimization than female victimization (2004). One explanation is that intoxicated men in the U.S. are more likely than intoxicated women to provoke others. In contrast, data from our study shows that females were more likely than males to yell at or insult, or swear at a family member (Mandal, 2012) which may provoke a response in the form of physical violence. Females who drink may be especially likely to provoke family members, thus putting themselves at risk for physical violence.

Females in urban areas may be at higher risk of experiencing family violence due the impact of environmental and structural conditions on family members. Factors such as crowding, unemployment, inadequate housing, and lack of social support place additional undue stress on family members (McDade & Adair, 2001) and may act as a catalyst for violence.

Males and females shared most of the same risk and protective factors for bidirectional violence. Among both genders, being married or cohabitating was protective, most likely due to living separately from their families of origin. Urban residence was a risk factor for bidirectional aggression, again due to stressors resulting from urban-living.

This study confirms that female perpetration of violence in this setting is common and more frequent than male perpetration. This finding is in line with previous research that shows, compared to married and cohabitating males, a higher proportion of married and cohabitating females perpetrate intimate partner violence in Cebu (Ansara & Hindin, 2009; Fehringer & Hindin, 2009).

One limitation of this study is the non-specificity of type of family member youth use and experience violence with. Knowing this can help determine the mechanism through which witnessing interparental violence leads to subsequent familial violence. In the case of bidirectional violence, if young adults are violent with the same parent they had witnessed hurting the other parent, then simply sharing a household with the violent parent increase their own risk of violence. However, if the violence occurs with siblings, extended family, or a parent they do not remember being violent, then it is likely that the violence is a result of social learning. Furthermore, if the violence occurs with the respondents' own children, this means their parents' violence (e.g. violence between mothers of index children and their partners) have implications not only on their young adult children, but also on their grandchildren.

Another limitation is that this study does not measure excessive punishment or abuse of youth by parents during their childhoods. Children who witness intimate partner violence between their parents are at risk of being excessively punished or abused as children, and this punishment or abuse places them at increased risk of being involved with violence in their later years (Ehrensaft, et al., 2003; Stith, et al., 2000). This study also does not measure the non-physical aggression between parents. Understanding use and experience of psychological aggression between parents could help delineate if

witnessing other forms of violence have an effect on youth's risk of perpetration and victimization. Finally, there is potential bias in self-reported data. This may be especially true if some respondents were motivated to provide socially desirable responses, or felt shame, guilt, or fear in disclosing violence. Young adults who experienced violence and reported it may be different from those who experienced violence but did not report it.

There are several contributions of this study. This is the first developing country study to assess the effect of witnessing interparental violence on young adults' subsequent familial violence. This is also one of the few studies in the developing world to explore intergenerational violence transmission with both male and female perpetrators, and consider the multidirectional nature of violence for both parents and young adults. Including one-sided violence as well as bidirectional violence is particularly important since previous research has shown that persons who are victimized often also perpetrate violence (Gray & Foshee, 1997). Finally, although most studies of violence in developing countries are cross-sectional, this research uses two separate time points for the outcome and predictors.

Recommendations for further research include designing studies to unpack the mechanisms through which witnessing interparental violence leads to perpetration and victimization of family violence among youth. This may be done by including questions about young people's beliefs and attitudes around violence. If youth accept violence as an appropriate means to resolve conflict with family members, and this attitude mediates the relationship between witnessing interparental violence and involvement with family violence, then this provides some evidence that violence is passed down to young adults

through social learning. An alternative is to directly ask youth whether seeing their parents use violence significantly influences their own behavior. However, self-reports may not be valid since this question captures youth's perceptions of what influences their behavior, as opposed to factors that actually influence them.

As discussed above, future studies specifying which family members youth are violent with can help determine if violence is a result of sharing a living space with violent parents. If youth use and experience violence with the parent(s) who perpetrated partner violence, this may indicate youth are involved with violence largely due to their immediate circumstance rather than because they "learned" it. Undertaking qualitative research can best determine the pathways to violence.

The gender differences found in our study also warrant further research. The finding that males and females are both at higher risk of perpetration after seeing their fathers be violent and higher risk of victimization after seeing their mothers be violent, but follow same-sex modeling for bidirectional violence, is interesting. One explanation may be that the pathway between witnessing violence and being violent is different for males and females. One gender may be more prone to "learning" violence while the other gender may be more likely to merely react to the immediate situation. Stratifying the sample by gender when implementing the research strategies recommended above may provide additional insight.



## VI. References

- Adair, L. S., Popkin, B. M., Akin, J. S., Guilkey, D. K., Gultiano, S., Borja, J., et al. (2011). Cohort profile: the Cebu longitudinal health and nutrition survey. *Int J Epidemiol*, 40(3), 619-625.
- Allison, P. (1999). *Logistic Regression Using SAS: Theory and Application*. Cary, NC: SAS Press.
- Ansara, D. L., & Hindin, M. J. (2009). Perpetration of intimate partner aggression by men and women in the Philippines: prevalence and associated factors. *J Interpers Violence*, 24(9), 1579-1590.
- Bandura, A. (1973). *Aggression: a social learning analysis*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *The social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Cappell, C., & Heiner, R. B. (1990). The intergenerational transmission of family aggression. [Empirical Study]. *Journal of Family Violence*, 5(2), 135-152.
- Cebu Study Team. (1989). *The Cebu longitudinal health and nutrition study: Survey procedures*: Office of Population Studies, University of San Carlos; Carolina Population Center, The University of North Carolina at Chapel Hill; Nutrition Center of the Philippines, Manila.
- Demographic Research and Development Foundation, I. U. P. I. (2004). *Youth Sex and Risk Behaviors in the Philippines*. Dilimna, Quezon City.
- Duke, A. A., Giancola, P. R., Morris, D. H., Holt, J. C. D., & Gunn, R. L. (2011). Alcohol dose and aggression: Another reason why drinking more is a bad idea. [Empirical Study]
- Interview
- Quantitative Study]. *Journal of Studies on Alcohol and Drugs*, 72(1), 34-43.
- Ehrensaft, M. K., Cohen, P., Brown, J., Smailes, E., Chen, H., & Johnson, J. G. (2003). Intergenerational transmission of partner violence: A 20-year prospective study. [Empirical Study]
- Longitudinal Study
- Prospective Study]. *Journal of Consulting and Clinical Psychology*, 71(4), 741-753.
- Fehringer, J. A., & Hindin, M. J. (2009). Like parent, like child: intergenerational transmission of partner violence in Cebu, the Philippines. *J Adolesc Health*, 44(4), 363-371.
- Felson, R., & Burchfield, K. (2004). Alcohol and the risk of physical and sexual assault victimization. *Criminology*, 42, 837-859.
- Gage, A. J. (2005). Women's experience of intimate partner violence in Haiti. [Empirical Study]
- Quantitative Study]. *Social Science & Medicine*, 61(2), 343-364.
- Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violent profiles. [Empirical Study]. *Journal of Interpersonal Violence*, 12(1), 126-141.
- Jankowski, M. K., Leitenberg, H., Henning, K., & Coffey, P. (1999). Intergenerational transmission of dating aggression as a function of witnessing only same sex

- parents vs. opposite sex parents vs. both parents as perpetrators of domestic violence. *Journal of Family Violence*, 14(3), 267-279.
- Jeyaseelan, L., Sadowski, L. S., Kumar, S., Hassan, F., Ramiro, L., & Vizcarra, B. (2004). World studies of abuse in the family environment--risk factors for physical intimate partner violence. *Inj Control Saf Promot*, 11(2), 117-124.
- Koenig, M. A., Stephenson, R., Ahmed, S., Jejeebhoy, S. J., & Campbell, J. (2006). Individual and contextual determinants of domestic violence in North India. *Am J Public Health*, 96(1), 132-138.
- Mandal, M. (2012). *Determinants of Violence with Family and Friends Among Youth in Cebu, Philippines (unpublished)*. Johns Hopkins University, Bloomberg School of Public Health, Baltimore.
- Martin, S. L., Moracco, K. E., Garro, J., Tsui, A. O., Kupper, L. L., Chase, J. L., et al. (2002). Domestic violence across generations: findings from northern India. *Int J Epidemiol*, 31(3), 560-572.
- Maxwell, S. R. (2001). A focus on familial strain: Antisocial behavior and delinquency in Filipino society. [Empirical Study]. *Sociological Inquiry*, 71(3), 265-292.
- McDade, T. W., & Adair, L. S. (2001). Defining the "urban" in urbanization and health: a factor analysis approach. *Soc Sci Med*, 53(1), 55-70.
- Medina, B. T. G. (2001). *The Filipino Family*. Quezon City: University of Philippines Press.
- Milgram, G. G. (1993). Adolescents, alcohol and aggression. [Empirical Study]. *Journal of Studies on Alcohol, Suppl 11*, 53-61.
- Moore, T. M., Elkins, S. R., McNulty, J. K., Kivisto, A. J., & Handsel, V. A. (2011). Alcohol use and intimate partner violence perpetration among college students: Assessing the temporal association using electronic diary technology. [Empirical Study]. *Psychology of Violence*, 1(4), 315-328.
- Moretti, M. M., Obsuth, I., Odgers, C. L., & Reebye, P. (2006). Exposure to maternal vs. paternal partner violence, PTSD, and aggression in adolescent girls and boys. *Aggressive Behavior*, 32(4), 385-395.
- Stets, J. E. (1991). Psychological aggression in dating relationships: The role of interpersonal control. [Empirical Study]. *Journal of Family Violence*, 6(1), 97-114.
- Stickley, A., & Carlson, P. (2010). Factors associated with non-lethal violent victimization in Sweden in 2004-2007. *Scand J Public Health*, 38(4), 404-410.
- Stith, S. M., Rosen, K. H., Middleton, K. A., Busch, A. L., Lundeberg, K., & Carlton, R. P. (2000). The intergenerational transmission of spouse abuse: A meta-analysis. [Meta Analysis]. *Journal of Marriage & the Family*, 62(3), 640-654.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. *Journal of Marriage & the Family*, 41(1), 75-88.
- Straus, M. A. (1996). The Revised Conflict Tactics Scales (CTS2). *Journal of Family Issues*, 17(3), 283-316.
- Ulman, A., & Straus, M. A. (2003). Violence by children against mothers in relation to violence between parents and corporal punishment by parents. [Empirical Study]. *Journal of Comparative Family Studies*, 34(1), 41-60.

- Wells, S. (2006). Differences in predictors and alcohol-related aggression and non-alcohol-related perpetration: An exploratory analysis in a sample of young adult drinkers. [Empirical Study Quantitative Study]. *Contemporary Drug Problems: An Interdisciplinary Quarterly*, 33(4), 563-583.
- Williams, K. R. (1992). Social sources of marital violence and deterrence: Testing an integrated theory of assaults between partners. [Empirical Study]. *Journal of Marriage & the Family*, 54(3), 620-629.