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Family-of-Origin Factors and Physical Teen Dating Violence Victimization and Perpetration: A Meta-Analysis

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Abstract

The purpose of this meta-analysis is to explore the relationship between family-of-origin factors (i.e., attachment, witnessing inter-parental violence, experiencing abuse as a child, poor parenting, and parental support) and physical teen dating violence (TDV i.e., physical acts, such as hitting, kicking, or using force to hurt another person) victimization and perpetration. We included a total of 27 studies, which yielded 81 effect sizes examining physical TDV perpetration and victimization, in this study. We found that anxious attachment was the strongest risk marker for physical TDV perpetration and experiencing abuse as a child was the strongest risk marker for physical TDV victimization. Our results also revealed that witnessing interparental violence was a significant risk marker for physical TDV victimization, avoidant attachment and experiencing abuse as a child were significant risk markers for perpetration, and parental support was a significant protective marker against physical TDV victimization. Our findings highlight the importance of family factors when identifying adolescents who are at risk for physical TDV, particularly those who have experienced abuse as a child and have an insecure attachment. They can also be used by parent educators to inform parenting practices and encourage parents to model healthy relationships for their children.

Keywords Child abuse · Family-of-origin · Meta-analysis · Physical teen dating violence · Risk and protective factors

Highlights

- This meta-analysis examines the relationship between family-of-origin factors and physical teen dating violence (TDV).
- Anxious attachment was the strongest risk marker for TDV perpetration, followed by witnessing inter-parental violence, experiencing child abuse, and avoidant attachment.
- Experiencing abuse as a child was the strongest risk marker for TDV victimization, followed by witnessing inter-parental violence and poor parenting.
- Parental support was a significant protective marker against physical TDV victimization.

Teen dating violence (TDV), which consists of physical, psychological, and sexual abuse or stalking (Centers for Disease Control and Prevention (CDC), 2020), is common among adolescents. In fact, 20% of adolescents reported both physical TDV perpetration and victimization in their relationship in the past year (Wincentak et al., 2017), with

rates peaking between the ages of 16 and 17 (Foshee et al., 2009). For the purpose of this study, we focused specifically on physical TDV (i.e., physical acts, such as hitting, kicking, or using force to hurt another person; CDC, 2020) because risk markers and outcomes vary based on the type of violence (Niolon et al., 2015) and physical violence can result in serious consequences. In fact, physical TDV has been associated with negative mental health outcomes, including increased depressive and anxiety symptoms, suicidal ideation, post-traumatic stress symptoms, as well as general internalizing problems (e.g., Ackard et al., 2007; Foshee et al., 2013). Physical TDV victimization has also been associated with risky health behaviors, such as higher sexual risk behaviors (Silverman et al., 2001), substance



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abuse (Parker & Bradshaw, 2015), and unhealthy weight control and disordered eating behaviors (Ackard, & Neumark-Sztainer, 2002). Last, physical TDV victimization has been linked to lower academic performance, increased likelihood of school dropout, and an increase in antisocial behavior (e.g., Banyard & Cross, 2008).

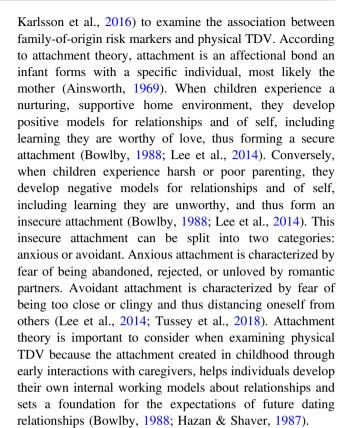
It is also important to examine physical TDV during adolescence because it is during this formative developmental period that patterns are learned that often carry throughout the lifespan. Specifically, individuals who experience physical violence in their adolescent relationships are more likely to perpetrate physical violence as they mature, further supporting the need to understand and prevent physical TDV (e.g., Foshee et al., 2009). It is also important to examine gender when looking at physical TDV, as previous researchers have found that adolescent females are just as likely to perpetrate violence in their romantic relationships (Arriaga & Foshee, 2004; Wincentak et al., 2017), although males tend to use more severe acts of violence.

For adolescents, the family serves as the initial place of modeling and relationships built in the family help set a framework for future relationships (Hazan & Shaver, 1987). Additionally, the adult literature on intimate partner violence (IPV) supports the relationship between family-of-origin factors and IPV (e.g., Smith-Marek et al., 2015). Although previous researchers have examined family-of-origin factors as risk markers for TDV, the results regarding the strongest risk marker for TDV have been inconsistent. For example, some researchers have found that family factors are the strongest risk marker for TDV engagement (e.g., Earnest & Brady, 2016), while others have not (e.g., Arriaga & Foshee, 2004). Consequently, a meta-analysis of the existing research on risk markers of physical TDV is warranted in order to identify significant risk markers across studies.

In this meta-analysis, we examine family-of-origin risk markers of physical TDV in order to narrow our research scope and because of the importance of family relationships for adolescents. Specifically, we examine which family-of-origin factors – attachment style, witnessing inter-parental violence, and quality of the parental relationship (i.e., experiencing abuse as a child, poor parenting, and protective markers such as parental support) – are the strongest risk markers for both physical TDV perpetration and victimization. In addition, we explore whether the risk markers for physical TDV differ in strength between males and females, as well as between physical TDV victimization and perpetration.

Theoretical Framework

Similar to previous research, we used attachment theory (e.g., Lee et al. 2014; Tussey et al., 2018) and social learning theory (e.g., Chapple, 2003; Foshee et al., 1999;



Social learning theory has also been used to explain the link between family-of-origin risk markers and physical TDV. Bandura (1971) theorizes that most behaviors are learned, either intentionally or unintentionally, from a model. Models set a stage for individuals to learn their behaviors through observational learning (Bandura, 1971). In order for observational learning to happen, an individual must observe the behavior, retain the behavior, have the necessary motor functions to imitate the behavior, and have motivational reinforcement to follow through (Bandura, 1971; Wolf & Foshee, 2003). This motivational reinforcement, called vicarious reinforcement, occurs when individuals see the model's actions and the responses to the actions to formulate expectations about the outcomes if they emulate a specific behavior (Bandura, 1971). The family is a primary source of modeling for children to learn how to interact with others, especially when handling anger. Therefore, in terms of violence, if children witness their parents using violence as a way to handle anger, and do not see negative consequences, they learn that being violent, or accepting violence, is an appropriate way to handle conflict.

Literature Review

Previous researchers using attachment theory to explain TDV have found that individuals who are insecurely attached are more likely to engage in TDV (e.g., Lee et al., 2014).



Moreover, researchers have found a correlation between factors often related to the development of an insecure attachment (e.g., witnessing violence in the family-of-origin, experiencing abuse by a parent or harsh parenting) and TDV (e.g., Bonache et al., 2017; Foshee et al., 1999; Lee et al., 2014; Tussy et al., 2018). To illustrate, Foshee and colleagues (1999) found that the eighth and ninth graders in their study who had been hit by a parent felt less attached to their parent and had developed a more aggressive conflict-response style, meaning they were more likely to perpetrate TDV when angry. Bonache and colleagues (2017) also found that male high school students who were anxiously attached and female high school students who had an avoidant attachment were more likely to be victims of physical TDV. Consequently, examining the role of attachment to parents and romantic partners is key in understanding risk markers for physical TDV perpetration and victimization.

In support of social learning theory, previous researchers have found that adolescents who witnessed violence between their parents were more likely to perpetrate violence or be a victim of violence later in life (e.g., Earnest & Brady, 2016; Karlsson et al., 2016; Maas et al., 2010; Schwartz et al., 1997; Temple et al., 2013). However, the findings linking inter-parental violence and TDV have been inconsistent, particularly when it comes to gender. To illustrate, Schwartz and colleagues (1997) found that exposure to inter-parental violence was significantly related to males' physical TDV perpetration; however, no relationship was found for female participants. Conversely, another study of ninth and tenth graders found that both father-to-mother and mother-to-father violence were significantly associated with physical TDV perpetration for girls; however, for boys, only mother-to-father violence was significantly associated with physical TDV perpetration (Temple et al., 2013). Last, Hunter (2009) found that witnessing inter-parental violence was not significantly associated with TDV for males or females, calling into question the relationships between witnessing violence and TDV engagement and underlining the need to further examine gender differences and the risk markers of TDV for both males and females.

Moving beyond witnessing family violence to personal experiences of violence in the family-of-origin, some researchers have reported mixed findings regarding the relationship between experiencing abuse as a child and TDV victimization and perpetration (Earnest & Brady, 2016; Kennedy, 2008; Wolf & Foshee, 2003). To illustrate, in a study of high school students, Earnest and Brady (2016) found that experiencing abuse by a parent was the strongest correlate for physical TDV victimization. The authors argued that the participants who had been victims of abuse in their families were more likely to be victims in their romantic relationships because violence was modeled in the

family and, thus, normalized (Earnest & Brady, 2016). Additionally, Kennedy (2008) found that experiencing violence in the family was associated with physical TDV victimization, but only for females. On the other hand, Linder (2002) found that family violence factors did not predict later TDV for either males or females. Thus, it is important to explore whether childhood abuse is a risk marker for physical TDV perpetration and victimization for both males and females and, if so, whether it differs in strength between males and females, as well as between physical TDV victimization and perpetration.

In addition to experiencing child abuse, family contextual factors, like negative parental relationships, low monitoring, and low involvement, have been found to be associated with later TDV (Chase et al., 2002; Chiodo et al., 2012; Miller et al., 2011). To illustrate, Chase and colleagues found that adolescents who engaged in TDV perceived their parents to have lower involvement, behavioral control, and parental supervision than their peers who did not engage in TDV. Similarly, Chiodo and colleagues found that female adolescents who experienced parental rejection were more likely to be in mutually violent relationships two years later. Conversely, other researchers have refuted the importance of parenting in explaining TDV. For example, Makin-Byrd and Bierman (2013) found that parenting was not related to TDV, thus highlighting the need to further examine poor parenting as a risk marker for physical TDV.

Turning from poor parenting practices to parental support in the form of child-parent bonding and parental connectedness, previous researchers have found that parental support can serve as a protective marker against later TDV (e.g., Livingston et al., 2018; Maas et al., 2010). In terms of attachment theory, child-parent bonding and connectedness lead to secure attachment, establishing positive relational frameworks for the later relationships, and protecting adolescents from unhealthy relational patterns (Bowlby, 1988; Lee et al., 2014). To illustrate, in their study on the etiological pathways of TDV development, Livingston and colleagues (2018) found that maternal warmth and sensitivity at 36 months was negatively correlated with later TDV. Similarly, Maas and colleagues (2010) found that bonding to parents served as a protective marker against TDV victimization. However, a study on Latino adolescents and their parents found that parental monitoring and parental communication were not associated with physical TDV victimization (Reyes et al., 2016), highlighting the need to better understand the role parental relationship quality plays in TDV.

Although previous meta-analyses have begun to fill a gap in what we know about risk markers of TDV, they have included both adolescents and young adults or have examined undifferentiated TDV rather than examining whether the same variables were risk markers for the



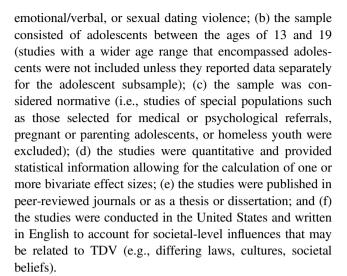
various forms of TDV (Hébert et al., 2019; Park & Kim, 2018). Thus, the present study will extend these metaanalyses by focusing solely on adolescents (i.e., those between the ages of 13–19) and parceling out physical TDV victimization and perpetration from other types of TDV. We chose to limit our sample to 13-19 year olds because romantic relationships are a salient part of adolescent developmental and violence in relationships peaks around 16-17 (Foshee et al., 2009), making adolescence a critical time for establishing relational patterns. Furthermore, we limited our study to risk markers of physical TDV because previous researchers have found differences in the risk markers of physical and psychological violence among adults (Cascardi et al., 2020; Saudino & Hines, 2007). We also focused solely on family-of-origin factors, including attachment style, witnessing inter-parental violence, and the quality of the parent-child relationship (i.e., experiencing abuse as a child, poor parenting, and parental support), as risk or protective markers of physical TDV victimization and perpetration. We aimed to identify the strongest familyof-origin risk marker for both physical TDV perpetration and victimization, as well as the strongest family-of-origin risk marker for males and females.

Method

This meta-analysis followed the procedure for selection and identification of studies outlined by Card (2012). The data in this study were from a larger meta-analysis that examined all risk markers as they related to TDV. For the larger metaanalysis, the process included two phases of gathering studies reporting on risk markers as they related to TDV to be included. In the first phase, studies for review were obtained from database searches (ERIC, PsychInfo, Proquest Research Library, Proquest Dissertations and Theses, PubMed, and Social Services Abstracts), using specific search terms regarding teens (teen*, adolescen*, high school), dating (dating, roman*, intima*, relationship, couple, partner), violence (violen*, aggress*, victim*, perpetrat*, abuse), and risk markers (correlate*, path*, risk factor, predict*, associate*) to conduct a comprehensive search of literature available from 1997 to 2017. The second search phase followed the same search criteria, and used the same databases, but was extended to examine articles from 2017 to 2018. The second search was conducted to ensure the inclusion of the most recent literature on TDV risk markers.

Included Studies

Studies were included in the larger meta-analysis if they met the following inclusion criteria: (a) they measured physical,



A total of 11,134 studies were found through the databases in the first phase of article selection, an additional 1025 studies were identified in the second phase of article selection, resulting in a total of 12,159 studies to review (see Fig. 1). Of those articles, a total of 971 studies met the original inclusion criteria; however, 342 of those studies were duplicates so only the remaining 629 were considered for further screening. During the second round of screening, 196 studies were excluded because they did not measure TDV, meaning they examined adult IPV or combined TDV with peer violence in the same measure. An additional 140 studies were excluded because they did not examine adolescents aged 13-19, 102 studies were excluded because they did not provide statistics that allowed for the calculation of at least one effect size to use in the analysis, 63 studies were excluded because they did not examine a population of adolescents in the United States, 26 studies were excluded because they used a non-normative sample, 17 studies were excluded because they did not include quantitative data, and one study was excluded because it was not in English. Finally, for this specific meta-analysis, 57 studies were excluded because they did not include risk markers that were of interest to this study (i.e., family-oforigin risk markers) and seven were excluded because they did not measure physical TDV. This resulted in a total of 27 studies, yielding 81 effect sizes examining physical TDV perpetration and victimization to be included in the study.

Coding Procedures

We followed the recommended procedures for coding articles to be included in a meta-analysis (Card, 2012; Hunter & Schmidt, 2004). Specifically, we created a 28-item code sheet in order to capture pertinent information from each study. The code sheet included statistical information to calculate bivariate effect sizes, the gender of the perpetrator and victim, the risk markers examined, the



Fig. 1 Flowchart of study selection

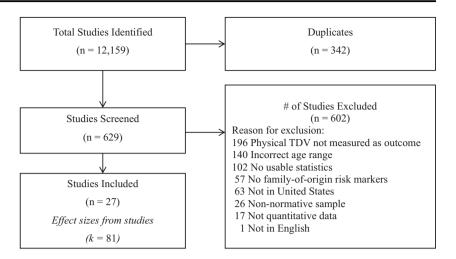


Table 1 Risk Markers for Physical Teen Dating Violence Victimization and Perpetration

		Victimization			Perpetration		
Risk Marker	\overline{k}	Mean r	95% CI	\overline{k}	Mean r	95% CI	
Anxious Attachment	-	-		3	0.20***	[0.16, 0.23]	
Avoidant Attachment	-	-		3	0.07***	[0.04, 0.11]	
Experiencing Abuse as a Child	8	0.22***	[0.18, 0.27]	5	0.11***	[0.05, 0.17]	
Parental Support	11	-0.08***	[-0.13, -0.03]	16	-0.05	[-0.12, 0.01]	
Poor Parenting	10	0.09***	[0.04, 0.14]	6	0.02	[-0.01, 0.04]	
Witnessing Inter-parental Violence	7	0.13***	[0.06, 0.21]	18	0.15***	[0.07, 0.23]	

k Number of effect sizes; r Point estimate of the effect size; CI Confidence interval.

sample size, how TDV was measured, and other useful information. All of the articles were cross-coded by two research team members with a 97.18% agreement rate.

Statistical Approach and Analyses

A random-effects model was utilized to account for true population differences between studies and allow for greater generalization of the results of this study (Card, 2012). All meta-analyses have the potential to exclude unpublished studies, which is known as the "file drawer problem" (Hunter & Schmidt, 2004). In order to combat this potential limitation, we conducted Duval and Tweedie's (2000) trim and fill test, calculated Rosenthal's (1979) classic fail-safe N's, and calculated Orwin's (1983) fail-safe N's to examine potential publication bias. The purpose of Duval and Tweedie's trim and fill test was to identify and correct funnel plot asymmetry that can stem from publication bias. Specifically, smaller studies causing asymmetry are removed, the trimmed funnel plot is used to estimate the true center of the funnel, and then the smaller studies are replaced around the center (Duval & Tweedie, 2000). We used the classic fail-safe N to calculate the number of non-significant studies needed to create an insignificant result of p < 0.05 (Rosenthal, 1979). In order to determine if the results were robust against potential publication bias, we followed the recommended cutoff (i.e., the number of non-significant studies required to nullify the current effect is greater than the number of effect sizes present in the study, multiplied by five, and then adding ten; Rosenthal, 1979). If the classic fail-safe N exceeded this number, the effect size for that risk marker is robust against potential publication bias. We also used Orwin's fail-safe N to test how many potential missing studies with an effect size magnitude of r = 0.00 it would take to bring the mean effect size to r = 0.10 (Cohen, 1992).

We used Comprehensive Meta-Analysis 3.0 software (Borenstein et al., 2014) to enter and calculate effect sizes for insecure attachment, witnessing inter-parental violence, experiencing abuse as a child, poor parenting, and lack of parental support as risk markers for both physical TDV victimization and perpetration. First, we analyzed the strength of each risk marker for physical TDV perpetration, and then again for physical TDV victimization. Next, we compared each family-of-origin risk marker that had at least three effect sizes for both physical TDV perpetration and victimization on whether it had a stronger link with



p values that are statistically significant are shown in bold.

^{***} p < 0.001

 Table 2 Comparing Risk Markers for Physical TDV Between

 Perpetration and Victimization

Risk Marker	k	Mean r	95% CI	Q^b	<i>p</i> -value
Experiencing Abuse as a Child					
Perpetration	5	0.11***	[0.05, 0.16]	9.40	0.002**
Victimization	8	0.22***	[0.18, 0.27]		
Poor Parenting					
Perpetration	6	0.02	[-0.04, 0.07]	2.91	0.09
Victimization	10	0.08***	[0.04, 0.12]		
Parental Support					
Perpetration	16	-0.05	[-0.10, 0.00]	0.77	0.38
Victimization	11	-0.08**	[-0.14, -0.03]		
Witnessing Inter- parental Violence					
Perpetration	18	0.16***	[0.09, 0.23]	0.25	0.62
Victimization	7	0.12*	[0.00, 0.25]		

k Number of effect sizes, r Point estimate of the effect size, CI Confidence interval, Q^b Heterogeneity of between-group differences with k-1 degrees of freedom

perpetration or victimization. Then we compared males and females on each family-of-origin risk marker that had at least three effect sizes (Cumming, 2012) to test the strength of the risk marker for both male and female adolescents. In order to analyze the strength of each risk marker, we used Cohen's (1992) suggested criteria for assessing the magnitude of the effect sizes as trivial (r < 0.01), small (r = 0.10), medium (r = 0.30), or large (r = 0.50).

Results

We found that anxious attachment was the strongest risk marker for physical TDV perpetration (r = 0.20, p < 0.001; see Table 1), followed by witnessing inter-parental IPV (r = 0.15, p < 0.001), experiencing abuse as a child (r = 0.11, p < 0.001), and avoidant attachment (r = 0.07, p < 0.001). However, experiencing abuse as a child was the strongest risk marker for physical TDV victimization (r = 0.22, p < 0.001), followed by witnessing inter-parental IPV (r = 0.13, p < 0.001) and poor parenting. Parental support, on the other hand, served as a protective marker against physical TDV victimization (r = -0.08, p < 0.001).

When examining if these family-of-origin factors were significantly stronger risk or protective markers against physical TDV victimization or perpetration, only one factor, experiencing abuse as a child, was a significantly stronger risk marker for physical TDV victimization than perpetration (Q = 9.40, p < 0.01); see Table 2). There were no

Table 3 Comparing Risk Markers for Physical TDV Perpetration Between Males and Females

Risk Marker	k	Mean r	95% CI	Q^b	<i>p</i> -value
Parent Support					
Males	6	-0.02	[-0.08, 0.05]	8.51	0.004**
Females	3	-0.32**	[-0.49, -0.13]		
Witnessing Inter- parental Violence					
Males	7	0.15*	[0.00, 0.28]	0.57	0.449
Females	6	0.23**	[0.07, 0.37]		

k Number of effect sizes, r Point estimate of the effect size, CI Confidence interval, Q^b Heterogeneity of between-group differences with k-1 degrees of freedom

significant differences in the strength of witnessing interparental violence $(Q=0.25,\ p=0.62)$, poor parenting $(Q=2.91,\ p=0.09)$, or parental support $(Q=0.77,\ p=0.38)$ as risk or protective markers against physical TDV victimization and perpetration. It is also important to note that there were not at least three effect sizes to analyze anxious or avoidant attachment as risk markers for physical TDV victimization. As a result, we were unable to compare the strength of each attachment variable for victimization and perpetration.

When comparing the strength of these family-of-origin factors as risk markers for physical TDV perpetration by gender, we were unable to run analyses comparing the strength of experiencing abuse as a child or poor parenting as risk markers between males and females. When comparing the strength of witnessing inter-parental IPV as a risk marker for physical TDV perpetration between males (r = 0.15, p < 0.05) and females (r = 0.23, p < 0.01), there was no significant difference (Q = 0.57, p = 0.45; see Table 3). In fact, the only difference found was that parental support was a significantly stronger protective marker (Q = 8.51, p < 0.01) against physical TDV perpetration for females (r = -0.032, p < 0.01) than for males (r = -0.02, p = 0.60).

Analyses of Publication Bias

As previously mentioned, we computed Duval and Tweedie's (2000) trim and fill test, the classic fail-safe *N* test (Rosenthal, 1979), and Orwin's (1983) fail-safe *N* test to analyze the possibility of publication bias on the significant results found in the meta-analysis (see Table 4). For physical TDV victimization, all risk markers were robust against potential publication bias. For physical TDV perpetration, all risk markers, except for avoidant attachment, were robust against potential publication bias. This is unsurprising, as avoidant attachment was not as strongly



p values that are statistically significant are shown in bold.

^{*}p < 0.05, **p < 0.01, ***p < 0.001

p values that are statistically significant are shown in bold.

^{*}p < 0.05, **p < 0.01

Table 4 Duval and Tweedie's Trim and Fill (Random Effects), Classic Fail-Safe *N*, and Orwin's Fail- Safe *N* Tests for Risk Markers for TDV

		Trim and Fill	Classic	Orwin's Fail-Safe N	
Outcome Measure	# of Studies	Imputed Studies	Fail-Safe N	r to 0.10	
Perpetration				_	
Anxious Attachment	3	1	92	3	
Avoidant Attachment*	3	2	10	0	
Experiencing Abuse as a Child	6	1	49	0	
Witness Parental IPV	10	2	328	2	
Victimization					
Experiencing Abuse as a Child	5	1	230	6	
Parent Support	5	0	63	0	
Poor Parenting	5	0	50	0	
Witness Parental IPV	4	0	44	2	

^{*}Not robust against possible publication bias

correlated with physical TDV as the other risk markers, and only three studies examined avoidant attachment as a risk marker for physical TDV perpetration; thus, this risk marker should be interpreted cautiously.

Discussion

Violence within adolescent romantic relationships continues to be a prevalent and important topic within our society (Wincentak et al., 2017); however, there continues to be a need for additional and more synthesized research that examines risk markers associated with different forms of TDV. The present study uses both theory (i.e., social learning and attachment theory) and a meta-analytic approach to help address this gap in what we know about the risk markers for physical TDV. Specifically, we focus exclusively on physical TDV perpetration and victimization among adolescents between the ages of 13 and 19, and when possible, compare the strength of risk markers between males and females and between perpetration and victimization.

Overall, our study found several important risk markers associated with physical TDV victimization and perpetration. Specifically, we found that experiencing abuse as a child is the strongest risk marker for physical TDV victimization (e.g., Earnest & Brady, 2016; Kennedy, 2008; Maas et al., 2010), and is also a significant risk marker for physical TDV perpetration (Foshee et al., 1999; Wolf & Foshee, 2003). A key facet of social learning theory is that individuals learn their behaviors from observing and replicating others' behavior (Bandura, 1971). For adolescents, this theory posits that adolescents learn from observing significant people in their lives, such as their parents, and use these social observations to replicate behaviors such as violence. Adolescents who are victims of abuse as children

learn that violence is an effective way to handle conflict through messages sent by their parents normalizing violence. Adolescents then internalize these messages and develop social scripts that predispose them to become a victim of or perpetrate physical TDV (Tyler et al., 2011).

Additionally, in support of this theory, witnessing interparental violence was a significant risk marker for physical TDV perpetration (e.g., Chapple, 2003; Earnest & Brady, 2016; Miller et al., 2011). We also found it was a significant risk marker for physical TDV victimization. Similar to experiencing child abuse, witnessing violence sends messages that the violence is normal which becomes part of the adolescent's framework for future relationships and is replicated by the adolescent (Tyler et al., 2011). However, we found no significant differences when examining if witnessing inter-parental violence was a stronger risk marker for physical TDV perpetration between males and females. It is possible that we did not find significant gender differences because we were not able to differentiate between mother-to-father or father-to-mother violence as has been done in previous studies (e.g., Karlsson et al., 2016; Temple et al., 2013). Future research should continue to examine if witnessing inter-parental violence is stronger for one gender over the other and if witnessing mother-tofather or father-to-mother violence relates to gender differences. Further research on gender differences would be beneficial in tailoring intervention and prevention programs for males and females.

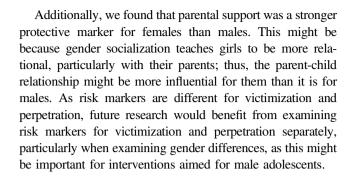
Attachment was found to be an important risk marker for physical TDV perpetration in this study. It is possible that experiencing abuse as a child breaks down secure attachment bonds between the parent and child, resulting in an insecure attachment and an unhealthy relational model. In support of this idea, adolescents with an insecure attachment have been found to perpetrate violence because of their negative relationship models (Foshee



et al., 1999; Tussey, et al., 2018). Another plausible explanation is that anxiously attached individuals might lash out with violence when their partner tries to pull away because of their fear of abandonment and their inability to handle their emotions in a constructive way, thus also explaining the finding that anxious attachment is the strongest risk marker for physical TDV perpetration. Even though social learning theory posits that attachment plays an important role as a structure for future relationships wherein adolescents might choose an abusive partner who fits the working model they developed from their parental relationship (Hare et al., 2009), there were not at least three effect sizes to analyze attachment as a risk marker for physical TDV victimization. Therefore, further research on attachment as a risk marker for physical TDV victimization is warranted.

Finally, poor parenting was a significant risk marker for physical TDV victimization only. This finding contradicts previous researchers who have linked poor parenting with physical TDV perpetration more frequently than with physical TDV victimization (Chase et al., 2002) or have not differentiated between perpetration and victimization (Chiodo et al., 2012). It is possible that poor parenting (e.g., neglect or conflict), breaks down the secure attachment bonds and models unhealthy relational patterns, thus leading to unhealthy relational expectations. Poor parenting could also decrease adolescents' feelings of worth, making them feel they are deserving of victimization. Future research should continue to examine the relationship between poor parenting and physical TDV victimization versus perpetration in order to better understand and clarify the developmental pathway through which poor parenting relates to physical TDV.

In terms of protecting against physical TDV, we found parental support serves as a significant protective marker against physical TDV victimization (e.g., Livingston et al., 2018). It is possible that parental support, in the form of parent-child bonding, relationship quality, or connectedness, is important in establishing a secure attachment and a healthy relationship framework for adolescents that protects against victimization (Maas et al., 2010). On the other hand, parental support was not significant in protecting against physical TDV perpetration. One possible explanation for this finding is that the cumulative effect of the various risk markers might overshadow the effect that protective markers have on physical TDV perpetration. Further, research has shown that negative factors have a stronger influence on adolescents' perpetration of physical TDV (Park & Kim, 2018). Specifically, protective markers had little to no power in protecting against physical TDV perpetration, arguing that intervention and prevention programs need to focus primarily on decreasing risk markers instead of increasing protective markers (Park & Kim, 2018).



Limitations and Future Research

Although a thorough search of the databases was conducted in order to gather articles for this study, it is possible that we missed some published studies (e.g., the article was not indexed in one of the databases we included in our search). In addition, even though we ran analyses to address the "filedrawer problem," it is still a limitation all meta-analyses face (Hunter & Schmidt, 2004). Another limitation is that we only examined family-of-origin risk markers, thus excluding all other risk markers for physical TDV. Although the family plays an important role for adolescents, there are other important contextual factors that should be considered in future research (e.g., peers, school, or community violence). Additionally, we only examined physical TDV; thus, we cannot generalize our findings to risk markers of psychological or sexual violence. Future research should examine if the risk markers for other types of TDV are similar to or different from those found in this study. It is also important to note that the sexual orientation of the adolescents or their parents was not examined due to the dearth of research specifically addressing TDV or inter-parental violence among queer individuals. Future research should examine if the risk markers for TDV are similar to or different for queer adolescents, as well as heterosexual adolescents who are raised by queer parents. The small number of studies obtained for each risk marker is another limitation. If three or more studies were not obtained for a risk marker, we were unable to run analyses to assess the strength of the risk marker. Future research should continue to examine the relationship between family-of-origin risk markers and physical TDV victimization and perpetration, especially expanding upon how attachment is related to victimization.

Implications

Results from this meta-analysis highlight the importance of screening for child abuse and anxious attachment when working with adolescents to identify who is at risk for physical TDV victimization or perpetration. Additionally, when working to prevent physical TDV, family life educators and clinicians can focus on reshaping the influence of



the past. For example, programs can focus on how attachment with parents is influential on outcomes in dating relationships. They can address detrimental messages sent by parents about appropriate ways to handle conflict and encourage adolescents to identify if they have internalized messages learned from parents. Professionals can also help adolescents re-work their relational models so they can form healthy expectations for future relationships. Moreover, given the effectiveness of attachment-based interventions with adolescents (see Kobak & Kerig, 2015 for a review), including for youth who engage in violent behaviors (Moretti & Obsuth, 2009), professionals could use such interventions to improve attachment between adolescents and parents and thus, potentially reduce physical TDV. Professionals can also work with the whole family in order to address the family context and its influence on adolescents' engagement with physical TDV. Working with the whole family can allow the growth of parental support to help in preventing physical TDV. Additionally, raising awareness of these risk markers might allow parents to use these findings to inform their parenting practices and model healthy relationships for their children.

Conclusion

This meta-analysis examined the connection between family-of-origin factors (i.e., attachment, witnessing interparental violence, experiencing abuse as a child, poor parenting, and parental support) and physical TDV perpetration and victimization for male and female adolescents. We found that anxious attachment was the strongest risk marker for physical TDV perpetration and that experiencing abuse as a child was the strongest risk marker for physical TDV victimization. We also found that parental support was a significant protective marker against physical TDV victimization, but not perpetration. When examining if these family-of-origin factors were significantly stronger risk markers for physical TDV victimization or perpetration, we only found one significant difference; experiencing abuse as a child was a stronger risk marker for physical TDV victimization than perpetration. We also only found one difference when comparing by gender; parental support was a significantly stronger protective marker against physical TDV perpetration for females than for males. Our findings suggest that addressing family factors in physical TDV prevention and intervention programs and increasing parental support might decrease physical TDV.

Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethical Approval The authors conducted a meta-analysis, which does not require ethical approval.

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References

- *Indicates that the study was used in the meta-analysis
- Ackard, D. M., Eisenberg, M. E., & Neumark-Sztainer, D. (2007). Long-term impact of adolescent dating violence on the behavioral and psychological health of male and female youth. *Journal of Pediatrics*, 151(5), 476–481. https://doi.org/10.1016/j.jpeds. 2007.04.034.
- Ackard, D. M., & Neumark-Sztainer, D. (2002). Date violence and date rape among adolescents: Associations with disordered eating behaviors and psychological health. *Child Abuse & Neglect*, 26 (5), 455–473. https://doi.org/10.1016/S0145-2134(02)00322-8.
- Ainsworth, M. D. (1969). Object relations, dependency, and attachment: A theoretical review of the infant-mother relationship. Child Development, 40(4), 969–1025. https://doi.org/10.2307/ 1127008.
- Arriaga, X. B., & Foshee, V. A. (2004). Adolescent dating violence: Do adolescents follow in their friends', or their parents', footsteps? *Journal of Interpersonal Violence*, 19(2), 162–184. https://doi.org/10.1177/0886260503260247.
- Bandura, A. (1971). Social learning theory. General Learning Press. https://doi.org/10.2307/1167194.
- Banyard, V. L., & Cross, C. (2008). Consequences of teen dating violence. *Violence Against Women*, *14*(9), 998–1013. https://doi.org/10.1177/1077801208322058.
- Bonache, H., Gonzalez-Mendez, R., & Krahé, B. (2017). Romantic attachment, conflict resolution styles, and teen dating violence victimization. *Journal of Youth and Adolescence*, 46(9), 1905–1917. https://doi.org/10.1007/s10964-017-0635-2.
- Borenstein, M., Hedges, L. V., Higgins, J. P. T., & Rothstein, H. R. (2014). Comprehensive meta-analysis (Version 3) [Computer software]. Biostat. https://www.meta-analysis.com/.
- Bowlby, J. (1988). A secure base: Parent-child attachment and healthy human development. Basic Books.
- Card, N. A. (2012). Applied meta-analysis for social science research. Guilford Press.
- Cascardi, M., Jouriles, E. N., & Temple, J. R. (2020). Distinct and overlapping correlates of psychological and physical partner violence perpetration. *Journal of Interpersonal Violence*, 35(13-14), 2375–2398. https://doi.org/10.1177/0886260517702492.
- Centers for Disease Control and Prevention. (2020). Preventing teen dating violence. https://www.cdc.gov/violenceprevention/pdf/ipv/ TDV-factsheet_2020.pdf.
- *Chapple, C. L. (2003). Examining intergenerational violence: Violent role modeling or weak parental controls? *Violence and Victims*, 18(2), 143–162. https://doi.org/10.1177/0886260502017001003.
- *Chase, K., Treboux, D., & O'Leary, K. (2002). Characteristics of highrisk adolescents' dating violence. *Journal of Interpersonal Violence*, 17(1), 33–49. https://doi.org/10.1177/0886260502017001003.
- *Chiodo, D., Crooks, C., Wolfe, V., McIsaac, D., Hughes, A., & Jaffe, C. (2012). Longitudinal prediction and concurrent functioning of adolescent girls demonstrating various profiles of dating violence and victimization. *Prevention Science*, 13(4), 350–359. https://doi.org/10.1007/s11121-011-0236-3.
- Cleveland, H., Herrera, H., & Stuewig, V. (2003). Abusive males and abused females in adolescent relationships: Risk factor similarity



- and dissimilarity and the role of relationship seriousness. *Journal of Family Violence*,18. https://doi.org/10.1023/A:1026297515314.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159. https://doi.org/10.1037/0033-2909.112.1.155.
- Cumming, G. (2012). Understanding the new statistics: Effect sizes, confidence intervals, and meta-analysis. Routledge. https://doi.org/10.1111/j.1751-5823.2012.00187_26.x.
- Duval, S., & Tweedie, R. (2000). Trim and fill: A simple funnel-plot-based method of testing and adjusting for publication bias in meta-analysis. *Biometrics*, 56(2), 455–463. https://doi.org/10.1111/j.0006-341X.2000.00455.x.
- Earnest, A. A., & Brady, S. S. (2016). Dating violence victimization among high school students in Minnesota: Associations with family violence, unsafe schools, and resources for support. *Journal of Interpersonal Violence*, 31(3), 383–406. https://doi.org/10.1177/0886260514555863.
- *Feldman, S. S., & Gowen, L. K. (1998). Conflict negotiation tactics in romantic relationships in high school students. *Journal of Youth and Adolescence*, 27(6), 691–717. https://doi.org/10.1023/A:1022857731497.
- *Fosco, G., Xia, M., Lynn, M., & Grych, J. (2016). Triangulation and parent–adolescent relationships: Implications for adolescent dating competence and abuse. *Journal of Research on Adolescence*, 26(3), 524–537. https://doi.org/10.1111/jora.12210.
- Foshee, V. A., Bauman, K. E., & Linder, G. F. (1999). Family violence and the perpetration of adolescent dating violence: Examining social learning and social control processes. *Journal of Marriage and Family*, 61(2), 331–342. https://doi.org/10.2307/353752
- Foshee, V. A., Benefield, T., Suchindran, C., Ennett, S. T., Bauman, K. E., Karriker-Jaffe, K. J., Reyes, H. L. M., & Mathias, J. (2009). The development of four types of adolescent dating abuse and selected demographic correlates. *Journal of Research on Adolescence*, 19(3), 380–400. https://doi.org/10.1111/j.1532-7795.2009.00593.x.
- *Foshee, V. A., Linder, F., Macdougall, J. E., & Bangdiwala, S. (2016). Triangulation and parent–adolescent relationships: Implications for adolescent dating competence and abuse. *Journal of Research on Adolescence*, 26(3), 524–537. https://doi.org/10.1111/jora.12210.
- *Foshee, V., Reyes, H. L. M., & Ennett, S. (2010). Examination of sex and race differences in longitudinal predictors of the initiation of adolescent dating violence perpetration. *Journal of Aggression, Maltreatment, & Trauma, 19*(5), 492–516. https://doi.org/10.1080/10926771.2010.495032.
- Foshee, V. A., Reyes, H. L. M., Gottfredson, N. C., Chang, L. Y., & Ennett, S. T. (2013). A longitudinal examination of psychological, behavioral, academic, and relationship consequences of dating abuse victimization among a primarily rural sample of adolescents. *Journal of Adolescent Health*, 53(6), 723–729. https://doi.org/10.1016/j.jadohealth.2013.06.016.
- *Foshee, V. A., Reyes, H. L. M., Vivolo-Kantor, A. M., Basile, K. C., Chang, L. Y., Faris, R., & Ennett, S. T. (2014). Bullying as a longitudinal predictor of adolescent dating violence. *Journal of Adolescent Health*, 55(3), 439–444. https://doi.org/10.1016/j.jadohealth.2014.03.004.
- *Gover, A. (2004). Risky lifestyles and dating violence: A theoretical test of violent victimization. *Journal of Criminal Justice*, *32*(2), 171–180. https://doi.org/10.1016/j.jcrimjus.2003.12.007.
- *Hare, A. L., Miga, E. M., & Allen, J. P. (2009). Intergenerational transmission of aggression in romantic relationships: The moderating role of attachment security. *Journal of Family Psychology*, 23(6), 808–818. https://doi.org/10.1037/a0016740.
- Hazan, C., & Shaver, P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*, 52(3), 511–524. https://doi.org/10.1037/0022-3514.52.3.511.

- Hébert, M., Daspe, M. E., Lapierre, A., Godbout, N., Blais, M., Fernet, M., & Lavoie, F. (2019). A meta-analysis of risk and protective factors for dating violence victimization: The role of family and peer interpersonal context. *Trauma, Violence, & Abuse, 20*(4), 574–590. https://doi.org/10.1177/1524838017725336.
- *Howard, D. E., Beck, K., Kerr, M. H., & Shattuck, T. (2005). Psychosocial correlates of dating violence victimization among Latino youth. Adolescence, 40(158), 319–331.
- Hunter, J. E., & Schmidt, F. L. (Eds.). (2004). Methods of metaanalysis: Correcting error and bias in research findings. Sage Publishers. https://doi.org/10.4135/9781412985031.
- Hunter, H. L. (2009). Family factors and risk behaviors in adolescent dating relationships: Heterosocial competence as a mediator between interparental conflict and dating violence (Publication No. 3378930) [Doctoral dissertation, University of Kansas].
 ProQuest Dissertations and Theses Global.
- *Kaufman-Parks, A., Demaris, A., Giordano, P., Manning, W., & Longmore, M. (2018). Familial effects on intimate partner violence perpetration across adolescence and young adulthood. *Journal of Family Issues*, *39*(7), 1933–1961. https://doi.org/10.1177/0192513X17734586.
- *Karlsson, M. E., Temple, J. R., Weston, R., & Le, V. D. (2016). Witnessing interparental violence and acceptance of dating violence as predictors for teen dating violence victimization. Violence Against Women, 22(5), 625–646. https://doi.org/10.1177/1077801215605920.
- *Kennedy, A. (2008). An ecological approach to examining cumulative violence exposure among urban, African American adolescents. *Child and Adolescent Social Work Journal*, 25(1), 25–41. https://doi.org/10.1007/s10560-007-0110-0.
- *Kinsfogel, K., (2001). A comprehensive model of dating violence: Testing the integration of social learning and attachment theories (Publication No. 3049931) [Doctoral dissertation, Marquette University]. ProQuest Dissertations and Theses Global.
- Kobak, R., & Kerig, P. K. (2015). Introduction to the special issue: Attachment-based treatments for adolescents. *Attachment & Human Development*, 17(2), 111–118. https://doi.org/10.1080/14616734.2015.1006382.
- Lee, M., Reese Weber, M., & Kahn, J. H. (2014). Exposure to family violence and attachment styles as predictors of dating violence perpetration among men and women: A mediational model. *Journal of Interpersonal Violence*, 29(1), 20–43. https://doi.org/ 10.1177/0886260513504644.
- *Linder, J. R. (2002). Parent and peer predictors of physical aggression, verbal aggression, and conflict management in romantic relationships in late adolescence and young adulthood: A prospective developmental study (Publication No. 3056336) [Doctoral dissertation, University of Minnesota]. ProQuest Dissertations and Theses Global.
- Livingston, J. A., Eiden, R. D., Lessard, J., Casey, M., Henrie, J., & Leonard, K. E. (2018). Etiology of teen dating violence among adolescent children of alcoholics. *Journal of Youth and Adoles*cence, 47, 515–533. https://doi.org/10.1007/s10964-017-0730-4.
- *Maas, C., Fleming, C., Herrenkohl, T., & Catalano, R. (2010). Childhood predictors of teen dating violence victimization. *Violence and Victims*, 25(2), 131–149. https://doi.org/10.1891/0886-6708.25.2.131.
- *Makin-Byrd, K., & Bierman, K. L. (2013). Individual and family predictors of the perpetration of dating violence and victimization in late adolescence. *Journal of Youth and Adolescence*, 42(4), 536–550. https://doi.org/10.1007/s10964-012-9810-7.
- *McCloskey, L. (2013). The intergenerational transfer of mother-daughter risk for gender-based abuse. *Psychodynamic Psychiatry*, 41(2), 303–328. https://doi.org/10.1521/pdps.2013.41.2.303.
- *McCloskey, L., & Lichter, E. (2003). The contribution of marital violence to adolescent aggression across different relationships.



- Journal of Interpersonal Violence, 18(4), 390–412. https://doi.org/10.1177/0886260503251179.
- Miller, E., Breslau, J., Chung, W.-J. J., Green, J. G., McLaughlin, K. A., & Kessler, R. C. (2011). Adverse childhood experiences and risk of physical violence in adolescent dating relationships. *Journal of Epidemiology and Community Health*, 65(11), 1006–1013. https://doi.org/10.1136/jech.2009.105429.
- Moretti, M. M., & Obsuth, I. (2009). Effectiveness of an attachment-focused manualized intervention for parents of teens at risk for aggressive behaviour: The Connect Program. *Journal of Adolescence*, 32(6), 1347–1357. https://doi.org/10.1016/j.adolescence. 2009.07.013.
- Niolon, P. H., Vivolo-Kantor, A. M., Latzman, N. E., Valle, L. A., Kuoh, H., Burton, T., Taylor, B. G., & Tharp, A. T. (2015). Prevalence of teen dating violence and co-occurring risk factors among middle school youth in high-risk urban communities. *Journal of Adolescent Health*, 56(2), S5–S13. https://doi.org/10. 1016/j.jadohealth.2014.07.019.
- Orwin, R. G. (1983). A fail-safe N for effect size in meta-analysis. *Journal of Educational Statistics*, 8(2), 157–159. https://doi.org/10.2307/1164923.
- Park, S., & Kim, S. (2018). The power of family and community factors in predicting dating violence: A meta-analysis. *Aggression and Violent Behavior*, 40, 19–28. https://doi.org/10.1016/j.avb. 2018.03.002.
- Parker, E. M., & Bradshaw, C. P. (2015). Teen dating violence victimization and patterns of substance use among high school students. *Journal of Adolescent Health*, 57(4), 441–447. https://doi.org/10.1016/j.jadohealth.2015.06.013.
- *Reyes, H. L. M., & Foshee, V. A. (2013). Sexual dating aggression across grades 8 through 12: Timing and predictors of onset. *Journal of Youth and Adolescence*, 42(4), 581–595. https://doi.org/10.1007/s10964-012-9864-6.
- *Reyes, H. L. M., Foshee, V., Fortson, B., Valle, L., Breiding, M., & Merrick, M. (2015). Longitudinal mediators of relations between family violence and adolescent dating aggression perpetration. *Journal of Marriage and Family*, 77(4), 1016–1030. https://doi.org/10.1111/jomf.12200.
- *Reyes, H. L. M., Foshee, V. A., Klevens, J., Tharp, A. T., Chapman, M. V., Chen, M., S. & Ennett, S. T. (2016). Familial influences on dating violence victimization among Latino youth. *Journal of Aggression, Maltreatment*, & *Trauma*, 25(8), 773–792. https://doi.org/10.1080/10926771.2016.1210270.
- Rosenthal, R. (1979). The file drawer problem and tolerance for null results. *Psychological Bulletin*, 86(3), 638–641. https://doi.org/10.1037/0033-2909.86.3.638.

- Saudino, K., & Hines, D. (2007). Etiological similarities between psychological and physical aggression in intimate relationships: A behavioral genetic exploration. *Journal of Family Violence*, 22(3), 121–129. https://doi.org/10.1007/s10896-006-9059-6.
- Schwartz, M., O'Leary, S. G., & Kendziora, K. T. (1997). Dating aggression among high school students. *Violence and Victims*, 12 (4), 295–305. https://doi.org/10.1891/0886-6708.12.4.295.
- Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA*, 286(5), 572–579. https://doi.org/10.1001/jama.286.5.572.
- Smith-Marek, E. N., Cafferky, B., Dharnidharka, P., Mallory, A. B., Domingquez, M., High, J., Stith, S. M., & Mendez, M. (2015). Effects of childhood experiences of family violence on adult partner violence: A meta-analytic review. *Journal of Family Theory and Review*, 7(4), 498–519. https://doi.org/10.1111/jftr. 12113.
- *Temple, J. R., Shorey, R. C., Tortolero, S. R., Wolfe, D. A. & Stuart, G. L. (2013). Importance of gender and attitudes about violence in the relationship between exposure to interparental violence and the perpetration of teen dating violence. *Child Abuse & Neglect*, 37(5), 343–352. https://doi.org/10.1016/j.chiabu.2013.02.001.
- Tyler, K. A., Brownridge, D. A., & Melander, L. A. (2011). The effect of poor parenting on male and female dating violence perpetration and victimization. *Violence and Victims*, 26(2), 218–230. https://doi.org/10.1891/0886-6708.26.2.218.
- Tussey, B. E., Tyler, K. A., & Simons, L. G. (2018). Poor parenting, attachment style, and dating violence perpetration among college students. *Journal of Interpersonal Violence*. Advance online publication. https://doi.org/10.1177/0886260518760017.
- *Volpe, E. (2010). HIV-risk behaviors and intimate partner violence in urban, adolescent girls: Impact of sexual relationship power and partner age differential [Doctoral dissertation, University of Rochester]. UR Research Institutional Repository. https://urresearch.rochester.edu/institutionalPublicationPublicView.action? institutionalItemId=11191.
- Wincentak, K., Connolly, J., & Card, N. (2017). Teen dating violence: A meta-analytic review of prevalence rates. *Psychology of Violence*, 7(2), 224–241. https://doi.org/10.1037/a0040194.
- Wolf, K. A., & Foshee, V. A. (2003). Family violence, anger expression styles, and adolescent dating violence. *Journal of Family Violence*, 18, 309–316. https://doi.org/10.1023/a: 1026237914406.

