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Exposure to Intimate Partner Violence: Does the Gender of the Perpetrator Matter for Adolescent Mental Health Outcomes?

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ABSTRACT

Research on exposure to intimate partner violence (IPV) among children and adolescents has rarely examined whether the gender of the perpetrator (e.g., mother-perpetrated versus father-perpetrated IPV) elicits differential effects on male and female adolescents' mental health outcomes. This study examined whether exposure to severe IPV impacted male and female youths' mental health internalizing (i.e., withdrawn, somatic, and depressed/anxiety problems) and externalizing (i.e., aggression) outcomes differently, as well as whether the effects of IPV exposure depended upon the gender of the perpetrator of violence. Results indicated that female-only perpetrated IPV detrimentally impacted some of girls' internalizing mental health problems more so than the internalizing mental health problems of males. Potential policy implications for law enforcement, school counselors, and other mental health service providers are discussed.

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Youth who are exposed to intimate partner violence (IPV) between their parents may be at increased risk for a multitude of behavioral and emotional problems, including mental health problems such as depression, anxiety, post-traumatic stress disorder (PTSD), and internalizing symptoms (Fergusson & Horwood, 1998; Finkelhor, Ormond, & Turner, 2009; Graham-Bermann, DeVoe, Mattis, Lynch, & Thomas, 2006; Zinzow et al., 2009). Research also suggests that males and females may react differently to being exposed to parental violence, although most of the findings in this area are mixed with regard to mental health outcomes. For instance, some evidence suggests that male witnesses are more likely to develop externalizing behaviors and females are more likely to suffer from internalizing disorders (Clements, Oxtoby, & Ogle, 2008; Kennedy, Bybee, Sullivan, & Greeson, 2010; Yates, Dodds, Sroufe, & Egeland, 2003), while other studies have found that girls exposed to IPV are more likely than boys to demonstrate externalizing problems such as anger (Sigfusdottir, Farkas, & Silver, 2004), and yet others have found no gender differences in these outcomes (Fergusson & Horwood, 1998; Kitzmann, Gaylord, Holt, & Kenny, 2003; Moylan et al., 2009; Sternberg, Baradaran, Abbott, Lamb, & Guterman, 2006).

Like most other areas of research, though, the literature regarding exposure to IPV has methodological problems that somewhat weaken the validity of findings, and may contribute to the mixed evidence regarding whether exposure to partner violence affects male and female youths differently. One avenue that has very rarely been examined, but that may lead to a better understanding of the impact of IPV exposure among youth, is whether the gender of the perpetrator (e.g., mother-perpetrated versus father-perpetrated IPV) elicits differential effects on adolescents' mental health outcomes (e.g., Jankowski, Leitenberg, Henning, & Coffey, 1999).

The current study attempts to address this gap in knowledge. We seek to answer two questions regarding the effect of exposure to intimate partner violence on youth mental health problems. First, we examine whether exposure to severe IPV impacts male and female youths' mental health internalizing (withdrawn, somatic, and depressed/anxiety problems) and externalizing outcomes differently. Second, we investigate whether the effects of IPV exposure on males' and females' mental health and externalizing problems depend upon the gender of the perpetrator of violence.

EXPOSURE TO INTIMATE PARTNER VIOLENCE AND MENTAL HEALTH PROBLEMS

In the field of criminology, research on the effects of exposure to IPV among youth has tended to focus on aggression and violence as outcomes, as based on the cycle of violence (Widom, 1989) and other social learning theories (Akers, 1985; Bandura & Walters, 1959). These perspectives hypothesize that youth who are exposed to violence in the home will be at risk for modeling such behavior later in life. Psychological research has focused more extensively on mental health problems associated with earlier exposure to violence. Much of this literature has been guided by stress response models, whereby exposure to on-going violence in the home is viewed as a significant stressor expected to lead to mental health deficits such as anxiety and depression (Foster & Brooks-Gunn, 2009). Such research seeks to identify the primary causes of mental health disorders because of the high rates of these illnesses among adolescents (Knopf, Park, & Paul Mulye, 2008; National Research Council and Institute of Medicine, 2009) and the fact that such problems can have long-lasting and detrimental effects on children's later development and psychological problems (Macmillan, 2001; National Research Council and Institute of Medicine, 2009).

General Strain Theory (GST, Agnew, 1992) may bridge the gap between these two perspectives. According to this theory, victimization is viewed as a type of negative (i.e., "noxious") experience that can result in strong, emotional states such as depression, anxiety, and anger. These emotions, in turn, may lead to violence and delinquency as victims attempt to cope with and relieve the traumas caused by victimization (Agnew, 1992). Strains are most likely to result in negative emotions and violence when they are high in magnitude and duration, are viewed as unjust, and when they threaten the child's core values and beliefs. Exposure to IPV fulfills all of these criteria, and victimization experienced in the home has been identified as particularly likely to result in negative consequences for adolescents (Agnew, 2001).

Evidence demonstrates a relationship between exposure to IPV and mental health problems among youth. In their meta-analysis of 118 articles on the effects of IPV exposure on children, Kitzmann et al. (2003) identified an average effect size of 0.29 between witnessing inter-adult physical aggression at home and child psycho-social problems, while a meta-analysis by Evans et al. (2008) indicated an average effect size of 0.48 between exposure to IPV and internalizing symptoms among children. Independent studies have also demonstrated significant relationships between exposure to IPV and depression, anxiety, and PTSD, as well as more generalized forms of internalizing and externalizing symptoms (Fergusson & Horwood, 1998; Finkelhor et al., 2009; Graham-Bermann et al., 2006; Mrug & Windle, 2010; Sternberg et al., 2006; Zinzow et al., 2009).

Like all areas of study, research on exposure to IPV has had some methodological limitations. For example, studies often have very small samples – usually fewer than 500 youth subjects and often less than 100 subjects (Clements et al., 2008; Sternberg et al., 2006) – which may limit the generalizability and comparability of findings; research in this area has also relied

largely on non-representative samples, such as women and children living in domestic violence shelters. Concerns of misspecification have also been raised, since many studies have failed to control for potentially relevant variables, such as the co-occurrence of child abuse, parental mental health problems, or parenting behaviors, all of which may also be related to children's internalizing symptoms (Foster & Brooks-Gunn, 2009; Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008; Kennedy et al., 2010; Mrug & Windle, 2010; Sternberg et al., 2006). Studies that do not control for child abuse, for example, may find that exposure to partner violence is a significant predictor of mental health problems, while studies that include multiple relevant control variables (e.g., child abuse, parental variables, etc) in multivariate models may find that exposure to IPV is not a significant predictor (Herrenkohl & Herrenkohl, 2007; Ho & Cheung, 2010; Moylan et al., 2009). Studies have also conceptualized and measured exposure to IPV as well as mental health problems in varied ways (e.g., assessing overall internalizing problems or examining only depression or only anxiety), making comparisons across studies difficult and precluding examination of the degree to which exposure to IPV leads to different types of disorders. Similarly, most research has evaluated effects of IPV exposure on *either* internalizing symptoms or externalizing problems (particularly aggression and violence), and few studies have included both outcomes or have combined the outcomes into a total measure of problem behavior (Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003).

Limitations of the previous research may also help to explain the mixed results regarding gender differences in the effects of exposure to partner violence. For instance, studies which utilize small samples or samples with very few females versus males (or males versus females) may lack the statistical power to find significant gender differences, if they are present (Kitzmann et al., 2003; Sternberg et al., 2006). Some research suggests that the relationship

between IPV exposure and outcomes may be moderated by child or family characteristics (Clements et al., 2008; Foster & Brooks-Gunn, 2009), including the gender of the child and the sex of the perpetrator; we turn to these topics next.

The Importance of Gender and the Gender of the IPV Perpetrator

General Strain Theory (Agnew, 1992) is one of the few theoretical perspectives positing gender differences in the relationship between victimization and problem behaviors. According to Broidy and Agnew (1997), when faced with strains such as exposure to IPV, males and females are apt to experience different negative emotions: males are more likely to respond to stressors with frustration, anger, and violent behaviors, while females are more likely to react with internalizing symptoms such as depression and anxiety. Indeed, evidence appears to support this view, given that rates of violence are generally higher among males (Puzzanchera, 2009), while rates of anxiety and depression tend to be higher among females (Knopf et al., 2008). However, empirical evidence specifically investigating gender differences in the effects of IPV exposure on these types of emotional reactions has been limited and mixed.

There is some evidence to support GST's hypothesis, in that male witnesses of IPV have been shown to be at increased risk for developing externalizing behaviors compared to females, and some studies have shown that female victims are more likely than male victims to suffer from internalizing disorders (Clements et al., 2008; Doumas, Margolin, & John, 1994; Evans et al., 2008; Kennedy et al., 2010; Yates et al., 2003). A meta-analysis of 53 studies (Evans et al., 2008) identified an average effect size of .46 between exposure to IPV and externalizing behaviors for boys compared to .23 for girls, although the same study showed that effects on internalizing were similar for both sexes. A longitudinal study by Yates and colleagues (2003)

found that boys living in homes in which IPV occurred were at significant risk for later externalizing behaviors, while girls were not, and conversely, that IPV exposure increased internalizing outcomes among females but not males. In contrast, some studies have found that girls exposed to IPV are *more likely* than boys to experience anger (Sigfusdottir et al., 2004), externalizing symptoms (Cummings, Pepler, & Moore, 1999), and both externalizing and internalizing problems (O'Keefe, 1994; Spilsbury et al., 2007). While these studies have identified gender as a potential moderator in the relationship between IPV and problem behaviors among children, other research – including meta-analyses (Kitzmann et al., 2003; Sternberg et al., 2006) and individual studies (Fergusson & Horwood, 1998; Moylan et al., 2009) relying on data from multiple studies and varied samples – has failed to find gender differences in the effects of IPV exposure.

One possible reason that prior research has found mixed results regarding gender differences in the effects of IPV exposure is because many previous studies have not examined the role that mother-perpetrated versus father-perpetrated violence plays for male and female youth. That is, very little research has explored whether the impact of IPV exposure on male and female youth depends in part upon who the perpetrator of violence is in relation to the child (e.g., mother or father). It is possible that violent mothers evoke different responses among their female children as opposed to their male children (Fergusson & Horwood, 1998; Moretti, Osbuth, Odgers, & Reebye, 2006), and the failure to examine this relationship could help to explain gender differences (or lack thereof) in the impact of exposure to IPV and mental health outcomes among youth.

Jankowski et al. (1999) argued that modeling theory would suggest that the same-sex parent is a more important model to the child than the opposite-sex parent; in support, they found that

college students who witnessed only their same-sex parent perpetrate IPV were more likely to use physical aggression towards their dating partners than those who witnessed only their opposite sex parent perpetrate IPV. Moretti and colleagues (2006) also found some evidence of sex-specific modeling effects in that boys who witnessed their father perpetrating IPV engaged in increased aggression towards their friends, and girls who witnessed their mothers perpetrate IPV were more aggressive towards their friends and romantic partners. Their findings were somewhat mixed, though, because males who witnessed their mothers' IPV were also more aggressive towards their romantic partners, and girls who saw their fathers engage in IPV were more aggressive towards their fathers.

Spilsbury et al. (2007) suggested that future research look at the perpetrator's relationship to the victim since little research has been done in this area and the findings thus far are somewhat mixed. The current study examines this issue in detail by investigating two questions: 1) does exposure to severe IPV impact male and female youths' mental health internalizing and externalizing outcomes differently, and 2) do the effects of IPV exposure on males' and females' mental health and externalizing problems depend upon the gender of the perpetrator of violence?

METHOD

Data and Participants

This study used data from the Project on Human Development in Chicago Neighborhoods (PHDCN, Earls, Brooks-Gunn, Raudenbush, & Sampson, 2002). The PHDCN was designed to examine the prosocial and antisocial behaviors of children and adolescents and to assess the effects of families, schools, and neighborhoods on their development. For the PHDCN, 343 neighborhood clusters (NCs) were derived from 847 census tracts in Chicago; these NCs were

then stratified by seven categories of racial-ethnic and socio-economic diversity, and 80 NCs were selected via stratified probability sampling. From these 80 NCs, participants were sampled for the Longitudinal Cohort Study (LCS). To be eligible for the LCS, households in these areas had to include a family with at least one child in one of the seven youth age cohorts (ages 0, 3, 6, 9, 12, 15, and 18) targeted for the study. The final sample included 6,228 participants (75% of the eligible population) who were considered to be representative of residents in Chicago. The subjects of the PHDCN were children, adolescents, and young adults aged 0 to 18, but interviews were also conducted with the primary caregivers[1] of the subjects, and PHDCN interviewers also assessed their impressions of the home environment through home visits.

Given our focus on exposure to intimate partner violence and adolescent mental health problems, the current study relies on data from two cohorts of youth (aged 12 and 15, n = 1,517) and their caregivers. All measures were collected at the first wave of data collection (1994-1997) for the PHDCN study. Table 1 displays the descriptive statistics for the total sample (males and females combined) as well as separately by gender (n = 745 males, n = 772 females).

(**Table 1 About Here)**

Measures

Dependent Variables. The outcomes assessed in this study were male and female self-reported internalizing and externalizing mental health symptoms captured by the Youth Self Report (YSR) (Achenbach, 1991). Subjects reported on a three-point scale (0 = not true, 1 = somewhat true or sometimes true, and 2 = very true or often true) their symptoms of being withdrawn, depressed or anxious, somatic, and aggressive during the past six months. Seven items were used to capture withdrawn symptoms: (child) likes to be alone; refuses to talk; is

[1] Hereafter referred to interchangeably as the parents of the youth subjects.

secretive; is shy; is underactive; is unhappy/sad/depressed; is withdrawn. Items were summed to create the *withdrawn symptoms* scale (alpha = 0.59). Fourteen items were used to measure youths' depressive or anxiety symptoms: (child) is lonely; cries a lot; fears doing bad; feels s/he has to be perfect; feels unloved; feels that others are out to get him/her; feels worthless; feels nervous; is fearful; feels guilty; is self conscious; is suspicious; is unhappy; worries. Items were summed to create the *depression/anxiety* scale (alpha = 0.82). Nine items were used to measure *somatic symptoms* among youth: (child) feels dizzy; overtired; achy; experiences headaches; experiences nausea; experiences eye problems; gets rashes; has stomach cramps; experiences vomiting (alpha =0.75). A total scale combining the withdrawn, depression/anxiety, and somatic subscales was created. The *internalizing symptoms* scale summed the 29 items listed above (alpha =0.86).[2] To measure externalizing behaviors, 19 items capturing *aggression* were assessed. Subjects reported how true it was that they: argued; bragged; were cruel; demanded a lot of attention; destroyed his/her own things; destroyed others' things; disobeyed at home; disobeyed at school; were jealous; got in fights; attacked others; screamed a lot; showed off; were stubborn; were moody; talked too much; teased; had temper tantrums or a hot temper; and threatened others (alpha = 0.85) during the past six months.

Exposure to Intimate Partner Violence. Youths' exposure to intimate partner violence was assessed using six items from the Conflict Tactics Scale (Straus, 1979) indicating severe violence. This measure tapped physical violence between parents that occurred within the context of an argument or disagreement. The subjects' primary caregivers reported on their own physical violence as well as their partner's violence within the relationship. The primary caregiver who was interviewed was asked how many times during an argument with their partner in the past year their partner had: kicked, bit, or hit them with their fist; hit or tried to hit them

[2] "Child is unhappy" was only counted one time in the internalizing scale.

with something; beat them up; choked them; threatened them with a knife or a gun; and used a knife or fired a gun. The same parent who was interviewed also reported their own violence by answering the same questions.[3] Frequency was assessed on a six-point scale from 0 times to 21 or more times, and items were summed to calculate the *total physical IPV* that occurred between partners (alpha = 0.75). To investigate whether violence perpetrated only by the adult male or female impacted youths differently, this measure was disaggregated to identify those couples where only the male was violent, only the female was violent, and where both partners were violent. *Male-only perpetrated IPV* reflected the frequency that only the male partner perpetrated severe violence against the female partner (and the female partner did not use severe violence against the male), whereas *female-only perpetrated IPV* reflected the frequency that only the female partner perpetrated severe violence against the male (and the male did not use severe violence). For instance, cases where a female primary caregiver reported that her partner was violent, but she was not, were coded as "male-only perpetrated IPV," and this measure indicated how often (on a six-point scale) she reported that he was violent; likewise, a female primary caregiver who reported that only she was violent in the relationship was coded as "female-only perpetrated IPV," and this indicated how often she was violent. *Mutual IPV* indicated the frequency at which both partners in the relationship reported using severe violence against each other. The reference group consisted of couples who reported using no severe violence in the past year.[4] The majority (79.2 percent) of couples reported engaging in no severe violence, followed by 8.1 percent reporting mutual violence, 7.3 percent reporting female-only perpetrated violence, and 5.4 percent reporting male-only perpetrated IPV.

[3] 89 percent of interviewed primary caregivers were female.
[4] Separate analyses were conducted due to multicollinearity between the total IPV measure and the disaggregated IPV measures.

Control Variables. Multiple control variables were included in the analysis in order to account for other possible predictors of youth internalizing and externalizing problems. Adolescents reported on their age and demographic information, while responses from the primary caregiver and interviewer impressions were used to measure child abuse, parental warmth, family income, parental education, parental employment, and parental depression. *Age* was the youth's age in years. Two separate dichotomous variables, *Hispanic* and *African American*, denoted the race/ethnicity of the participant.[5] *Child abuse* was assessed with the Conflict Tactics Scale for Parent and Child (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998) and reflected whether the parent reported using any of seven acts of physical abuse (threw something at; slapped; pushed, grabbed; kicked, bit, or hit with fist; hit with something; beat up; burned or scalded) against the youth during the past year (coded no = 0; yes = 1) (alpha 0.69). *Parental warmth* was observed by trained PHDCN staff during in-home interviews, who rated the occurrence (not observed = 0; observed = 1) of each of nine behaviors displayed by parents during interactions with children. These nine behaviors were summed (alpha 0.77) to reflect overall parental warmth (e.g., praise, encouragement, and affection). *Income* was an ordinal variable (1 = < $5,000; 2 = $5,000-$9,999; 3 = $10,000-$19,999…, 7 = > $50,000) denoting the total maximum personal or household income earned in the past year, while *parental education* was an ordinal measure indicating the highest level of education reached by either parent (1 = less than high school…, 3 = more than high school). *Parental employment* was a dichotomous measure indicating whether the primary caregiver was currently employed or had been employed in the previous year (0 = no; 1 = yes). Finally, *parental depression* was a dichotomous variable indicating that either parent suffered from depression, or "felt so low for a period of two weeks

[5] Caucasians (non-Latino whites) served as the reference category.

that they hardly ate or slept, or couldn't work or do whatever they usually do" at some point during the previous year (0 = no; 1 = yes).

Analyses

The current study includes youth living in 80 neighborhoods in Chicago. Hierarchical modeling techniques (Hierarchical Linear Modeling [HLM], see Raudenbush & Bryk, 2002) were used to control for potential neighborhood influences on youth outcomes by adjusting for the correlated error that exists between individuals living within the same neighborhoods. All predictors were group-mean centered and fixed to remove any between-neighborhood variation that may have been related to adolescent internalizing and externalizing problems. Outcomes were analyzed using linear regression in HLM. The analyses proceeded in two steps. First, we examined the overall effect of the total amount of severe physical violence occurring in the household on adolescents' mental health outcomes. We then examined the effect of the disaggregated variables (i.e., female-only perpetrated IPV, male-only perpetrated IPV, and mutual IPV compared to no IPV) on males' and females' mental health outcomes. The relationships between exposure to IPV and youth outcomes were analyzed separately for males and females, and differences in the strength of the coefficients were examined using the equality of coefficients test developed by Clogg, Petkova, and Haritou (1995). Multicollinearity was not a problem for any of the models presented (tolerance values for all models were > .49, see Allison, 1999).

RESULTS

As shown in Table 1, the sample was evenly distributed by age (mean age 13.53 years) and included comparable numbers of male and female youths. None of the demographic or socioeconomic variables were significantly different between males and females. However, females reported higher levels of all types of internalizing mental health problems, as well as aggression, than males. Females were also exposed to more total physical violence between their parents than males.

Table 2 depicts the results of the analyses of withdrawn symptoms. Regarding exposure to IPV, the total amount of parental violence was not significantly associated with youths' withdrawn symptoms. Only female perpetrated IPV was significantly related to both males' and females' withdrawn symptoms, and this effect was significantly different for males and females. Females exposed to higher levels of severe IPV perpetrated only by female caregivers were more likely suffer from withdrawn mental health problems, while males exposed to this same violence were less likely to experience these problems. Older youth and those experiencing child abuse were more likely to report withdrawn symptoms among females, while higher parental education was associated with lower levels of withdrawn symptoms among males. However, the differences in these effects between males and females were not significant.

(Table 2 About Here)

Table 3 contains the analyses of depression/anxiety among youth. While exposure to the total amount of violence between parents was not significantly related to males' or females' depression or anxiety problems, violence perpetrated only by the female caregiver again impacted males and females differently, although both effects were not statistically significant. Older females were also more likely to exhibit depression/anxiety than younger females, and the

magnitude of the positive effect of age for females was significantly different from the null effect of age for males. No gender differences were found for the effects of race, child abuse, or income, although African American males were less likely than Caucasian males to report depression/anxiety, child abuse was related to higher levels of depression/anxiety among females, and higher income was related to fewer depression/anxiety symptoms among males.

(Table 3 About Here)

The models of youths' somatic symptoms are displayed in Table 4. Contrary to the results regarding depression/anxiety and withdrawn problems, exposure to any form of severe partner violence was not significantly related to somatic problems among males or females. Older females were more likely to report somatic symptoms than younger females, while younger males were more likely to exhibit somatic symptoms than older males; the difference between these two effects was significant. African American males were less likely to report somatic problems than Caucasian males, and child abuse was related to higher levels of somatic problems among males and females alike; however, no gender differences were found for these effects. Parental warmth was related to lower levels of somatic problems among females, but again, there was no gender difference in this effect. Higher income was associated with fewer somatic problems among males, and this effect was significantly different from the null effect of income observed for females.

(Table 4 About Here)

The models of internalizing symptoms are contained in Table 5. Total IPV was not associated with internalizing outcomes for either sex, but female-only perpetrated severe partner violence was related to fewer internalizing problems among males; this effect was significantly different between males and females. Age was significantly related to internalizing problems

among youth (older males reported fewer internalizing problems, while older females reported more internalizing problems) and this effect was also significantly different between sexes. African American males were less likely to report internalizing symptoms than Caucasian males, and child abuse was related to more internalizing among females, but no gender differences were found for these effects, meaning that they impacted males and females similarly. Finally, income impacted males more so than females (only in the second set of models) – higher family income was related to fewer internalizing symptoms among males.

(Table 5 About Here)

Finally, the analyses of aggression are contained in Table 6. Regarding exposure to IPV, the total amount of violence between partners in the household was associated with significantly higher levels of aggression among females, as was mutual IPV. Although these variables were not associated with aggression for males, the differences in these effects did not differ significantly between sexes. Age was related to higher levels of aggression among males and females, but the magnitude of the effect was stronger for females. Ethnicity (Hispanic) was more strongly related to females' aggression than males' aggression, although neither effect was significant. Child abuse was associated with increased levels of aggression among males and females, and parental warmth was associated with lower levels of aggression among females; neither of these effects differed by gender.

(Table 6 About Here)

DISCUSSION AND IMPLICATIONS

Our findings suggest that children's exposure to violence between their parents impacts their mental health by increasing their internalizing and externalizing symptoms, at least in the short-

term. We found that being exposed to parental violence, particularly violence perpetrated only by the female caregiver, was related to increased internalizing problems (such as withdrawn symptoms) even after multiple control variables (e.g., child abuse) had been taken into account. The total amount of severe IPV that occurred between parents was generally not a significant predictor of either males' or females' mental health problems, though it was significantly related to females' aggression (albeit with no significant gender differences in this effect). It appears that the impact of IPV on short-term internalizing mental health problems among adolescents may be better understood when it is examined in terms of which parental figure is the "aggressor" versus the "victim."

The results depicted here suggest that females appear to be more detrimentally affected by exposure to IPV, particularly female-perpetrated severe violence, than males. These findings seem to support Jankowski et al.'s (1999) contention that the same-sex parent (e.g., mother) is a more salient model to their child (e.g., daughter). Thus, modeling theory could adequately account for the results of the current study. This theory could also be used to explain why violence that was only perpetrated by the mother was significantly related to *lower* levels of males' withdrawn problems and overall internalizing symptoms – that is, since the mother is the opposite sex of the son, her violence may be therefore less detrimental to him. General Strain Theory (Agnew, 1992), however, may better explain these findings, as it stipulates that males are simply more likely to respond to strain (e.g., exposure to violence) with aggression, anger, or violence rather than internalizing mental health problems.

Our results also indicated that violence perpetrated only by the father and mutual violence between both parents were relatively unimportant with regard to internalizing mental health problems among adolescents. Perhaps this is because our measure of IPV exposure does not

capture the larger context of the violence. The measure used here does not consider the motivations for violence, perceptions of the violence, or the consequences of it (see Lindhorst & Tajima, 2008). Thus, we cannot understand why violence occurred (e.g., control purposes versus self-defense or resistance, see Johnson, 2011), whether the parents considered this normal and acceptable behavior (Lindhorst & Tajima, 2008), or whether either was hurt or injured as a result of the violence (Straus, 2011). All of these factors could potentially impact youths' perceptions of IPV and subsequent reactions, such as depression. Perhaps the lack of detail surrounding the violence influenced the results we found here; without further understanding of such context, we cannot be sure why female perpetrated IPV was so detrimental for girls or why mutual IPV was relatively unimportant to the mental health outcomes among youth. Perhaps what we can conclude from our results, however, is that the gender of the perpetrator of violence may be a potential moderator of the effect of exposure to intimate partner violence among children and adolescents and, as such, deserves more attention in future research.

Although our study overcomes certain limitations of previous research, particularly by including several relevant control variables and comparable numbers of male and female youths, it nonetheless is cross-sectional and may suffer from restricted generalizability. Certainly, violence between parents could have existed prior to the past year, and this might have impacted youths' mental health differently; a longitudinal analysis would be better suited to examine patterns of violence and mental health that were set into motion earlier in life. Our cross-sectional analyses offer a useful starting point in better understanding the interrelationships of exposure to parental violence, gender, and gender of the perpetrator, but future research may consider whether the results of the current study are evident in longitudinal analyses. Additional research is also needed to determine whether the patterns found here generalize to other samples

(e.g., non-urban or primarily Caucasian youth) or to different outcomes among youth, such as delinquency and violence. Our results could also reflect differential reporting patterns of male and females adolescents. It is possible that males are less likely to admit to suffering from mental health symptoms than females, and the findings that females evidence more mental health problems than males may therefore be misleading. We restricted our IPV measure to the most severe forms of violence, so these results cannot be generalized to families experiencing less severe conflict. In addition, we cannot ensure that all children whose parents reported IPV actually witnessed or knew about the events, although evidence suggests that children are likely aware of this type of violence (e.g., they hear it or see broken furniture, bruises, etc, see Holt, Buckley, & Whelan, 2008). Nonetheless, the measures of exposure to partner violence could have under-estimated the effects of IPV if some adolescents coded as victims were actually unaware of their caregivers' violence.

Given that mental health problems that occur early in life may lead to more problems later on, our results suggest that law enforcement personnel, school counselors, school personnel, and other service professionals be made aware of the potential harmful effects of exposure to partner violence on children and adolescents. We suggest that when responding to calls for domestic violence, law enforcement officers record when children are present, as well as the gender of the child. Further, these officers should be well-acquainted with the local service providers who work with victims (both adult and children) of domestic violence, so that they can make appropriate referrals when necessary. If it is possible for this information to be shared with third parties such as school counselors and other mental health providers, doing so may facilitate early intervention in these children's lives. For instance, if school counselors know that a child is being exposed to parental violence, they might understand that difficulties in school performance

(e.g., falling asleep in class, not turning in assignments, or acting out) could be reactions to or consequences of the child's violent home life. Further, educating parents, particularly mothers, about the detrimental impact of their violence on their children's behavior and mental well-being may also help to curb their aggression towards partners, at least when their children are present.

The negative outcomes produced by IPV exposure emphasize the need to direct services to children living in homes in which violence between caregivers is present. Children exposed to IPV need treatment to help alleviate the immediate distress caused by victimization and to prevent the development of long-term problems. While interventions targeting youth victims in particular are needed, more universal interventions that take place in schools and/or community agencies can also be beneficial. The National Research Council and Institute of Medicine (2009) have recently identified a number of interventions that have been demonstrated in high quality research trials to prevent mental and behavioral disorders among the youth population. Such services include universal programs delivered in schools and in the community that enhance youth behavioral and emotional competence by, for example, providing them with skills to cope with stress and anxiety, and to recognize and respond appropriately to negative emotions. Children from all backgrounds can benefit from such services, and those exposed to intimate partner violence between their parents can also profit from these types of interventions without feeling targeted or stigmatized due to their status as victims.

REFERENCES

Achenbach, T. M. (1991). *Manual for the Youth Self-Report and 1991 profile*. Burlington, VT: University of Vermont, Department of Psychiatry.

Agnew, R. (1992). Foundation for a General Strain Theory of crime and delinquency. *Criminology, 30*, 47-88.

Agnew, R. (2001). Building on the foundation of General Strain Theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency, 38*, 319-361.

Akers, R. L. (1985). *Deviant behavior: A social learning approach* (3rd ed.). Belmont, CA: Wadsworth.

Allison, P. D. (1999). *Multiple regression: A primer*. Thousand Oaks, CA: Pine Forge Press, Sage.

Bandura, A., & Walters, R. H. (1959). *Adolescent aggression*. New York, NY: The Ronald Press Company.

Broidy, L., & Agnew, R. (1997). Gender and crime: A General Strain Theory perspective. *Journal of Research in Crime and Delinquency, 34*, 275-306.

Clements, C. M., Oxtoby, C., & Ogle, R. L. (2008). Methodological issues in assessing psychological adjustment in child witnesses of intimate partner violence. *Trauma, Violence, and Abuse, 9*, 114-127.

Clogg, C., Petkova, E., & Haritou, A. (1995). Statistical methods for comparing regression coefficients between models *American Journal of Sociology, 100*, 1261-1293.

Cummings, J. G., Pepler, D. J., & Moore, T. E. (1999). Behavior problems in children exposed to wife abuse: Gender differences. *Journal of Family Violence, 14*, 133-156.

Doumas, D., Margolin, G., & John, R. S. (1994). The intergenerational transmission of aggression across three generations. *Journal of Family Violence, 9*, 157-174.

Earls, F. J., Brooks-Gunn, J., Raudenbush, S. W., & Sampson, R. J. (2002). Project on Human Development in Chicago Neighborhoods (PHDCN) (Publication., from Ann Arbor, MI: Inter-university Consortium for Political and Social Research, Grant 93-IJ-CX-K005.

Evans, S. E., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta analysis of child and adolescent outcomes. *Aggression and Violent Behavior, 13*, 131-140.

Fergusson, D. M., & Horwood, L. J. (1998). Exposure to interparental violence in childhood and psychosocial adjustment in young adulthood. *Child Abuse and Neglect, 22*, 339-557.

Finkelhor, D., Ormond, R., & Turner, H. A. (2009). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse and Neglect, 33*, 403-411.

Foster, H., & Brooks-Gunn, J. (2009). Toward a stress process model of children's exposure to physical family and community violence. *Clinical Child and Family Psychology Review, 12*, 71-94.

Graham-Bermann, S. A., DeVoe, E. R., Mattis, J. S., Lynch, S., & Thomas, S. A. (2006). Ecological predictors of traumatic stress symptoms in Caucasian and ethnic minority children exposed to intimate partner violence. *Violence Against Women, 12*, 663-692.

Herrenkohl, T. I., & Herrenkohl, R. C. (2007). Examining the overlap and prediction of multiple forms of child maltreatment, stressors and socioeconomic status: A longitudinal analysis of youth outcomes. *Journal of Family Violence, 22*, 553-562.

Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Moylan, C. A. (2008). Intersection of child abuse and children's exposure to domestic violence. *Trauma, Violence and Abuse, 9*(2), 84-99.

Ho, M. Y., & Cheung, F. M. (2010). The differential effects of forms and settings of exposure to violence on adolescents' adjustment. *Journal of Interpersonal Violence, 25*, 1309-1337.

Holt, S., Buckley, H., & Whelan, S. (2008). The impact of exposure to domestic violence on children and young people: A review of the literature. *Child Abuse and Neglect, 32*, 797-810.

Jankowski, M. K., Leitenberg, H., Henning, K. R., & 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*, 267-279.

Johnson, M. P. (2011). Gender and types of intimate partner violence: A response to an anti-feminist literature review. *Aggression and Violent Behavior, 16*, 289-296.

Kennedy, A. C., Bybee, D., Sullivan, C. M., & Greeson, M. (2010). The impact of family and community violence on children's depression trajectories: Examining the interactions of violence exposure, family social support, and gender. *Journal of Family Psychology, 24*, 197-207.

Kitzmann, K. M., Gaylord, N. K., Holt, A. R., & Kenny, E. D. (2003). Child witnesses to domestic violence: A meta-analytic review. *Journal of Consulting and Clinical Psychology, 71*, 339-352.

Knopf, D., Park, M. J., & Paul Mulye, T. (2008). *The mental health of adolescents: A national profile, 2008*. San Francisco, CA: National Adolescent Health Information Center, University of California, San Francisco.

Lindhorst, T., & Tajima, E. A. (2008). Reconceptualizing and operationalizing context in survey research on intimate partner violence. *Journal of Interpersonal Violence, 23*, 362-382.

Macmillan, R. (2001). Violence and the life course: The consequences of victimization for personal and social development. *American Review of Sociology, 27*, 1-22.

Moretti, M. M., Osbuth, 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*, 385-395.

Moylan, C. A., Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Russo, M. J. (2009). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems *Journal of Family Violence, 25*, 53-63.

Mrug, S., & Windle, M. (2010). Prospective effects of violence exposure across multiple contexts on early adolescents' internalizing and externalizing problems. *Journal of Child Psychology and Psychiatry, 51*, 953-961.

National Research Council and Institute of Medicine. (2009). *Preventing mental, emotional, and behavioral disorders among young people: Progress and possibilities. Committee on the Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults: Research Advances and Promising Interventions*. Washington, D.C.: Board on Children, Youth, and Families, Division of Behavioral and Social Sciences and Education. The National Academies Press

O'Keefe, M. (1994). Linking marital violence, mother-child/father-child aggression and child behavior problems. *Journal of Family Violence, 9*, 63-78.

Puzzanchera, C. (2009). *Juvenile Arrests 2008*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2 ed. Vol. 1). Thousand Oaks, CA: Sage.

Sigfusdottir, I.-D., Farkas, G., & Silver, E. (2004). The role of depressed mood and anger in the relationship between family conflict and delinquent behavior. *Journal of Youth and Adolescence, 33*, 509-522.

Spilsbury, J. C., Belliston, L., Drotar, D., Drinkard, A., Kretschmar, J., Creeden, R., et al. (2007). Clinically significant trauma symptoms and behavioral problems in a community-based sample of children exposed to domestic violence. *Journal of Family Violence, 22*, 487-499.

Sternberg, K. J., Baradaran, L. P., Abbott, C. B., Lamb, M. E., & Guterman, E. (2006). Type of violence, age, and gender differences in the effects of family violence on children's behavior problems: A mega-analysis *Developmental Review, 26*, 89-112.

Straus, M. A. (1979). Measuring intra family conflict and violence: The Conflict Tactics Scale. *Journal of Marriage and the Family, 41*, 75-88.

Straus, M. A. (2011). Gender symmetry and mutuality in perpetration of clinical-level partner violence: Empirical evidence and implications for prevention and treatment. *Aggression and Violent Behavior, 16*, 279-288.

Straus, M. A., Hamby, S., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent-Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse and Neglect, 22*, 249-270.

Widom, C. S. (1989). The cycle of violence. *Science, 244*, 160-166.

Wolfe, D. A., Crooks, C. V., Lee, V., McIntyre-Smith, A., & Jaffe, P. G. (2003). The effects of children's exposure to domestic violence: A meta-analysis and critique. *Clinical Child and Family Psychology Review, 6*, 171-187.

Yates, T. M., Dodds, M. F., Sroufe, L. A., & Egeland, B. (2003). Exposure to partner violence and child behavior problems: A prospective study controlling for child physical abuse and neglect, child cognitive ability, socioeconomic status, and life stress. *Development and Psychopathology, 15*, 199-218.

Zinzow, H. M., Ruggiero, K. J., Resnick, H., Hanson, R., Smith, D., Saunders, B., et al. (2009). Prevalence and mental health correlates of witnessed parental and community violence in a national sample of adolescents. *Journal of Child Psychology and Psychiatry, 50*, 441-450.

Table 1
Descriptive Statistics

	Total Sample		Males		Females		
	$\bar{x}$	*sd*	$\bar{x}$	*sd*	$\bar{x}$	*sd*	*t-test*
	n = 1,517		*n = 745*		*n =772*		
Dependent Variables							
Withdrawn Symptoms	3.58	*2.45*	3.16	*2.34*	3.98	*2.50*	-6.51***
Depression/Anxiety	5.68	*4.64*	4.86	*4.04*	6.46	*5.02*	-6.68***
Somatic Symptoms	3.92	*3.21*	3.49	*2.99*	4.33	*3.35*	-5.09***
Internalizing Symptoms	12.80	*8.27*	11.21	*7.53*	14.31	*8.65*	-7.33***
Aggression	8.83	*6.05*	8.29	*5.85*	9.34	*6.19*	-3.35***
Independent Variables							
Age	13.53	*1.54*	13.53	*1.54*	13.53	*1.53*	
Hispanic	0.45	*0.50*	0.46	*0.50*	0.43	*0.50*	
African American	0.37	*0.48*	0.35	*0.48*	0.38	*0.49*	
Child Abuse	0.64	*0.48*	0.66	*0.47*	0.62	*0.49*	
Parental Warmth	5.89	*2.00*	5.87	*2.00*	5.91	*2.00*	
Income	4.13	*1.88*	4.14	*1.88*	4.12	*1.88*	
Parental Education	2.08	*0.93*	2.10	*0.93*	2.05	*0.93*	
Parental Employment	0.63	*0.48*	0.65	*0.48*	0.61	*0.49*	
Parental Depression	0.14	*0.34*	0.15	*0.35*	0.13	*0.34*	
Total Physical IPV	1.18	*3.72*	0.96	*3.11*	1.39	*4.22*	-1.98*
Male-Only Perpetrated IPV	0.19	*1.11*	0.13	*0.85*	0.25	*1.32*	
Female-Only Perpetrated IPV	0.22	*1.25*	0.18	*0.91*	0.27	*1.51*	
Mutual IPV	0.76	*3.42*	0.65	*2.93*	0.88	*3.86*	

Note: Only significant t-tests are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (*t*-tests, 2-tailed)

Table 2
Fixed Effects Models Predicting Withdrawn Symptoms

	Withdrawn Symptoms					Withdrawn Symptoms				
	Males		Females			Males		Females		
	β	*SE*	β	*SE*	z test	β	*SE*	β	*SE*	z test
Constant	3.14***	*0.12*	3.87***	*0.12*	-4.302**	3.14***	*0.12*	3.87***	*0.12*	-4.302**
Independent Variables										
Age	0.05	*0.07*	0.20**	*0.07*		0.06	*0.07*	0.20**	*0.07*	
Hispanic	0.35	*0.50*	0.67	*0.44*		0.29	*0.50*	0.70	*0.44*	
African American	-0.21	*0.45*	0.77	*0.51*		-0.22	*0.44*	0.81	*0.51*	
Child Abuse	0.36	*0.23*	0.61**	*0.21*		0.40	*0.23*	0.60**	*0.21*	
Parental Warmth	0.03	*0.05*	-0.02	*0.06*		0.04	*0.05*	-0.02	*0.06*	
Income	-0.07	*0.08*	0.04	*0.07*		-0.08	*0.08*	0.04	*0.07*	
Parental Education	-0.28*	*0.13*	-0.01	*0.20*		-0.30*	*0.12*	-0.02	*0.20*	
Parental Employment	0.18	*0.24*	-0.01	*0.24*		0.19	*0.24*	0.01	*0.24*	
Parental Depression	-0.12	*0.33*	-0.21	*0.32*		-0.15	*0.33*	-0.24	*0.31*	
Total Physical IPV	-0.02	*0.04*	0.05	*0.03*		--	--	--	--	
Male-Only Perpetrated IPV	--	--	--	--		-0.06	*0.09*	0.01	*0.05*	
Female-Only Perpetrated IPV	--	--	--	--		-0.26***	*0.08*	0.18**	*0.06*	-4.400**
Mutual IPV	--	--	--	--		-0.00	*0.04*	0.04	*0.03*	
Variance Components	0.34092		0.12988			0.34770		0.12933		
X^2	105.82		78.65			106.60		78.87		

Note: Only z-values associated with significant differences in the magnitude of effects are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (2-tailed)

Table 3
Fixed Effects Models Predicting Depression/Anxiety

	Depression/Anxiety					Depression/Anxiety				
	Males		Females			Males		Females		
	β	*SE*	β	*SE*	z test	β	*SE*	β	*SE*	z test
Constant	4.80***	*0.18*	6.30***	*0.26*	-4.743**	4.80***	*0.18*	6.30***	*0.26*	-4.743**
Independent Variables										
Age	-0.20	*0.13*	0.34*	*0.14*	-2.826**	-0.18	*0.14*	0.34*	*0.14*	-2.626**
Hispanic	-0.33	*0.77*	0.97	*0.72*		-0.41	*0.78*	0.99	*0.72*	
African American	-2.00**	*0.77*	-1.07	*0.81*		-2.03**	*0.78*	-1.03	*0.81*	
Child Abuse	0.41	*0.47*	1.44***	*0.42*		0.47	*0.47*	1.43***	*0.43*	
Parental Warmth	0.07	*0.11*	-0.08	*0.12*		0.08	*0.11*	-0.08	*0.12*	
Income	-0.26*	*0.13*	0.03	*0.12*		-0.28*	*0.13*	0.03	*0.12*	
Parental Education	0.12	*0.24*	-0.31	*0.29*		0.10	*0.24*	-0.33	*0.29*	
Parental Employment	0.56	*0.46*	-0.22	*0.51*		0.56	*0.46*	-0.18	*0.52*	
Parental Depression	-0.89	*0.58*	-0.27	*0.57*		-0.95	*0.58*	-0.31	*0.56*	
Total Physical IPV	0.05	*0.11*	0.07	*0.05*		--	--	--	--	
Male-Only Perpetrated IPV	--	--	--	--		0.04	*0.12*	-0.02	*0.10*	
Female-Only Perpetrated IPV	--	--	--	--		-0.31	*0.17*	0.22	*0.12*	-2.547*
Mutual IPV	--	--	--	--		0.08	*0.12*	0.05	*0.05*	
Variance Components	0.15430		1.73568			0.15791		1.73308		
X^2	71.04		113.00			71.21		112.91		

Note: Only z-values associated with significant differences in the magnitude of effects are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (2-tailed)

Table 4
Fixed Effects Models Predicting Somatic Symptoms

	Somatic Symptoms					Somatic Symptoms				
	Males		Females			Males		Females		
	β	*SE*	β	*SE*	z test	β	*SE*	β	*SE*	z test
Constant	3.49***	*0.14*	4.27***	*0.16*	-3.669**	3.49***	*0.14*	4.26***	*0.16*	-3.622**
Independent Variables										
Age	-0.38***	*0.09*	0.20*	*0.10*	-4.311**	-0.37***	*0.09*	0.20*	*0.10*	-4.237**
Hispanic	-0.24	*0.42*	0.92	*0.62*		-0.28	*0.42*	0.93	*0.62*	
African American	-1.00*	*0.48*	0.66	*0.80*		-1.04*	*0.47*	0.70	*0.80*	
Child Abuse	0.62*	*0.30*	0.83**	*0.30*		0.66*	*0.30*	0.83**	*0.30*	
Parental Warmth	-0.02	*0.08*	-0.21*	*0.08*		-0.01	*0.08*	-0.21*	*0.08*	
Income	-0.19*	*0.08*	0.08	*0.11*	-1.985*	-0.20*	*0.08*	0.08	*0.11*	-2.059*
Parental Education	-0.15	*0.16*	-0.09	*0.24*		-0.15	*0.16*	-0.10	*0.24*	
Parental Employment	0.27	*0.30*	-0.12	*0.37*		0.26	*0.31*	-0.10	*0.36*	
Parental Depression	-0.27	*0.40*	0.65	*0.44*		-0.31	*0.40*	0.62	*0.45*	
Total Physical IPV	0.03	*0.07*	0.03	*0.03*		--	--	--	--	
Male-Only Perpetrated IPV	--	--	--	--		0.20	*0.11*	-0.04	*0.07*	
Female-Only Perpetrated IPV	--	--	--	--		-0.19	*0.10*	0.14	*0.14*	
Mutual IPV	--	--	--	--		0.03	*0.08*	0.02	*0.03*	
Variance Components	0.17570		0.00457			0.16282		0.22707		
X^2	87.31		81.55			87.42		83.13		

Note: Only z-values associated with significant differences in the magnitude of effects are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (2-tailed)

Table 5
Fixed Effects Models Predicting Internalizing Mental Health Symptoms

	Internalizing Symptoms					Internalizing Symptoms				
	Males		Females			Males		Females		
	β	*SE*	β	*SE*	z test	β	*SE*	β	*SE*	z test
Constant	11.12***	*0.35*	14.00***	*0.44*	-5.122**	11.12***	*0.35*	14.00***	*0.44*	-5.122**
Independent Variables										
Age	-0.52*	*0.24*	0.69**	*0.24*	-3.565**	-0.48*	*0.24*	0.68**	*0.24*	-3.418**
Hispanic	-0.25	*1.36*	2.59	*1.36*		-0.44	*1.35*	2.65	*1.37*	
African American	-3.15**	*1.19*	0.49	*1.74*		-3.23**	*1.17*	0.60	*1.72*	
Child Abuse	1.32	*0.82*	2.72***	*0.70*		1.45	*0.81*	2.71***	*0.70*	
Parental Warmth	0.08	*0.19*	-0.30	*0.22*		0.11	*0.19*	-0.28	*0.22*	
Income	-0.51*	*0.24*	0.15	*0.24*		-0.56*	*0.24*	0.16	*0.24*	-2.121*
Parental Education	-0.25	*0.45*	-0.36	*0.61*		-0.30	*0.44*	-0.41	*0.60*	
Parental Employment	0.89	*0.76*	-0.37	*0.84*		0.90	*0.76*	-0.29	*0.84*	
Parental Depression	-1.21	*1.13*	0.21	*0.93*		-1.34	*1.13*	0.12	*0.93*	
Total Physical IPV	0.06	*0.20*	0.15	*0.09*		--	--	--	--	
Male-Only Perpetrated IPV	--	--	--	--		0.15	*0.24*	-0.06	*0.15*	
Female-Only Perpetrated IPV	--	--	--	--		-0.74***	*0.21*	0.53	*0.29*	-3.547**
Mutual IPV	--	--	--	--		0.11	*0.21*	0.11	*0.10*	
Variance Components	1.06952		4.03896			1.07706		4.05949		
X^2	79.74		100.27			80.20		100.50		

Note: Only z-values associated with significant differences in the magnitude of effects are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (2-tailed)

Table 6
Fixed Effects Models Predicting Aggression

	Aggression					Aggression				
	Males		Females			Males		Females		
	β	*SE*	β	*SE*	z test	β	*SE*	β	*SE*	z test
Constant	8.31***	*0.29*	9.30***	*0.30*	-2.373*	8.31***	*0.29*	9.30***	*0.30*	-2.373*
Independent Variables										
Age	0.39*	*0.20*	0.92***	*0.16*	-2.069*	0.40*	*0.20*	0.92***	*0.16*	-2.030*
Hispanic	-1.65	*1.00*	1.00	*0.88*	-1.989*	-1.68	*1.00*	0.97	*0.91*	-1.960*
African American	-1.97	*1.18*	0.65	*1.14*		-1.96	*1.19*	0.64	*1.18*	
Child Abuse	1.16*	*0.56*	1.36*	*0.59*		1.18*	*0.55*	1.37*	*0.60*	
Parental Warmth	-0.09	*0.13*	-0.47*	*0.18*		-0.09	*0.14*	-0.45*	*0.18*	
Income	-0.23	*0.19*	0.04	*0.20*		-0.24	*0.19*	0.03	*0.19*	
Parental Education	-0.09	*0.37*	0.38	*0.36*		-0.12	*0.38*	0.34	*0.36*	
Parental Employment	0.86	*0.62*	-0.73	*0.68*		0.86	*0.62*	-0.65	*0.67*	
Parental Depression	-1.30	*0.71*	0.44	*0.90*		-1.31	*0.70*	0.42	*0.91*	
Total Physical IPV	0.09	*0.12*	0.16**	*0.06*		--	--	--	--	
Male-Only Perpetrated IPV	--	--	--	--		-0.09	*0.20*	-0.10	*0.16*	
Female-Only Perpetrated IPV	--	--	--	--		-0.05	*0.32*	0.34	*0.29*	
Mutual IPV	--	--	--	--		0.14	*0.12*	0.16***	*0.04*	
Variance Components	1.27981		1.59342			1.26287		1.59615		
X^2	96.81		97.72			96.49		97.85		

Note: Only z-values associated with significant differences in the magnitude of effects are provided
*$p \leq .05$ **$p \leq .01$ *** $p \leq .001$ (2-tailed)

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Abigail A. Fagan is an Associate Professor in the Department of Criminology and Criminal Justice at the University of South Carolina. Her research focuses on the etiology and prevention of juvenile delinquency, with an emphasis on family and community influences on offending, the relationship between gender and delinquency, and the identification and effective implementation of delinquency prevention programs. She has received federal funding as a Principal Investigator on projects examining contextual influences on the relationship between exposure to violence and youth offending using data from the Project on Human Development in Chicago Neighborhoods. She has also participated in the Blueprints for Violence Prevention Initiative and the Community Youth Development Study to help schools and communities implement effective prevention programs with high implementation quality.