The Mediating Role of Trauma Symptoms in Teen Dating Violence Victimization

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THE MEDIATING ROLE OF TRAUMA SYMPTOMS
IN TEEN DATING VIOLENCE VICTIMIZATION

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THE MEDIATING ROLE OF TRAUMA SYMPTOMS
IN TEEN DATING VIOLENCE VICTIMIZATION

A Thesis Presented to the Graduate Faculty of

Dedman College
Southern Methodist University

in
Partial Fulfillment of the Requirements
for the degree of
Doctor of Philosophy

with a
Minor in Quantitative Methods

by
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December 16, 2017
This research examined whether the frequency of recent physical and sexual teen dating violence (TDV) victimization is associated with re-experiencing, avoidance, and hyperarousal trauma symptoms, and whether they, in turn, predict the frequency of future TDV victimization. Participants were 104 (49% female) 14 to 17 year olds, recruited primarily from truancy courts to participate in three assessments, spaced three months apart. Adolescents reported on their trauma symptoms, experiences of physical and sexual dating violence victimization and characteristics of their romantic relationship at every assessment. Results indicated that the frequency of recent TDV victimization is related to re-experiencing, avoidance and hyperarousal trauma symptoms, even after controlling for baseline levels of each trauma symptom. Only re-experiencing symptoms mediated the relation between recent TDV victimization and TDV victimization three months later. Adolescent gender did not moderate this association. The present findings suggest that the trauma symptom clusters may differentially contribute to the risk of future victimization. Further research examining the cognitive and emotional processes involved in re-experiencing may enhance our understanding of risk factors for TDV victimization.
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The Mediating Role of Trauma Symptoms in Teen Dating Violence Victimization

National surveys indicate that at least 21% of adolescents in the U.S. aged 13-18 years old experience physical or sexual dating violence over the course of a year (Wincentak, Connolly, & Card, 2017); and up to 40% of teens and young adults experience lifetime physical or sexual dating violence (Halpern, Spriggs, Martin, & Kupper, 2009). Teen dating violence (TDV) victimization is associated with a number of mental health problems and adjustment difficulties, including higher rates of posttraumatic stress, attempted suicide, illicit drug use, depressed mood, and antisocial behavior (Ackard, Eisenberg, & Neumark-Sztainer, 2007; Callahan, Tolman, & Saunders, 200; Roberts, Klein, & Fisher, 2003; van Dulmen et al., 2012; Wolitzky-Taylor et al., 2008). Additionally, victims of TDV are at increased risk for experiencing TDV again (Spriggs, Halpern, & Martin, 2009; Exner-Cortens, Eckenrode, & Rothman, 2013; Gómez, 2011; Humphrey & White, 2000; Smith, White, & Holland, 2003), and continued victimization has been associated with even greater risk of mental health problems and adjustment difficulties compared to a single victimization experience (Howard, Debnam, & Wang, 2013). Despite the prevalence and consequences of TDV re-victimization, little is known about factors contributing to this phenomenon.

Theory on physical violence in intimate adult relationships highlights the important role of psychiatric symptoms in understanding the risk for experiencing continued victimization over time (Foa, Cascardi, Zoellner, & Feeny, 2000). Specifically, physical or sexual victimization can result in symptoms of post-traumatic stress disorder (PTSD), such as re-experiencing the traumatic event, avoidance, and hyperarousal (Wolitzky-Taylor et al., 2008). Trauma symptoms are theorized to make individuals more vulnerable to future attacks (Foa et al., 2000), and this may be especially true for females, who are more likely than males to report trauma symptoms as
a consequence of partner violence (Coker et al., 2005). For example, in a community sample of adolescents, physical TDV victimization was associated with later trauma symptoms, which in turn predicted dating violence victimization in early adulthood for females, even after controlling for baseline trauma symptoms (Jouriles, Choi, Rancher, & Temple, 2017). Similarly, among adult women who have experienced partner violence, trauma symptoms have been found to predict later victimization (Krause, Kaltman, Goodman, & Dutton, 2006; Perez & Johnson, 2008). These findings converge to suggest that females might be especially vulnerable to experiencing trauma symptoms, which might contribute to increased risk for victimization.

The clinical presentation of PTSD symptoms is quite diverse, which makes it important to consider the role of specific trauma symptom clusters: re-experiencing, avoidance, and hyperarousal. Indeed, research on the heterogeneous nature of PTSD indicates that these symptom clusters correlate only moderately with one another (Brown et al., 2016), and may have distinct underlying biological mechanisms of action (Foa, Zinbarg, & Rothbaum, 1992). The symptom clusters are also clinically important; prevention and treatment strategies for PTSD frequently involve delineating the presenting symptom clusters to help determine the most appropriate treatment approach (Albucher & Liberzon, 2002; Taylor et al., 2003). Moreover, the symptom clusters are differentially associated with the potential for suicide (Zuromski et al., 2014) and substance abuse (Avant, Davis, & Cranston, 2011).

It might be reasoned that the re-experiencing and avoidance clusters are especially predictive of victimization. Re-experiencing a traumatic event (e.g., through intrusive thoughts, flashbacks, and nightmares) is a form of cognitive rehearsal, and repeated mental re-experience of victimization might contribute to a belief that violence is an expected part of relationships and sex. This understanding of social situations, sometimes referred to as cognitive scripts, contain
an individual’s knowledge about an interaction, their expectations for a partner’s behavior, as well as normative beliefs about accepted or appropriate behavior in certain situations (Moskowitz, 2005). Cognitive scripts that normalize relationship violence, unwanted sex, or both have been prospectively linked to victimization (Krahe, Bieneck, & Scheinberger-Olwig, 2007), and may influence how teens approach and maintain romantic relationships. Additionally, reminders of an initial traumatizing event such as being pressured to have unwanted sex, can trigger the re-experiencing of that event. Activation of intrusive thoughts and memories of previous victimization can cause the individual to “freeze” or fail to otherwise act to escape from risky situations (Filipas & Ullman, 2006). Avoidance (deliberate efforts to avoid people, places or situations that are reminders of the event) or numbing (emotional detachment) may also increase the likelihood of further victimization. It could result in the failure to notice, ignore, or fully apprehend signs of escalating danger in a situation or relationship (Krause et al., 2006). Avoidant behaviors and emotional detachment from reminders of the traumatic event may also inhibit help-seeking efforts that might help reduce risk for future incidents of violence (Perez & Johnson, 2008). To be clear, identifying whether these trauma symptoms are risk factors for future victimization does not imply the victim is at fault for the violence.

Hyperarousal (e.g., hypervigilance, exaggerated startle response, and angry outbursts) could conceivably either decrease or increase risk for victimization. On the one hand, a victimized adolescent experiencing hyperarousal symptoms may be especially sensitive or hypervigilant to escalating arguments and other danger signs in a relationship. This increased awareness may result in more conflict resolution attempts or avoidance of risky situations. Hyperarousal symptoms, on the other hand, are related to intensification of anger (Makin-Byrd, Bonn-Miller, Drescher, & Timko, 2012) and may thus contribute to aggressive behavior that
could serve to escalate the risk of violence perpetration and victimization (Jouriles, McDonald, Mueller, & Grych, 2011; O’Keefe, 1997; Wolfe & Foshee, 2003). This intensification of anger might also prompt an adolescent to end a violent relationship, possibly reducing the risk for future victimization experiences in the short term.

Prospective research examining the influence of the trauma symptom clusters on victimization risk over time is sparse. In a study of Gulf War Veterans, re-experiencing, avoidance, and hyperarousal were each associated with the initial trauma exposure, with re-experiencing accounting for the largest proportion of variance predicting later traumatic life events (Orcutt, Erickson, & Wolfe, 2002). In a sample of adult women who experienced intimate partner violence (IPV), numbing and hyperarousal were associated with previous IPV victimization, but only numbing predicted future IPV victimization (Krause et al., 2006).

The present research examines the three PTSD symptom clusters as mediators of the relation between recent and later TDV victimization. The sample consisted of teens recruited primarily from truancy courts. There are several reasons why it is important to evaluate this hypothesis in such an at-risk sample. Teens involved in at-risk samples are at an increased risk for experiencing TDV (Chase, Treboux, O’Leary, & Strassberg, 1998; Nocentini, Menesini, & Pastorelli, 2010), and other forms of violence, which can have additive effects on their risk for experiencing trauma symptoms (Finkelhor, Ormrod, & Turner, 2007) – making this a vulnerable population for experiencing re-victimization over time. Many scholars have argued that different intervention and dating violence prevention programs should be developed for high-risk teens, in addition to more universal programs for school- and community-based populations (Antle, Sullivan, Dryden, Karam, & Barbee, 2011; Wolfe et al., 2003). Examining victimization in this
population will help inform the development of targeted prevention and intervention programs for teens experiencing trauma symptoms and who are at elevated risk for TDV victimization.

We hypothesized that the frequency of recent physical and sexual TDV victimization would predict re-experiencing, avoidance, and hyperarousal symptoms after controlling for baseline levels of the symptoms. In turn, we expected re-experiencing and avoidance to predict the frequency of TDV victimization over the next three months. Given that adolescents who continue in a relationship with a violent partner are at higher risk for re-victimization, compared to those who leave (O’Leary, Slep, Avery-Leaf, & Cascardi, 2008; Shortt et al., 2012; Timmons Fritz & Smith Slep, 2009), and longer relationships may be associated with greater risk of victimization (Gaertner & Foshee, 1999; Longmore, Manning, Giordano, & Copp, 2014; Luthra & Gidycz, 2006), relationship status and relationship length were accounted for in analyses testing our hypotheses. In addition, based on findings that females experience TDV differently than males (Coker et al., 2005), we also explored sex as a potential moderator of the mediating effects.

Methods

Participants

This is a secondary analysis using data collected as part of a larger study on teen relationships, which involved three assessments spaced three months apart. For the original study, families had to meet the following eligibility criteria: (1) adolescent aged between 14 and 17 years; (2) adolescent and their mother spoke English; (3) adolescent lived in a household with their mother for the previous six months; (4) adolescent had no history of a head injury or developmental disability; (5) adolescent was in a dating relationship at the time of the first assessment. “Relationship” was defined broadly, including whether the teen had a current
girlfriend/boyfriend, someone they were dating or hanging out with, someone who was more than a friend, or someone whom he or she likes. A broad definition is consistent with the way that teens typically characterize their romantic relationships (Connolly & McIsaac, 2011). Assessments were spaced three months apart because the duration of the average teen romantic relationship is short (Carver, Joyner, & Udry 2003; Shulman & Scharf, 2000), and we wanted to include adolescents who were in relationships with the same partner, as well as different partners over the assessment period. The conceptual model for the analyses is illustrated in Figure 1.

The final sample included 104 teens (49% female) whose mean age was 15.8 (SD = 1.01) at baseline. According to mothers’ reports of teen race, the sample was 66% Black/African American, 21% White, 6% More than one race, 3% American Indian/Alaska Native, 2% Asian and 2% not reported. Mother’s reported a median family annual income of $27,000. Mothers averaged 12.7 years (SD = 1.84) of education. All the teens who completed the second assessment also completed the third. The current sample included teens who reported being in a relationship at the second assessment. At the third assessment, 50% of the teens reported being in a romantic relationship with the same partner as at the second assessment, 28% reported a new partner, and 22% reported no longer being in a relationship. The median relationship length for all participants was 14.0 weeks (SD = 34.4) at the final assessment.

Procedures

All procedures were approved by the IRB of the first author’s institution. Assessments were conducted at a university lab; mothers consented and teens assented to participation. Mother and teen assessments were conducted in separate rooms. All questionnaires were read aloud to participants to ensure attention and comprehension. Mothers and teens both received financial compensation for their participation.
Measures

Teen dating violence victimization (time 2 and 3). Teens completed the 4-item physical and 4-item sexual victimization subscales of the Conflict in Adolescent Dating Relationships Inventory (CADRI; Wolfe et al., 2001). They reported how often each of the 8 behaviors had been committed against them by a current or former dating partner in the past three months. Responses were indicated on a scale of 1 (never) to 5 (four or more times). The correlation between the physical (e.g., “They kicked, hit or punched me”) and sexual (e.g. “They kissed me when I didn’t want them to”) victimization subscales was .37 at time 2 and .30 at time 3. The items were summed to index the frequency of victimization. Coefficient alpha for this score was .78 at time 2 and .71 at time 3.

Trauma symptoms (time 1 and 2). Teens completed the 17-item Los Angeles Symptom Checklist (LASC) (King, King, Leskin, & Foy, 1995), rating how much trauma symptoms are currently a problem for them on a scale of 0 (not a problem) to 4 (extreme problem). The re-experiencing subscale contains three items (e.g., “Nightmares, bad dreams,” “Strong memories of unpleasant things that have happened”), the avoidance subscale contains six items (e.g., “Avoiding doing things that remind me of unpleasant things that have happened,” “Unable to show my feelings”), and the hyperarousal subscale contains eight items (e.g., “Getting angry easily and/or temper problems,” “Being too jumpy”). Responses were summed to create a composite score for each cluster. Coefficients alpha at time 1 and time 2, respectively were: re-experiencing, .59 and .61; avoidance, .79 and .71; hyperarousal, .81 and .76. The LASC has been found to reliably detect post-traumatic stress among teens who have experienced violence (Foy, Wood, King, King, & Resnick, 1997). The subscale items can also be summed into a single
trauma score, with an overall score greater than 24 indicating clinical levels of PTSD (King, et al., 1995).

**Relationship length and status (time 3).** At time 3 teens indicated the length of their relationship (in weeks), and whether they were 1) in a relationship with the same partner they reported at time 2, 2) in a relationship with a new partner, or 3) no longer in a relationship. Relationship status was dummy coded with two variables; for the same (1) vs. any other relationship (0), and for a new partner (1) vs. any other relationship option (0).

**Data Analysis**

The analytic model is presented in Figure 1. To test our hypotheses, separate multiple regression analyses were conducted for each of the “a paths” of the mediation model (whether the frequency of TDV victimization in the three months preceding time 2 predicted current re-experiencing, avoidance, and hyperarousal at time 2). We included time 1 levels of each trauma symptom cluster as control variables. In testing the “b paths” of the model (whether each current trauma symptom at time 2 predicted the frequency of victimization over the next 3 months), we conducted a single multiple regression analysis that included the trauma symptom clusters at time 2 and the frequency of victimization at time 2 as predictors of victimization at time 3. Relationship length and status were included as control variables. We tested all three symptom clusters simultaneously to examine whether they contributed independently of one another in predicting victimization. We tested the statistical significance of the mediated pathways ($a*b$) using the distribution of products test (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Unlike more traditional methods (e.g. Baron & Kenny, 1986), the distribution of products test estimates mediation by examining whether the indirect effect of the proposed mediator differs from 0. This effect is statistically determined by the product of the unstandardized coefficients in
the “a path” and “b path” of each mediator variable (a*b). This mediation test calculates the 95% Confidence Interval (CI) for a*b (MacKinnon et al., 2002). If the 95% CI does not include 0, then the mediated pathway is considered significant. To estimate the effect size of the mediation, we report the Proportion mediated (Pm). This indicates the proportion of the total effect of the independent variable (TDV at time 2) on the dependent variable (TDV at time 3) that is attributable to the mediated pathway.

A post hoc power analysis of the least powerful multiple regression model (with 7 predictors: TDV, re-experiencing, avoidance, and hyperarousal all at time 2, relationship length and dummy coded relationship status at time 3) using GPower (Faul, Erdfelder, Lang, & Buchner, 2007) indicated that with a sample size of 104, power exceeded .81 to detect a medium effect ($f^2 = .15$), and .99 to detect a large effect ($f^2 = .35$). According to Fritz and MacKinnon (2007), there was power $\geq .80$ to detect a medium-sized mediation effect with a sample size exceeding 71 participants. The most conservative models to evaluate whether victimization predicted trauma symptoms differently for males and females, included victimization at time 2, trauma symptoms at time 1, as well as the moderator and its interaction with victimization at time 2. For these models with alpha set at .05, and sample size of 104, power exceeded .89 to detect a medium effect ($f^2 = .15$), and .99 to detect a large effect ($f^2 = .35$).

Results

Descriptive Analyses

Means, standard deviations, and correlations among the study variables are reported in Table 1. For this sample, 31% ($n = 32$) of teens at time 2 and 24% ($n = 25$) at time 3 experienced at least one act of victimization. The most common act of physical victimization at time 2, “they slapped or pulled my hair,” was reported by 8% ($n = 8$) of teens. The most common act of
physical victimization at time 3, “they pushed, shoved, or shook me,” was reported by 6% \((n = 6)\) of teens. The most common act of sexual victimization, “they kissed me when I didn’t want them to,” was reported by 22% \((n = 23)\) of teens at time 2 and 17% \((n = 18)\) of teens at time 3. Clinical levels of PTSD (overall score > 24) were reported by 16% \((n = 17)\) of teens at time 1 and 11% \((n = 11)\) at time 2. There were no differences between males and females on levels of any of the symptom clusters at time 2 or the frequency of victimization at times 2 or 3, \(p > .11\).

**Trauma Symptom Mediation of TDV Victimization**

Results are summarized in Figure 2. Controlling for relationship length and status, victimization at time 2 predicted victimization three months later, \(b = .76, t(99) = 15.01, p < .001, \eta^2_p = .69\). Victimization over the three months prior to the time 2 assessment was associated with each current trauma symptom cluster at time 2, re-experiencing, \(b = .20, t(101) = 2.93, p = .004, \eta^2_p = .08\); avoidance, \(b = .45, t(101) = 4.35, p < .001, \eta^2_p = .16\); and hyperarousal, \(b = .39, t(101) = 2.96, p = .004, \eta^2_p = .08\). After controlling for relationship length and status and victimization over the three months prior to time 2, only re-experiencing predicted victimization at time 3, \(b = .19, t(96) = 2.17, p = .03, \eta^2_p = .05\); over and above avoidance, \(b = -.01, t(96) = .13, p = .89, \eta^2_p = .00\); and hyperarousal, \(b = -.02, t(96) = .33, p = .74, \eta^2_p = .00\). Victimization reported at time 2 still predicted victimization at time 3, after controlling for relationship length and status and each trauma symptom cluster, \(b = .73, t(96) = 13.56, p < .001, \eta^2_p = .66\). In testing the \(b\) paths and \(c'\) path we dropped three outliers whose residuals were greater than 4 standard deviations above the mean, the pattern of the results was the same if we included the outliers in our analyses.

We evaluated the statistical significance of the mediated pathways \((a*b)\) using the distribution of products test (MacKinnon et al., 2002). Re-experiencing symptoms partially
mediated the relation between victimization at time 2 and time 3, \( a \cdot b = .04 \), 95% CI [.002, .08], \( Pm = .05 \).

**Exploratory Analyses**

**Gender as a moderator.** Teen Gender did not moderate the association between victimization at time 2 and time 3, \( b = -.17 \), \( t(97) = 1.64 \), \( p = .10 \), \( \eta^2_p = .03 \), or between victimization at time 2 and any of the trauma symptom clusters at time 2, re-experiencing, \( b = -.13 \), \( t(96) = .90 \), \( p = .36 \), \( \eta^2_p = .01 \), avoidance, \( b = -.17 \), \( t(96) = .77 \), \( p = .44 \), \( \eta^2_p = .01 \), or hyperarousal, \( b = .02 \), \( t(96) = .07 \), \( p = .94 \), \( \eta^2_p = .00 \).

**Predicting TDV victimization in independent analyses.** Given that both re-experiencing and avoidance trauma symptoms were correlated with TDV victimization three months later, respectively, \( r = .39 \), \( p < .01 \), and \( r = .32 \), \( p < .01 \), we examined whether each trauma symptom cluster predicted victimization three months later in separate multiple regression analyses. In these separate multiple regression analyses, the pattern of the results was the same. After controlling for relationship length and status and victimization over the three months prior to time 2, only re-experiencing predicted victimization at time 3, \( b = .16 \), \( t(98) = 2.68 \), \( p = .009 \), \( \eta^2_p = .07 \); not avoidance, \( b = .05 \), \( t(98) = 1.23 \), \( p = .22 \), \( \eta^2_p = .02 \); nor hyperarousal, \( b = .05 \), \( t(98) = 1.55 \), \( p = .13 \), \( \eta^2_p = .02 \).

**Predicting physical and sexual re-victimization.** We examined whether the trauma symptom clusters for participants who reported victimization at time 2 (\( n = 32 \)) would predict re-victimization at time 3 (coded 0=not re-victimized, 1=re-victimized), controlling for the frequency of TDV at time 2, relationship length, and status. Examining each trauma symptom cluster in separate logistic regression analyses, both re-experiencing, \( b = .34 \), \( Wald = 4.41 \), OR =
1.40, \( p = .036 \), and avoidance, \( b = .19 \), \( Wald = 4.09 \), OR = 1.20, \( p = .043 \), but not hyperarousal, \( b = .09 \), \( Wald = 1.53 \), OR = 1.10, \( p = .216 \), predicted re-victimization at time 3.

**Discussion**

We examined whether experiences of TDV victimization predicted specific trauma symptom clusters, which in turn would predict the frequency of future TDV victimization. Results were consistent with our first hypothesis in that the frequency of recent physical and sexual TDV predicted re-experiencing, avoidance, and hyperarousal symptoms, even after controlling for baseline levels of these symptoms. This is in accord with research suggesting that experiencing physical or sexual dating violence is associated with trauma symptoms (Coker et al., 2005; Harned, 2001; Wolitzky-Taylor et al., 2008), and that this association is robust across diverse trauma symptom clusters. Our second hypothesis, that re-experiencing and avoidance, but not hyperarousal, would predict future victimization was partially supported. Re-experiencing and avoidance were both correlated with later victimization; however, when the three symptom clusters were considered simultaneously, only re-experiencing independently predicted later victimization. This pattern was consistent even when we examined each trauma symptom cluster in a separate model; only re-experiencing symptoms predicted later victimization.

Our findings extend the literature by demonstrating an indirect effect of trauma symptoms in the link between past and future victimization, and the role of the individual trauma symptom clusters in that link. Although a few studies have examined whether trauma symptoms increase the risk for future victimization (Jouriles et al., 2017; Krause et al., 2006; Perez & Johnson, 2008), none have examined the individual symptom clusters. Given the diversity of trauma symptom presentation, research examining the mechanisms of the separate symptom
clusters is necessary to better delineate factors contributing to victimization. Re-experiencing appears to be one such factor. Even though physical and sexual victimization were strongly correlated over time, re-experiencing symptoms still accounted for significant variance in predicting later victimization. Processes involved in re-experiencing, such as cognitive rehearsal or unpleasant memories of a traumatic event, may be particularly important to consider in the risk for victimization. Indeed, similar cognitive processes, such as those of ruminative depression, have been implicated as a risk factor for experiencing relationship violence (Keenan-Miller, Hammen, & Brennan, 2007; McCauley, Breslau, Saito, & Miller, 2015). Our findings suggest similar cognitive processes in re-experiencing symptoms may particularly increase one’s vulnerability to future victimization.

It is noteworthy that the findings emerged in a sample of teens recruited from the juvenile justice system. Research suggests that teens who come to the attention of the courts are at increased risk for experiencing trauma symptoms (Abram et al., 2004), not just from being more likely to have experienced TDV, but also from increased risk for experiencing other forms of violence, such as physical or sexual child abuse, witnessing domestic violence, from accidental trauma, or living in a violent neighborhood (Ford, Hartman, Hawke, & Chapman, 2008). In the current study, levels of TDV and trauma symptoms fell between those of community samples and samples of youth with clinical levels of trauma symptoms (Chase et al., 1998; Nocentini et al., 2010; Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001). Developmentally, multiple exposures to violence may desensitize youth, so that additional victimization experiences are not associated with increases in trauma symptoms (Masten, Narayan, Silverman, & Osofsky, 2015). However, by controlling for earlier levels of trauma symptoms, our results suggest that TDV victimization is nonetheless associated with increased trauma symptoms, even in a sample with
other risk factors for victimization (Finkelhor et al., 2007). This suggests that even modest levels of TDV are associated with detectable changes in trauma symptoms. These findings reinforce that an additive relation may exist between exposure to risk factors and adjustment difficulties among at-risk teens (Masten & Cicchetti, 2016); and further, that even minor increases in adjustment difficulties can in turn increase vulnerability to victimization.

It is unclear why gender did not moderate the associations between victimization and trauma symptoms or victimization over time, given that others have found differences in how males and females respond to experiences of violence (Coker et al., 2005) and that trauma symptoms predict victimization for female adolescents recruited from schools (Jouriles et al., 2017). One possibility is that important differences, distinguish court samples from school samples. It may be that there are less distinct vulnerabilities for males and females in at-risk samples.

The present findings hold implications for understanding the risk factors that contribute to TDV victimization among vulnerable youth. This area has not received much empirical attention, perhaps because some hold that identifying individual characteristics as risk factors for future victimization is akin to blaming the victim (for discussion see, Hamby & Grych, 2016). This view, that studying risk factors is analogous with victim blaming, fails to consider the broader contextual and societal factors related to experiences of violence and may be inadvertently overlooking the possibility that trauma symptoms may be a worthwhile target for dating violence prevention or intervention programs. According to a recent review of interventions designed to prevent or reduce teen dating violence, most programs emphasize altering school culture to decrease aggression, promoting bystander behaviors, or changing beliefs in dating attitudes or myths (De La Rue, Polanin, Espelage, & Pigott, 2017). Our findings
suggest that trauma symptoms may be a worthwhile addition to discussing how teens think about violence in relationships in these existing prevention programs.

This study has a number of strengths, including the longitudinal follow-up of a diverse sample recruited primarily from truancy courts. Limitations to the study include that trauma symptoms were measured without reference to any particular stressful or traumatic event (King, et al., 1995). While this approach is widely used in the literature assessing adolescent posttraumatic stress (Harned, 2001; Jouriles et al., 2017; Overstreet, Salloum, & Badour, 2010; Zebrack et al., 2015), it limits our ability to link the trauma symptoms to TDV specifically. Also, the observed associations among past TDV, trauma symptom clusters, and later TDV might be explained by unmeasured third variables related to both the trauma symptoms and TDV (e.g., low self-esteem or poor self-efficacy).

Despite the limitations, our findings document the relation of the trauma symptom clusters to past and future TDV victimization, and point to re-experiencing as a mediator. Research examining the cognitive and emotional processes inherent to re-experiencing may enhance our understanding of this mediating relation and improve our understanding of processes that give rise to TDV victimization. Furthermore, our findings hold certain clinical implications in that trauma symptoms may need to be considered in the context of how teens respond to victimization and think about violence in their relationships.
References


**Developmental Psychopathology, 4(6), 1–63.**


Figure 1.

Note. The control variables, relationship length and status, were included in the pathways predicting frequency of TDV victimization at time 3.
### Means, Standard Deviations, and Correlations among Study Variables (n = 104)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TDV Victimization $t_2$</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>9.07 (2.70)</td>
</tr>
<tr>
<td>2. TDV Victimization $t_3$</td>
<td>.83**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>8.90 (2.43)</td>
</tr>
<tr>
<td>3. Re-experiencing $t_1$</td>
<td>.07</td>
<td>.11</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2.47 (2.37)</td>
</tr>
<tr>
<td>4. Avoidance $t_1$</td>
<td>.15</td>
<td>.19</td>
<td>.52**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>5.07 (4.65)</td>
</tr>
<tr>
<td>5. Hyperarousal $t_1$</td>
<td>.11</td>
<td>.13</td>
<td>.77**</td>
<td>.65**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>6.44 (5.54)</td>
</tr>
<tr>
<td>6. Re-experiencing $t_2$</td>
<td>.27**</td>
<td>.36**</td>
<td>.50**</td>
<td>.35**</td>
<td>.33**</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>2.18 (2.22)</td>
</tr>
<tr>
<td>7. Avoidance $t_2$</td>
<td>.41**</td>
<td>.32**</td>
<td>.41**</td>
<td>.58**</td>
<td>.46**</td>
<td>.61**</td>
<td>—</td>
<td>—</td>
<td>3.56 (3.74)</td>
</tr>
<tr>
<td>8. Hyperarousal $t_2$</td>
<td>.29**</td>
<td>-.13</td>
<td>.52**</td>
<td>.46**</td>
<td>.62**</td>
<td>.72**</td>
<td>.69**</td>
<td>—</td>
<td>5.46 (4.73)</td>
</tr>
<tr>
<td>9. Relationship Length $t_3$</td>
<td>-.11</td>
<td>-.03</td>
<td>.06</td>
<td>-.22*</td>
<td>-.03</td>
<td>.15</td>
<td>-.11</td>
<td>-.03</td>
<td>27.66 (34.40)</td>
</tr>
</tbody>
</table>

*Note. $t_1 = $ first assessment; $t_2 = $ second assessment ; $t_3 = $ third assessment. $^*p < .05$, $^{**}p < .01$. 
Figure 2.

Note. The control variables, relationship length and status, were included in the pathways predicting frequency of TDV victimization at time 3. at every path of the model. Unstandardized coefficients and standard errors are reported. Solid lines reflect statistically significant path coefficients.  
***p < .001  **p < .01  *p < .05