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Do Parenting Practices and Pro-social Peers Moderate the Association between Intimate Partner Violence Exposure and Teen Dating Violence?

Edward F. Garrido and Heather N. Taussig

Kempe Center for the Prevention and Treatment of Child Abuse and Neglect, Department of Pediatrics, University of Colorado School of Medicine

Abstract

Objective—Teen dating violence (TDV) affects the lives of millions of adolescents each year. The current study examined the association between intimate partner violence (IPV) exposure and TDV perpetration and victimization. In addition, positive parenting practices and pro-social peer relationships were examined as potential moderators of the association between IPV and TDV.

Method—Participants were 41 adolescents (ages 12–15) and their caregivers. Youth were currently or recently in an out-of-home placement due to maltreatment. Youth reported on their exposure to violence, involvement in TDV, and association with pro-social peers. Caregivers reported on their parenting practices.

Results—There was a significant, positive association between IPV exposure and TDV victimization, but not between IPV and TDV perpetration. In addition, positive parenting practices and pro-social peer relationships moderated the association between IPV and TDV perpetration, such that there was a positive association between IPV exposure and TDV perpetration at lower, but not higher levels of these moderators. Similarly, there was a positive association between IPV exposure and TDV victimization at lower, but not higher levels of positive parenting practices.

Conclusions—These results highlight the importance positive parenting practices and pro-social peers as key protective factors that may attenuate TDV involvement for high-risk adolescents.

Keywords

Intimate Partner Violence; Domestic Violence; Teen Dating Violence; Foster Care; Child-Welfare; Parenting Practices; Pro-social Peers

Teen dating violence (TDV) is a pervasive and serious problem that affects the lives of millions of adolescents each year. Prevalence estimates from studies that employ a broad definition of TDV (i.e., that include acts of verbal and psychological intimidation) indicate that more than half of all dating youth surveyed report being either a perpetrator or victim of such acts (Jouriles, Garrido, Rosenfield, & McDonald, 2009). Although rates of TDV involvement are alarmingly high among youth in the general population, those adolescents with a history of maltreatment are at an even greater risk, both of perpetrating (Wolfe, Wekerle, Scott, & Pittman, 2001), and being a victim of TDV (Hamby, Finkelhor, & Turner, 2012). Given the severity of the problem, studies that examine both risk and protective

factors for TDV involvement are warranted. The current study sought to examine risk and protective factors for TDV involvement among a maltreated population.

One of the most commonly studied risk factors for TDV perpetration and victimization is a child's exposure to IPV involving their parents or caregivers. A recent review of the literature found consistent evidence from published studies over the past 25 years that exposure to IPV was positively associated with increased risk of TDV victimization (Vézina & Hébert, 2007). Similarly, there is also considerable evidence of an association between IPV exposure and TDV perpetration (O'Donnell et al., 2006; Tschann et al., 2009). Although studies suggest that exposure to IPV is a risk factor for involvement in TDV, it is important to note that many youth who witness IPV do not become perpetrators or victims of TDV. Kinsfogel and Grych (2004), for example, found that while 63% of their sample of adolescents reported witnessing their parents engage in IPV, only about 20% reported being a perpetrator of aggression in their own dating relationships. This suggests that there are likely protective factors that moderate the risk of IPV-exposed youths' involvement in TDV. There has been little research on those factors that may decrease the risk of IPV-exposed youths' involvement in TDV (Vagi et al., 2013). To address this need, the current study examined those factors that might attenuate the likelihood of maltreated adolescents' involvement in TDV, both as perpetrators and as victims. Social Developmental Theory (Hawkins, Smith, & Catalano, 2004) proposes that positive parenting and peer relationships can promote a pro-social developmental trajectory that diverts high-risk youth from engaging in problem behaviors in adolescence. While this theory has been used to examine substance use and general delinquent behavior (Hawkins et al., 2008), it has not previously been examined in relation to TDV.

Studies focused specifically on TDV have shown that positive parenting practices, such as warmth, support, and responsiveness, reduce the likelihood of adolescents' involvement in TDV (Brendgen, Vitaro, Tremblay, & Lavoie, 2001), while low levels of positive parenting practices increase the risk of TDV perpetration and victimization (Tyler, Brownridge, & Melander, 2011). What is not clear, however, is whether positive parenting practices moderate the link between IPV exposure and TDV. Skopp and colleagues (2007) examined warmth from a parent as a moderator of the association between IPV exposure and externalizing problems for a sample of 7–9 year olds. They found that IPV was associated with a greater number of externalizing problems, but this association was significant only at low levels of parental warmth. Similarly, Tajima and colleagues (2010) found that parental acceptance and responsiveness moderated the association between IPV exposure and both teenage pregnancy and running away from home. These studies suggest that positive parenting practices may moderate the impact of IPV exposure on TDV involvement; however, an empirical investigation of these hypothesized associations is needed.

In addition to the influence of caregivers, peers become an increasingly important influence on behavior and in shaping attitudes during adolescence. Several studies have found that youth who associate with deviant peers are more likely to perpetrate and be the victim of dating aggression. Brendgen and colleagues (2002) found that association with violent peers predicted attitudes consistent with dating aggression acceptance as well as perpetration of dating aggression against a partner. Similarly, Howard, Qiu, and Boekeloo (2003) found that

adolescents who reported having friends who drank were 2 to 4 times more likely to be a victim of TDV during the previous 3 months. While involvement with deviant peers is associated with a greater likelihood of TDV, there is also some support for the role of pro-social peer associations as a protective factor. Having a greater number of pro-social peers has been found to moderate the impact of IPV exposure on TDV (Levendosky, Huth-Bocks, & Semel, 2002).

While studies examining risk and protective factors for TDV perpetration and victimization have increased in recent years, the majority of these studies recruit samples from the community. Studies of TDV with youth involved in the child welfare system are few (see Jonson-Reid & Bivens, 1999, and Jonson-Reid, Scott, McMillen, & Edmond, 2007, for exceptions). The lack of TDV studies involving child welfare youth is significant given that maltreated youth are at heightened risk of being exposed to multiple forms of violence, both as a victim and a witness (Garrido, Culhane, Raviv, & Taussig, 2010; Hamby et al., 2012; Jouriles et al., 2008), which would presumably increase their risk of TDV involvement. It is estimated that among youth exposed to IPV, 75–95% are also the victims of parental physical abuse (Jouriles et al., 2008; Smith-Slep & O’Leary, 2005) and between 55% and 95% report witnessing community violence (Garrido et al., 2010; Hamby, Finkelhor, Turner, & Ormrod, 2010). No known studies have examined, among a sample of maltreated youth, whether IPV exposure is predictive of TDV involvement after controlling for exposure to multiple forms of violence. Thus, the current study set out to examine this question, as well as whether the influence of positive parenting practices and pro-social peers might attenuate the link between exposure to IPV and TDV. We hypothesized: 1) there would be a positive association between exposure to IPV and TDV perpetration and victimization, even after controlling for physical abuse victimization and community violence exposure, and 2) positive parenting practices and pro-social peer relationships would moderate the association between IPV exposure and TDV perpetration and victimization, such that IPV exposure would only be significantly associated with TDV at low levels of positive parenting practices and pro-social peer relationships.

Method

Participants

Recruitment—Participants in the current study were 41, 12–15-year-old adolescents involved in the Fostering Healthy Futures program, a component of which is a longitudinal study of maltreated children placed in out-of-home care. Participants were recruited for the original study if they met the following inclusion criteria at baseline: (a) they were 9–11 years old and had been court-ordered into out-of-home care within the preceding 12 months due to maltreatment, (b) they were proficient in English, (c) they were living in out-of-home care at the baseline assessment, and (d) they had no known intellectual disabilities. To avoid issues of statistical non-independence, one sibling was randomly selected for inclusion when multiple members of a sibling group were eligible. Ninety-three percent of eligible youth and caregivers ($N = 146$) completed interviews at the baseline assessment. Of those participants assessed at baseline, 105 youth were excluded from the current analyses due to the following reasons: 1) Sixteen youth and their caregivers refused the follow-up interview

or could not be located; 2) Six youth were living in a residential treatment center, which precluded collecting data on current parenting practices; 3) Fifty-two youth reported they did not have a dating partner and 31 youth reported having had a dating partner in the past year, but said they had not engaged in an argument or disagreement (the TDV questions were not asked of them). Thus, in the current study, we focused our analyses on the 41 youth who had at least one romantic partner within the past year with whom they reported having had an argument or disagreement. Results of t-tests and chi-square analyses indicated that participants who were lost to follow-up or who were excluded from analyses due to missing data did not differ from study participants on age, gender, or baseline levels of IPV exposure. With the exception of adult-to-child physical abuse victimization, which was collected at the baseline assessment, the data analyzed in the current study were cross-sectional and gathered at the follow-up interview conducted 3.5 years post-baseline.

Participant characteristics—The sample of 41 youth was 65.9% female ($n = 27$) and had a mean age of 13.59 years ($Range = 12\text{--}15$; $SD = 1.00$). Two thirds ($n = 27$, 65.9%) of youth resided in of out-of-home care, including kinship care (34.2%), foster care (19.5%), and adoptive homes (12.2%). The remaining 34.1% of youth had reunified by the follow-up interview and were living with their biological parents. The sample of youth was racially and ethnically diverse: 43.9% were Caucasian, 36.6% were Hispanic, 31.7% were African-American, 10.0% were Native American, and 2.4% were Asian or Pacific Islander (non-exclusive categories).

Procedure

All procedures and measures were approved by the university's institutional review board and interviews were conducted after obtaining consent from caregivers and children's legal guardians, as well as assent from youth. Youth and caregivers were interviewed separately at their residence or other community location. All measures were administered verbally by the interviewers. This helped ensure that participants were engaged in the assessment process and understood the questions. Youth and caregivers were each paid \$50 for their participation.

Measures of Predictor and Moderator Variables

Intimate Partner Violence (IPV) Exposure—Exposure to IPV was assessed with 11 items from the Physical Assault scale of the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, McCoy, & Sugarman, 1996). Youth were asked to "Think about any caregivers from any home where you have ever lived in the past. Thinking about all the caregivers with whom you have lived in the past, please tell us how many times the following things have happened." Types of IPV assessed included a range of acts varying in their severity, from pushing or shoving to using a knife or gun. When youth indicated that they had been exposed to a type of IPV, they were asked to report how many times they had been exposed to it and to rate their proximity to the IPV using a five-point scale developed by Edleson and colleagues (2008): 5 = "Witnessed the IPV at a close distance," 4 = "Witnessed the IPV at a far distance," 3 = "Heard the IPV while it was occurring, but did not see it," 2 = "Learned of the IPV after it had occurred," and 1 = "Saw the outcome of an act of IPV (e.g., something broken, an injury received by a parent)".

We examined IPV exposure across three dimensions: frequency, proximity, and severity (Garrido et al., 2011). IPV frequency was indexed as the number of acts of IPV youth had been exposed to; IPV proximity was indexed as the mean of participants' proximity ratings; and IPV severity was indexed as the sum of a subset of seven items ("punching"; "kicking"; "hitting with something that could hurt"; "slamming against a wall"; "choking or strangling"; "burning or scalding"; "using a knife or gun") typically considered severe in the literature (Strauss et al., 1996). Because of the high correlation between participants' scores on the three dimensions of IPV exposure ($r_s = .90-.95$), we decided to subject participants' scores on these three dimensions to a principal components analysis using orthogonal rotation. Eigenvalues and an examination of the scree plot revealed a one factor solution that accounted for 93% of the variance. An index score for each participant was created and used in all subsequent analyses. Participants who had not been exposed to IPV received a score of 0 on the index.

Parenting Practices—Each child's current caregiver (i.e., biological parent, foster parent, or kin) reported on their parenting practices with a 22-item version (Doyle & McCarty, 2000) of Strayhorn and Weidman's (1988) Parenting Practices Scale (PPS). The PPS assesses those parenting practices that are frequently targeted in clinical interventions aimed at improving parenting and impacting children's externalizing problems. Caregivers rated their use of warmth and their involvement in their child's activities, as well as their use of appropriate and consistent discipline. For each item, caregivers were asked to indicate, "How often do you do each of these things with your child?" with responses scored on a five-point scale (1 = "Never or none of the time" to 5 = "Always or all of the time"). In a previous study, the PPS demonstrated good construct and convergent validity, correlating significantly with parents' psychological and social health, observed parent-child interactions, and children's behavior problems (Strayhorn & Weidman, 1988). In the current study, the PPS demonstrated adequate internal consistency ($\alpha = .75$). Following the method employed in prior studies, a positive parenting practices index was created by reverse scoring appropriate responses and computing the mean of the 22 items (Doyle & McCarty, 2000). Higher scores on the index were indicative of greater use of positive parenting practices.

Pro-social Peer Relationships—The Association with Positive Peers index is a project-designed, 10-item, youth-completed scale that measures the extent to which youth associated with peers who engage in a wide range of pro-social behaviors. Sample items included, "How many of your friends have been involved in community activities, like youth groups or clubs?" and "How many of your friends have been involved in religious activities, such as going to church?" Youth were asked to indicate on a three-point scale (0 = "No Friends" to 2 = "Most Friends") how many of their friends engaged in these activities during the prior year. Scores on the Association with Positive Peers, demonstrated adequate internal consistency in the current study ($\alpha = .79$). A pro-social peers index was created by computing the mean of the 10 items, with higher scores indicative of greater involvement with pro-social peers.

Measure of Dependent Variable

Teen Dating Violence (TDV)—Youth reported their involvement (both perpetration and victimization) in TDV with a modified version of the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). The CADRI is a measure that asks respondents how often acts of TDV have occurred with a current or former romantic partner, “while you were having an argument.” Seventeen CADRI items assessing physical and psychological aggression perpetration and victimization were used in the current study. Three items assessed physical aggression (“slapped or pulled hair”; “kicked, hit, or punched”; “threw something”) and 14 items assessed psychological aggression (e.g., “tried to turn my friends against me” and “did something to try and make me feel jealous”). Participants’ responses to the CADRI items exhibited a good degree of internal consistency ($\alpha = .86$) in the current study.

While the CADRI asked respondents to indicate, on a four point scale (0 = “never” to 4 = “often”), the number of times they had been involved in an act of TDV, because there was limited variability in these responses (i.e., grouped at the lower end of the distribution), we decided to dichotomize participants’ responses. We dichotomized responses to perpetration items based on whether a participant reported having been a perpetrator of each act of TDV (0 = Did not happen; 1 = Did happen) and then repeated the process for the victimization experiences. We then summed these dichotomous scores across the 17 perpetration and victimization items, which provided two separate composite scores: one representing the number of types of TDV participants had been a victim of and the other representing the number of types of TDV participants had perpetrated.

Measures of Control Variables

Adult-to-Child Physical Abuse Victimization—Child Protection Services’ (CPS) intake reports and dependency and neglect petitions (narratives of the history and events precipitating the legal filing) were used to code whether youth had been exposed to physical abuse in the events leading to their removal from their home, which immediately preceded entry into the parent study. A code of ‘0’ was assigned to youth who had not been physically abused and a code of ‘1’ was given to youth who had experienced physical abuse.

Community Violence Exposure (CVE)—An adapted, 12-item version of the Things I Have Seen and Heard Scale (Richters & Martinez, 1993) was administered to youth at the follow-up interview. Youth were asked to indicate the number of times in the past year they had seen or heard acts such as, “guns being shot,” and “somebody stealing from a store or another person’s house” along a 5-point scale ranging from 0 (“never”) to 4 (“four or more times”). Scores on the Things I Have Seen and Heard Scale have been shown to correlate with youth reports of overall distress, as well as their fear at home and school (Martinez & Richters, 1993). In the current study, participants’ scores showed good internal consistency ($\alpha = .84$). Consistent with previous studies, we summed participants’ responses across the 12 items to form a CVE composite score.

Analysis Plan

Initial analyses were conducted to examine the descriptive statistics of the study's variables and bivariate associations. Regression analyses examined whether IPV exposure was associated with TDV involvement while controlling for physical abuse victimization and CVE. Given that the study's dependent variables were count-based measures, two sets of Poisson regression analyses were conducted (Long, 1997). One set of analyses was used to test whether pro-social peer relationships moderated the impact of IPV exposure on TDV perpetration and victimization, and the second set examined positive parenting practices as the moderator. In a first step, main effects were tested by entering the IPV exposure index into the model, along with physical abuse victimization and CVE as control variables, and either the pro-social peer relationships or positive parenting practices composite. This was followed with the addition of the interaction term in a second step (IPV×pro-social peer relationships; IPV×positive parenting practices). The IPV exposure index, as well as the CVE, positive parenting practices, and the pro-social peer relationships composites were centered at their respective means (Aiken & West, 1991).

Results

Descriptive Statistics and Bivariate Associations

In terms of participants' exposure to violence, approximately a third of the sample (14/41; 34.1%) had been the victim of parental physical abuse at the time of study entry. In addition, a quarter of participants reported having been exposed to IPV at least once in their lives (11/41; 26.8%) and almost all (40/41; 97.6%) participants reported witnessing at least one act of community violence during the year prior to the current study. Finally, almost two-thirds of the sample (26/41; 63.4%) reported perpetrating at least one act of TDV with a dating partner, and an even higher percentage (33/41; 80.5%) reported being the victim of at least one act of TDV.

Table 1 provides descriptive statistics and bivariate correlations for the study's variables. We found that, on average, caregivers reported engaging in positive parenting practices "some of the time" and youth reported slightly more than "some of their friends" were involved in pro-social activities during the year prior. We also found that youth reported perpetrating approximately two types of TDV and being the victim of about three and a half types.

Bivariate analyses demonstrated that physical abuse victimization and community violence exposure were not associated with either IPV exposure or TDV involvement. Higher scores on the IPV exposure index, however, were positively associated with TDV victimization, but were not related to TDV perpetration. Positive parenting practices were not correlated with IPV exposure, nor were they correlated with TDV perpetration or TDV victimization. Pro-social peer relationships, on the other hand, were negatively correlated with TDV perpetration, but not victimization. Finally, there was a strong correlation between TDV perpetration and victimization, with youth who perpetrated greater levels of TDV reporting they had also experienced relatively greater levels of TDV victimization.

Poisson Regression Analyses

Results of the first series of regression analyses, with TDV perpetration as the dependent variable and the pro-social peer relationships composite as the moderator, are summarized in the top half of Table 2. In step 1 of the model, the IPV exposure index and community violence exposure composite were significant, positive predictors of TDV perpetration, whereas the pro-social peer relationships composite was a significant, negative predictor of TDV perpetration. The main effect of pro-social peer relationships was qualified, in step 2, with a significant interaction of IPV exposure $\times$ pro-social peer relationships. To help interpret the significant two-way interaction between IPV exposure and the pro-social peer relationships composite, we followed procedures suggested by Aiken & West (1991). Specifically, the relation between IPV exposure and TDV perpetration was plotted separately for high (one standard deviation above the mean) and low (one standard deviation below the mean) levels of pro-social peer relationships. These associations are presented in Figure 1. When youth reported fewer pro-social peer relationships, a greater degree of IPV exposure was associated with higher levels of TDV perpetration (simple slope, $\beta = .69$, $t(37) = 2.68$, $p < .05$). When youth were exposed to a greater number of pro-social peer relationships, there was no association between IPV exposure and TDV perpetration (simple slope, $\beta = -.32$, $t(37) = -1.18$, $p = .ns$).

We conducted a second series of regression analyses predicting TDV perpetration, this time examining positive parenting practices as the moderator variable. Results of these analyses are presented in the bottom half of Table 2. In step 1, community violence exposure, as well as the IPV exposure index, achieved statistical significance as positive predictors of TDV perpetration. In step 2, there was a significant interaction of IPV exposure $\times$ positive parenting practices. The two-way interaction between IPV exposure and positive parenting practices predicting TDV perpetration followed a similar pattern to that observed with pro-social peer relationships as the moderator. When positive parenting practices was low, a greater degree of IPV exposure was associated with greater levels of TDV perpetration (simple slope, $\beta = .79$, $t(37) = 3.75$, $p < .05$). When level of positive parenting practices was high, there was no relation between IPV exposure and TDV perpetration (simple slope, $\beta = .47$, $t(37) = 1.51$, $p = .ns$).

We next conducted a series of hierarchical regression analyses examining predictors of TDV victimization. In the first set of analyses we looked at the pro-social peer relationships composite as a potential moderator. The results of these analyses are presented in the top half of Table 3. In step 1 of the model, community violence exposure and the IPV exposure index were both significant, positive predictors of TDV victimization. In step 2, however, the interaction term of IPV exposure $\times$ pro-social peers was not significant.

In the final series of regression analyses predicting TDV victimization, we examined parenting practices as the moderator. Results of these analyses are presented in the bottom half of Table 3. In step 1, physical abuse victimization and the IPV index were significant, positive predictors of TDV victimization, while parenting practices was a significant, negative predictor. The main effect of parenting practices was qualified by a significant interaction of IPV exposure $\times$ positive parenting practices in step 2. The associations between

IPV exposure, parenting practices, and TDV victimization followed a similar pattern to that observed with TDV perpetration (see Figure 2). When positive parenting practices was low, a greater degree of IPV exposure was associated with higher levels of TDV victimization (simple slope, $\beta = .80$, $t(37) = 3.86$, $p < .05$). When level of positive parenting practices was high, there was no relation between IPV exposure and TDV victimization (simple slope, $\beta = .13$, $t(37) = .79$, $p = .ns$).

Discussion

The first objective of the current study was to examine whether adolescents' IPV exposure was associated with their reports of TDV perpetration and victimization. Consistent with our hypotheses, IPV exposure was positively associated with TDV victimization. In regression analyses, the association between IPV exposure and TDV victimization was significant even after accounting for adolescents' physical abuse victimization and CVE. One possible explanation for the link between IPV and TDV victimization involves Social Learning Theory (SLT; Bandura, 1977). According to SLT, youth exposed to IPV in childhood are more likely to learn that aggression is an acceptable means of dealing with conflict in intimate relationships and may model witnessed behaviors in their own dating relationships. In the case of the current study's findings, IPV-exposed youth may have developed attitudes justifying dating aggression, which may have increased the likelihood of TDV victimization.

While there was a significant association between IPV exposure and TDV victimization, the association between IPV exposure and TDV perpetration was not significant. These mixed findings are consistent with other studies (Kinsfogel & Grych, 2004; Wolf & Foshee, 2003) and suggest that other variables, unaccounted for in the current study, may act as moderators of the IPV-TDV perpetration link. Some studies, for example, find that while there is a link between IPV exposure and TDV perpetration for boys, no such association is found for girls (Kinsfogel & Grych, 2004; Laporte, Jiang, Pepler, & Chamberland, 2011).

The second objective of the current study was to determine whether maltreated adolescents' exposure to positive parenting and pro-social peer relationships would moderate the association between IPV exposure and TDV perpetration and victimization. Consistent with our hypotheses, we found that the relationship between IPV and TDV was dependent on the level of positive parenting practices reported by caregivers. More specifically, while there was a positive association between IPV exposure and TDV perpetration and victimization for youth with caregivers who reported low levels of positive parenting practices, the link was not significant for youth with caregivers who reported high levels of positive parenting practices.

Previous research has shown that positive parenting practices, such as maternal warmth and parental acceptance and responsiveness, can moderate the association between IPV exposure and externalizing problems (Skopp et al., 2007; Tajima et al., 2010). The current study's findings extend these prior investigations by focusing specifically on TDV involvement as an outcome. One hypothesis regarding the mechanism underlying the role of positive parenting practices in attenuating the IPV-TDV link involves Social Developmental Theory (Hawkins et al., 2004), which proposes that youth development is impacted by a variety of

risk and protective factors and that prevention of delinquent behavior can be achieved by a focus on promoting protective factors (Hawkins et al., 2008). The cross-sectional design of the current study precluded an examination of the developmental trajectory of protective factors; however, we hypothesize that IPV-exposed youth who encountered responsive and warm caregivers were protected from the negative sequelae of IPV exposure.

A second hypothesis regarding the moderating effect of positive parenting practices is that adolescents perceived warm caregivers to be more approachable in their efforts to talk about their exposure to IPV, as well as their dating relationships. Adolescents who chose to seek out discussions with their caregivers may have felt more validated in their emotional disclosures, which may have assisted in their development of positive coping strategies, both for dealing with negative emotions related to their IPV exposure, as well as resolving disagreements with their dating partners in non-violent ways (McDowell, Kim, O'Neil, & Parke, 2002).

Another possibility is that caregivers who engaged in a greater number of positive parenting practices were better able to modulate their own emotional reactions in their interactions with adolescents. Consistent with Social Learning Theory (Bandura, 1977), it may have been the case that youth observed the emotional regulation skills of their caregivers and modeled these behaviors in their own dating relationships, thus attenuating the negative impact associated with IPV exposure. While we were not able to test these hypotheses in the current study, future studies should test these caregiver mechanisms as a means of understanding the role of parenting practices in moderating the negative effects associated with IPV exposure.

While the moderating impact associated with positive parenting practices was consistent, the results of analyses examining the role of pro-social peer relationships as a moderator of the IPV-TDV link were mixed. For youth who reported a greater number of pro-social friends, the association between IPV exposure and TDV perpetration was moderated. This finding is consistent with a recent longitudinal study that found that TDV perpetration was decreased for adolescents with friends who had pro-social beliefs (Foshee et al., 2013). Pro-social peer relationships did not, however, moderate the association between IPV exposure and TDV victimization. One possible explanation for these mixed results involves adolescents' gender. Prior studies have found that while peers' dating violence was associated with boys' and girls' own dating violence perpetration, the influence of peers on dating violence victimization was only evident for girls (Arriaga & Foshee, 2004). Another possible explanation for these mixed results is that there were other, unaccounted for, third variables that may have confounded our ability to determine the influence of pro-social peer relationships. Adolescents' social skills, for example, may be an important factor in both forming pro-social peer relationships and in resolving conflict in dating relationships through non-violent means. Finally, our limited sample size may have provided inadequate power for detecting a significant effect, which may have resulted in a type II error.

Limitations

Although the current study adds to the field's understanding of those factors that may moderate the IPV-TDV link, several limitations must be considered when interpreting the

results. First, the study did not provide for an examination of whether the child's current parent/caregiver (who reported on their parenting practices in this study) was the same parent/caregiver involved in the IPV reported by the youth. Consequently, we were unable to examine whether positive parenting practices moderated the impact associated with IPV exposure equally for youth with IPV-involved and non-involved caregivers. However, given that the majority of youth in the sample (two thirds) remained in out-of-home care at the time of the current study's assessment, it is likely that for most youth the positive parenting practices of foster caregivers moderated the impact of biological parents' IPV. This is an important finding because it suggests that while a child's exposure to IPV and other types of maltreatment increases their risk for engaging in TDV (Hamby et al., 2012), positive parenting practices, even if engaged in by a substitute caregiver, can counteract these harmful effects.

A second limitation involved the study's sample size. Our sample was limited to youth who had one or more dating partners during the year prior to assessment and who were involved in a disagreement with at least one partner. As a result of our relatively small sample, our ability to make generalizations to the larger population of maltreated adolescents may be limited. However, while the study's limited sample size may have negatively impacted external validity, it is noteworthy that we obtained such large effects with so few participants. Because of our limited sample size, we were unable to examine the study's findings across different placement types, as well as whether the effects of exposure to IPV were moderated by exposure to other forms of violence. Another limitation involved the study's reliance on retrospective reports from youth to gather data on IPV exposure and TDV involvement. Researchers have found that adolescents' memory of violent victimizations can be faulty, even within weeks of the event (Jouriles, McDonald, Garrido, Rosenfield, & Brown, 2005).

Clinical and Policy Implications

Youth involved in the child welfare system with maltreatment histories face a multitude of individual, familial, and environmental risk factors associated with increases in TDV perpetration and victimization (Crooks, Scott, Ellis, & Wolfe, 2011). Despite these risk factors, however, a sizable percentage of these youth are not involved in TDV. Results from the current study highlight the importance of warm and involved caregivers and pro-social peers as important factors that serve to protect IPV-exposed adolescents from the risk of TDV involvement. Furthermore, these results suggest that caregivers and peers may play an important role in TDV prevention programs. Indeed, recent programs have begun to involve caregivers and peers in their prevention efforts. Foshee and colleagues (2012), for example, recently adapted their successful *Safe Dates* prevention curriculum for use in homes, with a focus on using parents as preventionists. A recent nationwide randomized controlled study of the *Families for Safe Dates* program found that the curriculum reduced teens' acceptance of TDV and decreased the likelihood of physical dating violence victimization. In addition to the *Safe Dates* curriculum, the Centers for Disease Control and Prevention recently launched a TDV prevention program, *Dating Matters: Strategies to Promote Healthy Teen Relationships*, which targets multiple levels of adolescents' social ecology, including parents and peers, in its prevention activities (Tharp et al., 2011). Finally, Wolfe and colleagues

(2006) have implemented their *Fourth R* prevention program in schools, with an emphasis on involving peers in the delivery of the program's curriculum. The program has demonstrated success in reducing TDV across a 2-year period, with particularly strong results for youth with maltreatment histories (Wolfe, Crooks, Chiodo, & Jaffe, 2009). The results of the current study support the efforts of these effective prevention strategies in targeting caregivers and peers as mechanisms in preventing TDV involvement.

Research Implications

The current study's results highlight the importance of studying those factors that may attenuate the IPV-TDV link. Other social-ecological factors that may be influential in predicting TDV involvement should also be examined as possible moderators, including familial composition, placement type (e.g., foster care, kinship care, or adoptive home), neighborhood and school environment, and cultural considerations. Future research is also needed to more clearly elucidate the theoretical underpinnings of the current study's findings. While we have offered some possible explanations for the role of positive caregiver and peer relationships in moderating the IPV-TDV link, future studies should test these competing hypotheses directly. Future research efforts should also determine for whom the attenuating impact of positive caregiver and peer relationships is strongest. Given the high rate of exposure to multiple forms of violence among maltreated youth (Hamby et al., 2012), an examination of whether the potential benefit of these attenuating factors is diminished for youth with multiple violence victimizations is needed. Finally, it is important to recognize that youth in the current study were asked to recall their exposure to incidents of physical IPV only. Given recent findings indicating the importance of exposure to psychological IPV in predicting TDV involvement (Melancon & Gagne, 2011), future research should explore whether the current study's findings extend to IPV experiences involving psychological IPV exposure.

Conclusion

The current study adds to the extant research literature by highlighting the importance of positive parenting practices and pro-social peer relationships in moderating the impact of IPV exposure on adolescents' TDV involvement. The current study's results have the potential to influence efforts aimed at reducing the IPV-TDV link, which could ultimately increase the physical, emotional, and psychological well-being of millions of adolescents each year.

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Figure 1. TDV perpetration as a function of IPV exposure and pro-social peer relationships. The figure depicts a significant positive association between IPV exposure and TDV perpetration only when level of pro-social peers was low.

Figure 2. TDV victimization as a function of IPV exposure and positive parenting practices. The figure depicts a significant positive association between IPV exposure and TDV victimization only when level of positive parenting practices was low.

Table 1

Descriptive Statistics and Bivariate Correlations among Study Variables

Variable	1	2	3	4	5	6	7	M (SD)
1. Physical Abuse Victimization	--	.04	-.09	-.28	.25	.02	-.15	
2. Community Violence Exposure		--	.09	-.16	.14	.24	.21	9.22 (8.23)
3. IPV Exposure			--	.13	.07	.18	.32*	
4. Positive Parenting Practices				--	-.11	-.01	-.20	3.75 (.46)
5. Pro-social Peer Relationships					--	-.31*	-.14	1.22 (.37)
6. Number of Types of TDV Perpetration						--	.60*	1.95 (2.52)
7. Number of Types of TDV Victimization							--	3.49 (3.47)

Note: The appropriate correlation coefficient (e.g. Phi, point-biserial) was computed for correlations involving dichotomous variables; IPV = Intimate Partner Violence; TDV = Teen Dating Violence

* $p < .05$;

Table 2

Poisson Regression Analyses Predicting TDV Perpetration

Variables	<i>B</i>	<i>SE</i>	Wald χ^2	Likelihood ratio χ^2
Step 1				25.83*
Physical Abuse Victimization	-.34	.24	1.94	
Community Violence Exposure	.03	.01	6.92*	
IPV Exposure Index	.24	.10	5.59*	
Pro-social Peer Relationships	-1.32	.34	15.17*	
Step 2				32.38*
Physical Abuse Victimization	-.49	.26	3.58*	
Community Violence Exposure	.03	.01	3.49*	
IPV Exposure Index	1.54	.53	8.39*	
Pro-social Peer Relationships	-1.65	.37	19.81*	
IPV Exposure×Pro-social Peer Relationships	-1.19	.49	5.80*	
Step 1				10.25*
Physical Abuse Victimization	-.07	.24	.09	
Community Violence Exposure	.38	.15	6.65*	
IPV Exposure Index	.19	.10	3.59*	
Positive Parenting Practices	.01	.24	.01	
Step 2				43.09*
Physical Abuse Victimization	.25	.25	1.06	
Community Violence Exposure	.34	.15	5.17*	
IPV Exposure Index	5.50	1.04	27.97*	
Positive Parenting Practices	.98	.32	9.20*	
IPV Exposure×Positive Parenting Practices	-1.41	.28	25.18*	

Note:

* $p < .05$

Table 3

Poisson Regression Analyses Predicting TDV Victimization

Variables	<i>B</i>	<i>SE</i>	Wald χ^2	Likelihood ratio χ^2
Step 1				21.29*
Physical Abuse Victimization	.20	.19	1.04	
Community Violence Exposure	.26	.12	4.88*	
IPV Exposure Index	.24	.07	11.10*	
Pro-social Peer Relationships	-.40	.25	2.45	
Step 2				21.43*
Physical Abuse Victimization	.21	.20	1.15	
Community Violence Exposure	.27	.12	4.98*	
IPV Exposure Index	.11	.37	.08	
Pro-social Peer Relationships	-.37	.26	2.05	
IPV Exposure×Pro-social Peer Relationships	.12	.30	.15	
Step 1				28.41*
Physical Abuse Victimization	.46	.20	5.47*	
Community Violence Exposure	.17	.13	1.87	
IPV Exposure Index	.27	.07	13.21*	
Positive Parenting Practices	-.58	.20	8.47*	
Step 2				43.07*
Physical Abuse Victimization	.54	.20	7.69*	
Community Violence Exposure	.13	.13	.95	
IPV Exposure Index	2.66	.66	16.38*	
Positive Parenting Practices	-.07	.24	.08	
IPV Exposure×Positive Parenting Practices	-.64	.18	13.13*	

Note:

* $p < .05$