

THE RELATION BETWEEN BORDERLINE PERSONALITY DISORDER
FEATURES AND TEEN DATING VIOLENCE IN ADOLESCENCE:
A LONGITUDINAL STUDY

A Thesis
Presented to
The Faculty of the Department
of Psychology
University of Houston

In Partial Fulfillment
Of the Requirements for the Degree of
Master of Arts

By
Tyson R. Reuter
December, 2012

THE RELATION BETWEEN BORDERLINE PERSONALITY DISORDER
FEATURES AND TEEN DATING VIOLENCE IN ADOLESCENCE:
A LONGITUDINAL STUDY

Tyson Reuter, B.A.

APPROVED:

Carla Sharp, Ph.D.
Committee Chair
Department of Psychology

Julia Babcock, Ph.D.
Department of Psychology

Jeff Temple, Ph.D.
University of Texas Medical Branch

John W. Roberts, Ph.D.
Dean, College of Liberal Arts and Social Sciences
Department of English

THE RELATION BETWEEN BORDERLINE PERSONALITY DISORDER
FEATURES AND TEEN DATING VIOLENCE IN ADOLESCENCE:
A LONGITUDINAL STUDY

An Abstract of a Thesis

Presented to

The Faculty of the Department
of Psychology
University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of
Master of Arts

By

Tyson R. Reuter

December, 2012

ABSTRACT

Teen dating violence (TDV) is a serious social problem with significant physical and emotional consequences. A number of theoretical models have identified several factors associated with intimate partner violence (IPV) amongst adults, including the role of personality disorder features such as Borderline Personality Disorder (BPD). However, little is known about borderline features and intimate partner violence amongst adolescents (i.e. TDV). The present study is the first to investigate the relation between TDV and borderline features in adolescents, taking into account important additional correlates of TDV at both the cross-sectional and longitudinal level. An ethnically diverse sample of $N = 1,042$ adolescents completed self-report measures of dating violence and borderline features, in addition to measures of substance use, hostility, and exposure to parental violence. Results showed that borderline features made independent contributions to TDV victimization, but not perpetration, at the cross-sectional level for females. At the longitudinal level, baseline and follow up TDV victimization and TDV perpetration were significantly higher for adolescents with borderline features compared to adolescents without borderline features. Borderline features should be considered in the assessment of TDV in order to aid with identification and treatment. Implications of the role of gender on TDV and future directions are discussed.

TABLE OF CONTENTS

	Page Number
Introduction	1
Importance of the Problem	1
Explaining Intimate Partner Violence: Theoretical Framework and Empirical Support.....	2
Hostility and Violence in Romantic Relationships.....	3
Exposure to Parental Violence and Violence in Romantic Relationships.....	4
Substance Use and Violence in Romantic Relationships.....	5
Borderline Personality Disorder and Violence in Romantic Relationships.....	6
Borderline Personality Disorder in Adolescence.....	9
Purpose of the Present Study	11
Methods.....	12
Participants.....	12
Measures.....	13
Procedures.....	16
Data Analytic Strategy	16
Results.....	17
Preliminary Analyses	17
Bivariate Relations between Main Study Variables at the Cross-Sectional Level.....	19
The Relation between Borderline Features and TDV at the Cross-Sectional Level Controlling for Potential Confounding Variables (Aim 1)	21

The Relation between Borderline Status and the Persistence of TDV (Aim 2)....	25
Discussion	28
Appendices	34
Appendix 1: Conflict in Adolescent Dating and Relationship Inventory.....	34
Appendix 2: Borderline Personality Features Scale for Children.....	37
Appendix 3: Hostility Subscale from the Symptom Check List.....	39
Appendix 4: Substance Use.....	40
Appendix 5: Exposure to Parental Violence	41
References	42

LIST OF TABLES

Table	Page Number
1	Descriptive statistics.....18
2	Correlational analyses examining the bivariate relations between continuous variables.....20
3	Hierarchical linear regression with gender, substance use, mother-to-father violence, hostility (Block 1), and BPFS-C scores (Block 2) as independent variables and TDV victimization as the dependent variable.....22
4	Hierarchical linear regression with gender, substance use, mother-to-father violence, hostility (Block 1), and BPFS-C scores (Block 2) as independent variables and TDV perpetration as the dependent variable.....24

LIST OF FIGURES

Figure	Page Number
1	Repeated measures ANOVA with BPD vs. non-BPD categorical variable as the between subjects factor and TDV victimization at baseline and one year follow up as the within subjects variable.....26
2	Repeated measures ANOVA with BPD vs. non-BPD categorical variable as the between subjects factor and TDV perpetration at baseline and one year follow up as the within subjects variable.....27

Introduction

Importance of the Problem

Teen dating violence (TDV) is a significant social problem with an alarmingly high prevalence rate (Centers for Disease Control and Prevention, 2012). It is estimated that 10-20% of adolescents have experienced “severe” physical dating violence (Eaton, Davis, Barrios, Brener, & Noonan, 2007), with a conservative definition of TDV including physical aggression, intimidation, or coercion (Foshee et al, 1996; Wolfe et al., 2003). The rate is even higher in at-risk samples, or when other forms of abuse are considered, such as verbal and psychological intimidation (Malik, Sorenson, & Aneshensel, 1997; Molidor & Tolman, 1998; Wolfe, Scott, Wekerle, & Pittman, 2001).

TDV victimization and perpetration have been associated with both internalizing (e.g. depression, anxiety, suicidal ideation) and externalizing (e.g. substance use, risky sexual behavior) problems (Rothman, Reyes, Johnson, & LaValley, 2012; Silverman, Raj, Mucci, & Hathaway, 2001; Temple & Freeman, 2011; Wolitzky-Taylor et al., 2008). Importantly, victims and perpetrators of TDV may be at increased risk for continuing this maladaptive form of relating in future intimate relationships (Gidycz, Warkentin, & Orchowski, 2007; Roscoe & Benaske, 1985; Smith, White, & Holland, 2003; Stith, Smith, Penn, Ward, & Tritt, 2004; White & Smith, 2009).

Given the physical and emotional costs of TDV, including the increased risk for perpetuating the intergenerational transmission of interpersonal violence (Kwong, Bartholomew, Henderson, & Trinke, 2003; O'Keeffe, Brockopp, & Chew, 1986; Riggs, O'Leary, & Breslin, 1990), it is crucial that risk factors and correlates of TDV be investigated to help interrupt this negative pattern of relating. An improved understanding

of the etiology of TDV will invariably lead to advances in identification, prevention, and treatment.

Explaining Intimate Partner Violence: Theoretical Framework and Empirical Support

To understand the development of TDV, it is helpful to refer to theoretical models of adult intimate partner violence and the empirical findings supporting those theories. In the adult literature, aggressive behavior directed toward romantic partners is commonly called intimate partner violence (IPV), and although numerous theories have attempted to explain why individuals behave aggressively and engage in abusive behaviors towards their partners, IPV remains arguably atheoretical (Sellers, Cochran, & Branch, 2005). However, recent comprehensive etiological models posit a number of important factors that may explain aggressive and abusive behaviors between partners. One such model is Social Learning Theory, which assumes that individuals learn to behave aggressively when presented with violent models, especially if those models are admired by the individual (Akers, 1985, 2000; Bandura, 1977, 1978; Gray & Foshee, 1997; Sellers et al., 2005). With regards to youth, the theory postulates the same principle, such that children and adolescents learn violent behavior through observational learning and modeling of others' violent behavior, most notably their parents.

Although empirical work has demonstrated some support for Social Learning Theory in TDV towards partners (Malik et al., 1997; Sellers et al., 2005; Sims, Dodd, & Tejada, 2008), recent authors (e.g. Bell & Naugle, 2008) have suggested an alternative model, arguing that Social Learning Theory is limited because the typical variables of

interest (e.g. family conflict, modeling, reinforcing consequences of aggression, and sex-role characteristics) cannot fully account for the intergenerational transmission of IPV. That is, many victims and perpetrators did not experience or witness violence as children, and many survivors of childhood maltreatment do not become victims and perpetrators as adults. Given the significant heterogeneity of IPV (Bogat, Levendosky, & von Eye, 2005), Bell and Naugle (2008) proposed an alternative model that aims to widen the scope of possible predictors for IPV by including factors such as personality traits (e.g. hostility), distal antecedents (e.g. exposure to parental violence), motivating factors (e.g. substance use), and psychiatric disorders (e.g. Borderline Personality Disorder). This model is advantageous over previous approaches given that there are many pathways leading to and from IPV. This is consistent with a developmental psychopathology approach, which over the past twenty to thirty years has become the leading framework for understanding the development and maintenance of maladaptive behavior patterns. The following sections highlight research demonstrating links between these factors (i.e. hostility, exposure to parental violence, substance use, and Borderline Personality Disorder) and IPV.

Hostility and Violence in Romantic Relationships

Hostility can be defined as “thoughts, feelings, or behaviors that may be characterized as manifestations of anger, resentment, hostility, or aggression” (Derogatis, Lipman, & Covi, 1976, p. 287). Research has consistently demonstrated a positive relation between hostility and violence in romantic relationships, with a number of studies finding elevated levels of hostility and anger in domestically violent men (Beasley

& Stoltenberg, 1992; Dutton, 1994; Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, 2000). Indeed, some reviews (Norlander & Eckhardt, 2005; Schumacher, Slep, & Heyman, 2001) have found partner-violent men having scores of anger experience and expression one half a standard deviation higher than nonviolent men. For example, Maiuro, Cahn, Vitaliano, Wagner, & Zegree (1988) found that domestically violent men and generally assaultive men had higher levels of self-reported hostility and anger compared to men in a nonviolent control group. A similar finding was demonstrated by McKenry, Julian, & Gavazzi, (1995), who found hostility to be a significant predictor of male physical aggression. In another study examining the conflict strategies of violent versus nonviolent couples, Lloyd (1990) found that violent couples reported higher instances of verbal attacks and anger. Regarding youth, some studies have found associations between adolescent dating violence (perpetration and victimization) and factors such as interpersonal sensitivity and hostility (Wolfe et al., 1998; Wolfe et al., 2003).

Exposure to Parental Violence and Violence in Romantic Relationships

Research examining the consequences of witnessing parental violence demonstrates that exposure to violence in one's family of origin predicts subsequent IPV (Forsstrom-Cohen & Rosenbaum, 1985; Roberts, McLaughlin, Conron, & Koenen, 2011), likely because parents' interactions provide a salient model for how adolescents behave in their intimate relationships (Kinsfogel & Grych, 2004). Other authors have argued that witnessing parental violence teaches adolescents specific anger expression styles that increase the risk of violence perpetration (Wolf & Foshee, 2003). Also known

as the intergenerational transmission of violence, the theory argues that exposure to parental violence strongly predicts partner abuse, and research generally supports this theory. For example, Sims et al. (2008) showed that exposure to interparental violence victimization and intersibling violence perpetration predicted IPV perpetration in dating relationships in boys. Kinsfogel and Grych (2004) studied a group of adolescents and demonstrated that boys witnessing interparental aggressive conflict were more likely to utilize aggression in romantic relationships, and this belief in turn predicted higher IPV in dating partners. Similarly, using a sample of college students, Hastings and Hamberger (1988) found that male adult batterers were more likely than non-batterers to witness or experience violence as children. One study (Wolfe et al., 1998) found that family of origin violence explained a significant amount of variance (20%) for predicting relationship violence in adolescents. This pattern of observing violence leading to IPV perpetration for males is a common finding (Tontodonato & Crew, 1992), though some studies have shown that predicting violence perpetration may depend on the gender of the perpetrator (parent) or observer (Malik et al., 1997).

Substance Use and Violence in Romantic Relationships

Research has also demonstrated links between alcohol and drug use and violence in romantic relationships. For example, a number of studies have found significant associations with alcohol problems and court-involved male physical aggression (Hamberger & Hastings, 1991; Julian & McKenry, 1993). In a meta-analytic review of 50 independent studies examining alcohol and IPV, Foran and O'Leary (2008) found a clear relation between alcohol use/abuse and IPV for both males and females, with larger effect

sizes for males. For adults, a review study found that about 45% of incidents involving partner violence included alcohol (Roizen, 1993), and a similar trend was found in adolescents, such that O'Keefe et al. (1986) found 40% of incidents involving dating violence included alcohol, and Makepeace (1981) found about a third of incidents involving dating violence included alcohol. In a study examining domestically violent men entering a domestic violence treatment program, results showed that the odds of physical aggression were 8 times higher and the odds of severe physical aggression were 11 times higher when alcohol was consumed (Fals-Stewart, 2003). While the majority of the research has focused on links between alcohol and illicit substances and intimate violence in adults (Stuart, Moore, Ramsey, & Kahler, 2003; Temple, Weston, Stuart, & Marshall, 2008; Testa, Livingston, Vanzile-Tamsen, & Frone, 2003), research is beginning to demonstrate a similar finding in adolescents, such that rates of dating violence increase for adolescents who use substances (Foshee et al., 2004; O'Keefe, 1997; Silverman et al., 2001; Howard & Wang, 2003). For example, in a meta-analytic review by Rothman et al. (2012), a strong association was found between higher levels of alcohol use and dating violence perpetration in youth. Using a large, ethnically diverse sample of 1,565 adolescents, Temple and Freeman (2011) found that victims of dating violence were 2.5 to 4 times more likely to smoke cigarettes, use marijuana, or drink alcohol, though after multivariate analyses, only alcohol and cigarettes were specifically related to dating violence over and above other substances.

Borderline Personality Disorder and Violence in Romantic Relationships

Another variable of interest that research has recently examined is the role of personality variables. Specifically, a few studies have looked at Borderline Personality

Disorder (BPD) as a factor related to IPV (e.g. Dutton, 1995; Holtzworth-Monroe, 2000). BPD is an impairing psychiatric disorder characterized by strong emotions, feelings of emptiness, high levels of anxiety, and dramatic mood shifts. Prevalence of the disorder is relatively high, with estimates of one to two percent in community samples (Lenzenweger, Loranger, Korfine, & Neff, 1997; Torgersen, Kringlen, & Cramer, 2001) and approximately one in ten psychiatric outpatients and one in five inpatients (American Psychiatric Association, 2000). It is a pervasive and lifelong disorder with very high Axis I comorbidity (Grant et al., 2008), and it is important to note that the disorder may be lethal, with completed suicide estimates as high as 10 percent (Gunderson & Ridolfi, 2001). Impulsivity in BPD patients has been shown to be significant, with some authors reporting a Barratt Impulsiveness Scale (BIS) mean higher than those reported for a sample of prison inmates (Patton et al., 1995). Having such elevated levels of impulsivity, which can also be conceived of as a lack of self-control (Critchfield, Levy, & Clarkin, 2004), individuals with BPD often express their impulsive behavior toward the self and others in the form of aggressive behavior (Látalová & Praško, 2010). For example, Soloff et al. (2003) found that 58% percent of adults with the diagnosis have been involved “occasionally or often” in physical fights, while 25% percent have reported using weapons against others. Ross and Babcock (2009) found that the type of perpetrated violence (i.e. reactive or proactive) may depend on personality disorder diagnosis, such that partner violent men with a BPD diagnosis, whether alone or comorbid with Antisocial Personality Disorder (ASPD), were more likely to use violence reactively. Partner violent men with an ASPD diagnosis, on the other hand, were more likely to use violence proactively.

With impulsivity, aggressive behavior, and stormy interpersonal relationships as hallmarks of the disorder, it is not surprising that BPD relates to experiencing violence with significant others. In adults, BPD samples report higher levels of IPV, even after controlling for current Axis I disorders (Bouchard, Sabourin, Lussier, & Villeneuve, 2009; Whisman & Schonbrun, 2009). For example, in a comparison of male batterers (violent group) and men convicted on non-violent crimes (non-violent group), Edwards, Scott, Yarvis, Paizis, and Panizzon (2003) found that individuals in the violent group had significantly higher scores on BPD traits. These authors also noted significant correlations between spousal violence and BPD traits. A similar finding was demonstrated in two studies by Hamberger and Hastings (1988; 1991), such that male batterers showed higher levels of borderline symptoms than non-batterers. Some research has also found that violent husbands were more likely to have borderline and antisocial personality disorders relative to their nonviolent counterparts (Holtzworth-Munroe, Bates, Smutzler, & Sandin, 1997). Dutton (1994) found that Borderline Personality Organization was significantly related with chronic anger, jealousy, and higher frequencies of verbal and physical aggression in a sample of males in treatment for wife assault. In a study investigating emotion regulation and marital violence, Babcock, Jacobson, Gottman, & Yerington (2000) found that the dysphoric/borderline type of batterer typically engaged in physical and emotional abuse, experienced elevated levels of anger, and were emotionally unstable, noting that their “wife’s withdrawal may elicit a reactive display of expressive violence” (p. 404). Though there is a significant lack of research examining the psychopathology of women arrested for domestic violence, particularly women with Axis II disorders, recent studies have found higher rates of BPD

in these samples (Henning, Jones, & Holdford, 2003; Stuart, Moore, Gordon, Ramsey, & Kahler, 2006).

In summary, the adult literature suggests that individuals with BPD are more violent in their intimate relationships. However, little is known about the relation between BPD and TDV in adolescents.

Borderline Personality Disorder in Adolescence

The course of BPD typically begins in adolescence, peaks in early adulthood, and declines by middle age, such that longitudinal studies have found that most interpersonal symptoms dissipate over time (Choi-Kain, Zanarini, Frankenburg, Fitzmaurice, & Reich, 2010). However, adolescent borderline symptomatology significantly predicts lower social functioning and life satisfaction later in life (Winograd, Cohen, & Chen, 2008), thus increased focus has recently been given to studying BPD in adolescence (Sharp & Bleiberg, 2007).

Despite historical concerns regarding the validity of the construct of BPD in adolescence (see Miller, Muehlenkamp, & Jacobson, 2008 for a review), there is now general consensus that BPD in adolescence constitutes a valid and reliable diagnosis (Sharp, Ha, Michonski, Venta, & Carbonne, 2012). Evidence continues to build demonstrating a genetic basis for BPD (Distel et al., 2008; Kendler et al., 2008; Torgersen et al., 2000) and longitudinal continuity (Bornovalova, Hicks, Iacono, & McGue, 2009). Research also demonstrates overlap between adolescent and adult BPD in terms of the latent variables underlying symptoms (Bradley, Conklin, & Westen, 2005; Gratz et al., 2009; Leung & Leung, 2009) and the risk factors associated with BPD

(Carlson, Egeland, & Sroufe, 2009; Carlson, Sroufe, & Egeland, 2004; Rogosch & Cicchetti, 2005), as well as evidence for marked separation of course and outcome of adolescent BPD and other Axis I and Axis II disorders (Bornovalova et al., 2009; Crawford, Cohen, Chen, Anglin, & Ehrensaft, 2009; Crick, Murray-Close, & Woods, 2005).

At a broader level, Caspi (2000) and Caspi et al. (2003) showed that childhood temperament is modestly linked with adult personality, such that over a 23-year period, temperament at age 3 was predictive of adult personality structure and psychopathology. Further, a review by Miller et al. (2008) demonstrated that adolescent personality is linked with adult functioning, as well as provided evidence that BPD is evident and can be reliably diagnosed in youth, noting that “the foundations of adult personality and risk for psychopathology are laid and at least partially hardened well before adolescence” (p. 972). In support of this notion, Crick et al. (2005) found that the Borderline Personality Features Scale for Children (BPFS-C), which measures constructs such as affective instability and negative relationships, was moderately stable over one year. In response to the objection that BPD features fade over time, Cohen (2008) notes that, although some follow-up studies show that children and adolescents may no longer meet criteria for a BPD diagnosis in adulthood, many do not reach “normative” functioning either.

Although some controversy still remains regarding its diagnostic validity in youth, consensus is building that BPD features in adolescents are similar to those in adults, such that the similarities seem to overshadow the differences (Miller et al., 2008; Sharp & Romero, 2007). And because the core presentation of BPD in adolescents is

comparable to that in adults, the hallmark features of impulsivity, aggressive behavior, and stormy relationships are likely equally salient in adolescents with BPD.

Purpose of the Present Study

Although there is a large literature of etiological models of IPV in adults, the downward extension to adolescents is rare, particularly those which include personality disorder features. To address this gap in the literature, the overall goal of this study is to investigate important correlates of TDV at both the cross sectional and longitudinal levels in order to help identify, and perhaps predict, adolescents most likely to perpetrate and be victimized by TDV. Specifically, the first aim of this study was to explore whether borderline features in adolescents, determined dimensionally, were related to increased levels of TDV victimization and perpetration, controlling for potential confounding variables known to relate to TDV (i.e. substance use, hostility, and exposure to parental violence). The second aim of this study was to investigate whether borderline features in youth help explain the persistence of dating violence victimization and perpetration between baseline and one year follow up.

Given the impulsive and aggressive nature of individuals with BPD features and the evidence suggesting dating violence victimization and perpetration occur together (Malik et al., 1997), we hypothesize the following:

H1. BPD features (BPFS-C scores) will be positively correlated with dating violence victimization.

H2. BPD features (BPFS-C scores) will be positively correlated with dating violence perpetration.

H3. BPD features (BPFS-C scores) will be significantly associated with dating violence victimization when controlling for potential confounding variables (gender, substance use, exposure to parental violence, and hostility).

H4. BPD features (BPFS-C scores) will be significantly associated with dating violence perpetration when controlling for potential confounding variables (gender, substance use, exposure to parental violence, and hostility).

H5. TDV victimization will be more elevated and persistent across the two time points in individuals with BPD compared to those without BPD.

H6. TDV perpetration will be more elevated and persistent across the two time points in individuals with BPD compared to those without BPD.

Methods

Participants

The data for the present study was part of a larger dataset, which is an ongoing school-based longitudinal study investigating the risk and protective factors of TDV (Temple et al., 2012). The original sample included 1042 adolescents (age $M = 15.1$, $SD = .79$, 55.9% female) from seven schools in four Houston-area school districts. The sample was ethnically diverse and the breakdown was as follows: 29.4% White, 31.4% Hispanic, 27.9% Black, 3.6 % Asian, and 7.7% who identified as “Other.” Only students reporting a history of dating (i.e. endorsed the item “I have begun dating, going out with someone, or had a boyfriend/girlfriend”) were included in the current analyses ($N = 851$).

Measures

Teen Dating Violence. The Conflict in Adolescent Dating and Relationship Inventory (CADRI; Wolfe et al., 2001) is a 50-item measure that assesses TDV perpetration and victimization (e.g. physical, psychological, sexual, and relational). Each question is divided into two parts, one which indicates perpetration (e.g. “I threw something at him/her”) and one which indicates victimization (“He/she threw something at me”). Using binary responses (i.e. yes/no), participants chose whether or not they perpetrated and/or were victimized by an act during a conflict or argument with their boyfriend/girlfriend (or ex-boyfriend/ex-girlfriend if participant was not currently dating) in their lifetime (baseline) and in the past year (one year follow up). Summary scores for experiencing any violence (i.e. combination of victimization and perpetration subscales), victimization by violence, and perpetration of violence were calculated for both time points (baseline and one year follow up). Internal consistency for the CADRI ranges from acceptable to strong, with Wolfe et al. (2001) reporting a Cronbach’s alpha of .76 for the physical abuse subscales, .81 for the verbal and emotional abuse subscale, and .83 for the total abuse scale. Internal consistency for the CADRI in the present study was adequate with a Cronbach’s alpha of .92 for the total scale (i.e. experiencing any violence), .86 for the victimization scale, and .85 for the perpetration scale.

Borderline Personality Disorder Features. The Borderline Personality Features Scale for Children (BPFS-C; Crick et al, 2005) contains twenty-four items measuring borderline features, including identity problems, affective instability, negative qualities of peer relationships, and self-harm. Participants indicated on a scale of 1 (“not at all”) to 5 (“always true”) how they feel about themselves or other people. For Aim 1, the BPFS-C

total score was used dimensionally as an independent variable. For Aim 2, the cut-off score derived in a study by Chang, Sharp, and Ha (2011) was used to create a binary variable. Internal consistency for the scale has been demonstrated to be adequate, with Crick et al. (2005) reporting a Cronbach's alpha of .76 and Chang et al. (2011) reporting a Cronbach's alpha of .81. Internal consistency for the BPFS-C in the present study was adequate with a Cronbach's alpha of .86.

Hostility. Hostility was assessed through the use of the hostility subscale from the Symptom Check List (SCL-90; Derogatis, Lipman, & Covi, 1973). The SCL-90 is a 90-item self-report measure that identifies ten clinical subscales, including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and sleep difficulty (Lipman, Covi, & Shapiro, 1979). Due to time constraints, only the hostility subscale was included in the present study. This subscale identifies feelings and behaviors that are characteristic of anger, including aggression, irritability, rage, and resentment (Derogatis, Rickels, & Rock, 1976). Internal consistency for the subscale has been demonstrated to be adequate, with Derogatis et al. (1976) reporting a Cronbach's alpha of .84 and Hafkenscheid (1993) reporting a Cronbach's alpha of .76. For Aim 1, a summary score of the hostility subscale was used as an independent variable in regression analyses. Internal consistency for the hostility subscale in the present study was adequate with a Cronbach's alpha of .84.

Substance Use. Methods used to assess substance use were adapted from the "Monitor the Future Surveys," a series of large, ongoing studies that have assessed the behaviors and attitudes of high school students since 1975 (Johnston, O'Malley, Bachman, & Schulenberg, 2010). A standard set of three questions was used to assess use

of alcohol (“more than just a few sips”), cigarettes (“more than just a puff”), marijuana, inhalants, ecstasy, and prescription drugs not prescribed by a health professional. For example, participants were asked the number of occasions (if any) they used alcohol a) in their lifetime, b) during the past 12 months, and c) during the last 30 days. Participants were provided with examples of inhalants (e.g. sniffed glue) and prescription drugs (e.g. Xanax, Oxycontin, Ritalin). Previous research on adolescents has generally found that they are reliable and valid sources for reporting their substance use behaviors (Johnston et al., 2010). Summary scores were used categorically, with any substance use during the past 12 months coded as “yes.”

Exposure to Parental Violence. Father-to-mother and mother-to-father parental violence was assessed by asking the following: “In the past year, how many times did your father (or male caregiver) do any of the above behaviors to your mother (or female caregiver)?” The same question was then asked for mother-to-father violence. Participants were provided with examples of moderate to severe violent acts (e.g. pushed, grabbed, or shoved; slammed against wall; choked) and then asked to report the number of times they have witnessed violence using one of the following options: never, once or twice, 3-20 times, and more than 20 times. Total scores were created by dichotomizing father-to-mother and mother-to-father violence (e.g. witnessed or did not witness). Summary scores were used to determine exposure to parental violence categorically, with “never” coded as not being exposed to parental violence and “once or twice,” “3-20 times,” and “more than 20 times” coded as being exposed to parental violence.

Procedures

This study was approved by the appropriate institutional review board and the data is part of a larger dataset investigating adolescent health behaviors, including TDV. Recruitment at baseline and one year follow up occurred during school hours in classes with required attendance. Research staff attended each class twice prior to assessment to explain the study and answer questions. Information about the study, as well as parental permission slips were sent home with the students for their parents to read, sign, and return. Assent was then obtained from students who returned the forms, and those who assented were pulled from class into a private room on campus to complete the survey.

Data Analytic Strategy

Data was entered and double checked by multiple research assistants and cleaned for missing data. Exploratory analyses were conducted to view frequencies and descriptive statistics. Normality of the variables was analyzed and outliers were checked. Power analyses were conducted G*Power 3 (Faul, Erdfelder, Buchner, & Lang, 2009). A previous study (O’Leary et al., 1989) found a correlation of physical aggression between spouses over 30 months to be .59 for men and .72 for women. Thus, a sample size of 104 was calculated and determined to be sufficient for the present study’s analyses based on a power level of .8 and correlation among dating violence measures of .59.

Aim 1. For the first aim of exploring whether borderline features was related to increased levels of TDV victimization and perpetration while controlling for potential confounds, analyses were conducted to explore bivariate relations between borderline features (i.e. BPFS-C), dating violence victimization and perpetration (i.e. CADRI),

substance use, hostility, and exposure to parental violence. This included correlational analyses for continuous variables and independent samples t-tests for categorical variables. Once significant at the bivariate level, two separate hierarchical linear regression analyses were conducted with victimization and perpetration, respectively, as outcomes (dependent variables). Potential confounds (substance use, hostility, and exposure to parental violence) were entered into the first block, and BPFS-C scores were entered into the second block. Results of this analysis determined whether borderline features made independent contributions to TDV victimization and perpetration after controlling for potential confounds.

Aim 2. For the second aim of exploring whether borderline features at one year follow up explained the persistence of TDV victimization and perpetration between baseline and one year follow up, two repeated measures ANOVA were conducted: 1) Baseline and one year follow up victimization as the within subjects variable and BPD status as the between subjects variable; and 2) Baseline and one year follow up perpetration as the within subjects variable and BPD status as the between subjects variable. BPD status was categorically determined by use of a cutoff score of 66 as defined by Chang et al. (2011).

Results

Preliminary Analyses

Descriptive Statistics and Missing Data. Table 1 summarizes descriptive statistics of main study variables.

Table 1. Descriptive statistics.

		<i>N</i>	<i>%</i>			
Gender	Male	367	43.1			
	Female	484	56.9			
Grade	9 th	8	.9			
	10 th	618	72.6			
	11 th	211	24.8			
	12 th	6	.7			
		<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
Dating Violence (CADRI)	Experienced Any Violence	808	0	38	8.08	7.62
	TDV Victimization	816	0	23	4.15	4.16
	TDV Perpetration	824	0	18	3.96	3.84
Borderline Personality Disorder Features (BPFS-C)		778	28	104	57.74	14.27
Hostility (SCL-90)		849	6	24	11.32	3.76
		<i>N</i>	<i>%</i>			
BPD Categorical (BPFS-C \geq 66)		228	26.8			
BPD Categorical (BPFS-C $<$ 66)		550	64.6			
		<i>N</i>	<i>% Endorsed Yes</i>			
Substance Use (past year)	Alcohol Use	513	60.3			
	Cigarette Use	167	19.6			
	Marijuana Use	281	33.0			
	Synthetic Marijuana Use	118	13.9			
	Cocaine Use	22	2.6			
	Amphetamines Use	12	1.4			
	Inhalants	18	2.1			
	Cold or Cough Medicine	85	10.0			
	Ecstasy	51	6.0			
	Bath Salts	6	.7			
	Salvia	26	3.1			
	Prescription Drugs	111	13.0			
	Any Substance Use	550	64.6			
Exposure to Parental Violence	Father-To-Mother-Violence	79	9.3			
	Mother-To-Father-Violence	91	10.7			

To examine whether data was missing at random, differences between included or excluded participants were examined. First, a single variable was computed that coded each participant as missing data or not using the *NMISS* function in SPSS. Next, chi-square analyses were conducted to examine differences between these two groups on categorical study variables (i.e. gender, substance use, exposure to parental violence, and

categorical BPFS-C scores). Results showed that included and excluded participants were not significantly different on gender ($\chi^2 = 2.305, p = .145$), substance use ($\chi^2 = .004, p = 1.000$), father-to-mother violence ($\chi^2 = 1.518, p = .278$), mother-to-father violence ($\chi^2 = 1.411, p = .300$), or BPFS-C scores ($\chi^2 = .453, p = .638$), thus confirming that data was missing at random for these main study variables.

Assumptions of Normality. Data were entered, cleaned, and preliminary analyses were run to test statistical assumptions prior to conducting further analyses. Shapiro-Wilks statistics were conducted to test assumptions of normality for all continuous study variables. Significant positive skews were found for TDV victimization (CADRI; S-W = .858, $p < .001$), TDV perpetration (CADRI; S-W = .878, $p < .001$), borderline personality disorder features (BPFS-C; S-W = .984, $p < .001$), and hostility (SCL-90; S-W = .921, $p < .001$). Thus, these analyses show that certain main study variables were not normally distributed. However, due to potential for inaccuracy of results, transformations were not conducted to correct for skewness.

Bivariate Relations between Main Study Variables at the Cross-Sectional Level

Table 2 summarizes the results of correlational analyses examining the bivariate relations between continuous variables. As shown in Table 2, BPFS-C scores positively correlated with experiencing any violence, TDV victimization, TDV perpetration, and hostility, therefore supporting H1 (BPD features will be positively correlated with dating violence victimization) and H2 (BPD features will be positively correlated with dating violence perpetration).

Table 2. Correlational analyses examining the bivariate relations between continuous variables.

	BPFS-C	Experienced Any Violence	TDV Victimization	TDV Perpetration	Hostility
BPFS-C	-				
Experienced Any Violence	.140**	-			
TDV Victimization	.138**	.954**	-		
TDV Perpetration	.131**	.946**	.805**	-	
Hostility	.179**	.334**	.303**	.326**	-

Note: ** $p < .001$

These correlations were calculated for the purposes of determining potential confounding variables for multivariate analyses. Regardless, we corrected for multiple comparisons by using the Bonferroni correction ($k = 5$), which showed that all variables were significant at the .01 level.

To examine the bivariate relations between categorical variables of gender, substance use, and exposure to parental violence on the one hand and BPFS-C scores and dating violence on the other, several independent samples t-tests were conducted. Results showed significant relations between BPFS-C scores and gender and substance use, such that BPFS-C scores were significantly higher for females ($M = 59.16$, $SD = 13.43$) than males ($M = 55.90$, $SD = 15.15$) and significantly higher for those who used substances ($M = 59.02$, $SD = 13.77$) than those who did not use substances ($M = 55.32$, $SD = 14.86$). Results also showed significant relations between TDV victimization and gender, substance use, and mother-to-father violence, such that TDV victimization scores were significantly higher for females ($M = 4.77$, $SD = 4.49$) than males ($M = 3.30$, $SD = 3.48$), significantly higher for those who used substances ($M = 4.60$, $SD = 4.27$) than those who did not use substances ($M = 3.15$, $SD = 3.70$), and significantly higher for those who were

exposed to mother-to-father violence ($M = 5.22$, $SD = 4.10$) than those who were not exposed to mother-to-father violence ($M = 4.03$, $SD = 4.16$). Results also showed significant relations between TDV perpetration and gender, substance use, and mother-to-father violence, such that TDV perpetration scores were significantly higher for females ($M = 4.81$, $SD = 4.11$) than males ($M = 2.82$, $SD = 3.09$), significantly higher for those who used substances ($M = 4.46$, $SD = 4.04$) than those who did not use substances ($M = 2.95$, $SD = 3.20$), and significantly higher for those who were exposed to mother-to-father violence ($M = 5.15$, $SD = 4.08$) than those who were not exposed to mother-to-father violence ($M = 3.83$, $SD = 3.80$). Results showed that BPFS-C scores were not related to father-to-mother violence or mother-to-father violence, TDV victimization to father-to-mother violence, or TDV perpetration to father-to-mother violence.

In summary, analyses of the bivariate relations between main study variables showed that gender, substance use, exposure to mother-to-father violence, and hostility were all potential confounds of the relation between BPFS-C scores and TDV (victimization and perpetration). These variables were therefore controlled for in subsequent multivariate analyses.

The Relation between Borderline Features and TDV at the Cross-Sectional Level Controlling for Potential Confounding Variables (Aim 1)

The first aim of the study was to explore whether borderline features in adolescents (BPFS-C scores), determined dimensionally, were related to increased levels of TDV victimization and perpetration, controlling for potential confounding variables at the cross-sectional level. First, preliminary analyses were conducted to ensure no

violation of the assumptions of normality, linearity, multicollinearity, and homoscedasticity. These analyses confirmed the appropriateness of this analytic technique for both victimization and perpetration as dependent variables (*tolerance* = .948, *VIF* = 1.055). Next, variables demonstrating relations with TDV in the bivariate analyses (gender, substance use, mother-to-father violence, and hostility) were entered as independent variables in the first block of two separate hierarchical linear regressions. TDV victimization and TDV perpetration, respectively, were entered as dependent variables. BPFS-C scores were entered in the second block.

TDV Victimization. Findings are summarized in Table 3.

Table 3. Hierarchical linear regression with gender, substance use, mother-to-father violence, hostility (Block 1), and BPFS-C scores (Block 2) as independent variables and TDV victimization as the dependent variable.

Variable	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>	95% CI for β	
						Lower	Upper
Gender	-1.126	.292	-.135	-3.853	.000	-1.699	-.552
Substance Use	.878	.331	.101	2.820	.005	.267	1.489
Mother-To-Father-Violence	.724	.455	.056	1.591	.112	-.169	1.617
Hostility	.281	.040	.254	7.027	.000	.202	.359
BPFS-C	.017	.010	.060	1.695	.091	-.003	.038
Constant	.881	.851		.953	.341	-.859	2.482

*Note: $R^2 = .131$; CI = confidence interval

As shown in Table 3, after entry of gender, substance use, mother-to-father violence, and hostility as independent variables, the total variance explained by the model was 12.8%. After the entry of BPFS-C scores, the total variance explained by the model was 13.1%, $F(4, 745) = 21.883$, $p < .001$. BPFS-C scores explained an additional .3% of

the variance in TDV victimization after controlling for gender, substance use, mother-to-father violence, and hostility, $R^2 \text{ change} = .003$, $F \text{ change} (1, 724) = 2.873$, $p = .091$. In the final model, gender ($\beta = -.135$, $p < .001$), substance use ($\beta = .101$, $p = .005$), and hostility ($\beta = .254$, $p < .001$) were statistically significant. BPFS-C scores, however, did not retain significance ($\beta = .060$, $p = .091$).

Given that BPFS-C scores did not retain significance and gender was a significant covariate in the regression, additional analyses were conducted separately to examine whether different processes were occurring for males and females. When a linear regression was conducted including only females, the total variance explained by the model was 10.4%, and after entry of BPFS-C scores, the total variance explained by the model was 11.6%, $F(2, 420) = 18.255$, $p < .001$. BPFS-C scores explained an additional 1.2% of the variance in TDV victimization after controlling for substance use and hostility, $R^2 \text{ change} = .012$, $F \text{ change} (1, 418) = 5.442$, $p = .020$. TDV victimization was not related to mother-to-father violence ($t = -1.640$, $p = .105$) or father-to-mother violence ($t = -.881$, $p = .382$), and thus these variables were not included as covariates in the regression. In the final model, substance use ($\beta = .101$, $p = .031$), hostility ($\beta = .265$, $p < .001$), and BPFS-C scores ($\beta = .110$, $p = .020$) were statistically significant, therefore supporting H3 for females (BPD features will be significantly associated with dating violence victimization when controlling for potential confounding variables). A linear regression was not conducted for males as BPFS-C scores did not correlate significantly with TDV victimization ($r = .067$, $p = .233$).

TDV Perpetration. Findings are summarized in Table 4.

Table 4. Hierarchical linear regression with gender, substance use, mother-to-father violence, hostility (Block 1), and BPFS-C scores (Block 2) as independent variables and TDV perpetration as the dependent variable.

Variable	<i>B</i>	SE	β	<i>t</i>	<i>p</i>	95% CI for β	
						Lower	Upper
Gender	-1.740	.260	-.226	-6.678	.000	-2.251	-1.228
Substance Use	1.009	.278	.125	3.635	.000	.464	1.554
Mother-To-Father-Violence	.762	.413	.062	1.848	.065	-.048	1.572
Hostility	.283	.036	.277	7.939	.000	.213	.353
BPFS-C	.007	.009	.026	.742	.458	-.011	.025
Constant	2.062	.746		2.699	.007	.562	3.562

*Note: $R^2 = .186$; CI = confidence interval

As shown in Table 4, after entry of gender, substance use, mother-to-father violence, and hostility as independent variables, the total variance explained by the model was 18.5%. After the entry of BPFS-C scores, the total variance explained by the model was 18.6%, $F(4, 731) = 33.118, p < .001$. BPFS-C scores explained an additional .1% of the variance in TDV victimization after controlling for gender, substance use, mother-to-father violence, and hostility, $R \text{ squared change} = .001, F \text{ change} (1, 727) = .550, p = .458$. In the final model, gender ($beta = -.226, p < .001$), substance use ($beta = .125, p < .001$), and hostility ($beta = .277, p < .001$) were statistically significant. BPFS-C scores, however, did not retain significance ($beta = .026, p = .458$).

Given that BPFS-C scores did not retain significance and gender was a significant covariate in the regression, additional analyses were conducted separately by gender. When a linear regression was conducted including only females, the total variance explained by the model was 13.8%, and after entry of BPFS-C scores, the total variance

explained by the model was 13.9%, $F(3, 414) = 14.601, p < .001$. BPFS-C scores explained an additional .1% of the variance in TDV perpetration after controlling for substance use, mother-to-father violence, and hostility, $R^2 \text{ change} = .001, F \text{ change}(1, 411) = .431, p = .512$. TDV perpetration was not related to father-to-mother violence ($t = -.713, p = .479$), and thus this variable was not included as a covariate in the regression. In the final model, substance use ($\beta = .123, p = .009$) and hostility ($\beta = .309, p < .001$) were statistically significant. BPFS-C scores, however, did not retain significance ($\beta = .031, p = .512$). A linear regression was not conducted for males as BPFS-C scores did not correlate significantly with TDV perpetration ($r = .107, p = .055$). These findings do not support H4 (BPD features will be significantly associated with dating violence perpetration when controlling for potential confounding variables).

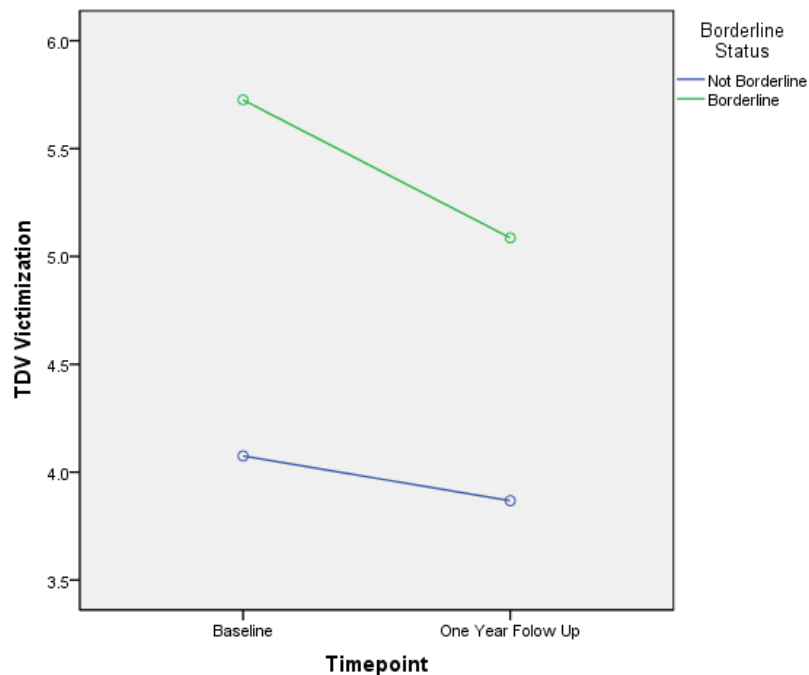
The Relation between Borderline Status and the Persistence of TDV (Aim 2)

Two repeated measures ANOVA were conducted to assess the differences in means across two time points in TDV victimization and perpetration, respectively, for BPD vs. non-BPD participants. Using a cutoff of 66 on the BPFS-C (Chang et al., 2011), a variable was created to determine BPD vs. non-BPD, and 26.8% ($N = 228$) of participants were above the cut off.

TDV Victimization. The BPD vs. non-BPD categorical variable was entered as the between subjects factor in the repeated measures ANOVA, with TDV victimization at baseline and one year follow up as the within subjects variable. Results showed no interaction effect for group (BPD vs. non-BPD) and time, $\text{Wilks' } \Lambda = .998, F(1, 688) = 1.369, p = .242$. However, a main effect was found for time, $\text{Wilks' } \Lambda =$

.992, $F(1, 688) = 5.269$, $p = .022$. Moreover, tests of between subjects effects showed a main effect in TDV victimization for BPD vs. non-BPD groups across both time points, such that the BPD group sustained significantly higher levels of TDV victimization at both time points compared to the non-BPD group, $F(1, 686) = 23.410$, $p = <.001$, therefore supporting H5 (TDV victimization will be more elevated and persistent across the two time points in individuals with BPD compared to those without BPD). The results of the repeated measures ANOVA is visually represented in Figure 1.

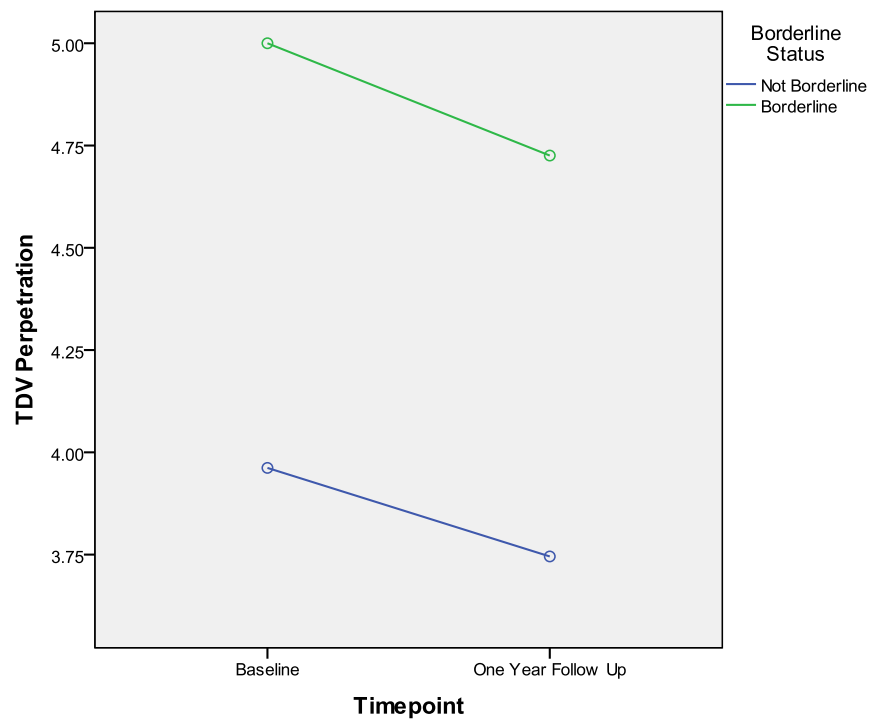
Figure 1. Repeated measures ANOVA with BPD vs. non-BPD categorical variable as the between subjects factor and TDV victimization at baseline and one year follow up as the within subjects variable.



TDV Perpetration. The BPD vs. non-BPD categorical variable was entered as the between subjects factor in the repeated measures ANOVA, with TDV perpetration at baseline and one year follow up as the within subjects variable. Results showed no

interaction effect for group (BPD vs. non-BPD) and time, *Wilks' Lambda* = 1.000, $F(1, 703) = .039$, $p = .843$. Further, a main effect was not found for time, *Wilks' Lambda* = .996, $F(1, 703) = .2805$, $p = .094$. However, tests of between subjects effects showed a main effect in TDV perpetration for BPD vs. non-BPD groups across both time points, such that the BPD group perpetrated significantly higher levels of TDV perpetration at both time points compared to the non-BPD group $F(1, 701) = 12.885$, $p = <.001$, thus supporting H6 (TDV perpetration will be more elevated and persistent across the two time points in individuals with BPD compared to those without BPD). The results of the repeated measures ANOVA is visually represented in Figure 2.

Figure 2. Repeated measures ANOVA with BPD vs. non-BPD categorical variable as the between subjects factor and TDV perpetration at baseline and one year follow up as the within subjects variable.



Discussion

Given recent calls for the inclusion of personality variables in the etiology of IPV (Bell & Naugle, 2008), the present study sought to explore the relation between borderline features and TDV in a community sample of adolescents. Several findings merit discussion. First, as expected, there was a significant relation between borderline features and TDV victimization and perpetration for both males and females. Second, although there was a significant relation between borderline features and TDV, borderline features did not make independent contributions to TDV victimization or perpetration over and above confounding variables. Rather, gender, substance use, and hostility were important predictors of TDV victimization and perpetration. However, when analyses were conducted separately by gender, results showed that borderline features made independent contributions to TDV victimization for females. Third, consistent with expectations, TDV victimization and perpetration were more elevated and persistent across the two time points in individuals who scored above a clinical cut-off for BPD compared to those below cutoff. In other words, adolescents above clinical cut-off showed consistently higher levels of TDV victimization and perpetration across both time points compared to adolescents below cut-off.

Given the hallmark characteristics of BPD (e.g. intense anger, impulsivity, stormy interpersonal relationships, fear of abandonment), the finding that borderline features were associated with both TDV victimization and perpetration is not surprising. Furthermore, research has consistently demonstrated a positive relation between BPD traits (or a BPD diagnosis) and IPV in the adult literature, even after controlling for Axis I disorders (Bouchard et al., 2009; Edwards et al., 2003; Hamberger & Hastings, 1988,

1991; Whisman & Schonbrun, 2009). Individuals with borderline features may be more prone to both TDV victimization and perpetration, perhaps due to feelings of unmet needs (Dutton, 1995) or a means to regulate negative emotions when distressed (Keltner & Kring, 1998). Indeed, research on adults shows that patients with BPD perceive both their past and current relationships as more hostile and lacking cohesion, even more so than those with depression or bipolar disorder (Benjamin & Wonderlich, 1994; Soloff & Millward, 1983). Adults with borderline features also report higher levels of interpersonal sensitivity and distress (Trull, 1995). Regarding adolescents, while some research shows a relation between borderline features and both proactive and relational forms of aggression (e.g. Ostrov & Houston, 2008), very little is known about the relation between borderline features and violence in adolescents' romantic relationships. This is the first study to provide evidence, albeit preliminary, that the link between borderline features and IPV in adults can be extended downwardly to adolescents.

However, it is surprising that borderline features did not make independent contributions to TDV victimization or perpetration when controlling for gender, substance use, and hostility. It is possible that the use of a community sample composed of male and female adolescents resulted in a non-significant finding due to lower severity of borderline features. The majority of previous studies investigating borderline features and IPV used clinical samples, usually consisting of men in treatment programs for wife assault or domestic abuse. Other variables, such as substance use, may have explained more of the variance of TDV due to its higher base rate in adolescence. Indeed, a large majority of the adolescents in the present study (64.6%) reported substance use in the past year. It is also possible that the confounding variables controlled for over represent

externalizing features (e.g. hostility, substance use) and do not capture the broad, contextual theoretical framework of IPV as proposed by Bell and Naugle (2008). That is, perhaps the inclusion of other factors known to relate to IPV in adults, such as emotion regulation skills, beliefs about violence, relationship satisfaction, and/or anxiety, may have provided a more complete picture of TDV in adolescents.

Alternatively, because borderline features made independent contributions to TDV victimization for females, it is possible that separate developmental pathways exist for males and females in the explanation of TDV. Perhaps this is explained by evidence showing that BPD may be expressed differently for males and females, such that adolescent females with BPD tend to be more internalizing and emotionally dysregulated, while adolescent males with BPD tend to be more externalizing and angry (Bradley et al., 2005). Thus, it is possible that the constructs of hostility and male BPD are overlapping, resulting in non-significant findings for the group as a whole. Future studies should parse out how borderline features may influence TDV differently in males and females. What is clear from the present study is that borderline features appear to place female teens at higher risk for TDV victimization (but not perpetration). The fact that teenage girls with borderline traits experience higher rates of victimization fits with adult literature showing that females with a borderline diagnosis are more likely to have experienced physical or sexual assault as adults compared to males with a borderline diagnosis or Axis II controls (Zanarini et al., 1999).

Finally, although the finding that hostility and substance use made independent contributions to TDV is congruent with the existing literature on IPV (Beasley & Stoltenberg, 1992; Stuart et al. 2003), it is noteworthy that exposure to father-to-mother

violence was not related to TDV victimization or perpetration. Further, the finding that exposure to mother-to-father violence did not make independent contributions to TDV victimization or perpetration is in contrast with the existing literature on IPV, which demonstrates that witnessing parental violence as children predicts IPV (Sims et al., 2008\). One possibility points to evidence that boys and girls are affected differently by exposure to parental violence (Malik et al., 1997), with research generally finding that exposure to parental violence is a better predictor for TDV in boys than girls (Foo & Margolin, 1995; Gwartney-Gibbs, Stockard, & Brohmer, 1987), and some studies even finding no relationship between exposure to parental violence and TDV for girls (Kinsfogel & Grych, 2004). Perhaps another explanation is that some studies (e.g. Hamberger & Hastings, 1991) do not analyze differences between mother-to-father violence and father-to-mother violence, but rather combine the two into a single construct (i.e. exposure to parental violence).

As with any study, these findings should be interpreted in light of several limitations. Specifically, the reliance on self-report data may limit the generalizability of the study's findings. Further, because the questions only assessed frequency of TDV, and not the severity or context surrounding the violence, these findings do not identify situations where youth are most at risk for TDV. For example, as noted by Temple and Freeman (2011), a positive response to a particular question on measures of dating violence cannot determine the context surrounding the violence, nor the degree of violence perpetrated or victimized (e.g. "he/she kicked, hit, or punched me" could indicate a slap on the wrist, a heavy blow to the head, or somewhere in between). It is also possible that inquiring about personal or sensitive questions, such as substance use or

witnessing parental violence, may lead to inaccurate reporting. However, when administered anonymously, as in the present study, self-report measures of adolescent problem behaviors provide reliable and valid results (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002). Another limitation is that borderline features were only assessed at one year follow up and not at baseline, thus assuming that those categorized as borderline at one year follow up were also borderline at baseline (and similarly, those categorized as not borderline at one year follow up were also not borderline at baseline). It is possible that participants' borderline status shifted between the two time points.

Despite these limitations, the results of the present study are strengthened in numerous ways. Specifically, the study had a large, ethnically diverse, community sample that included adolescents from several schools in varying geographic locations, thus improving the generalizability of the findings. Further, the longitudinal design of the study allows for investigating patterns of TDV across time. The assessment and inclusion of relevant covariates strengthens the finding that borderline features, for females, contributed to TDV victimization independent of confounding factors. Future research should utilize interview-based measures in order to investigate the effects of a BPD diagnosis as opposed to borderline features. Such diagnostic measures of BPD have only been used in a few studies (e.g. Ross & Babcock, 2009). Future research should also aim to obtain richer data on the degree and context related to TDV. Identifying personality disorder features that are associated with both the occurrence and stability of TDV is important from a clinical standpoint to identify those adolescents most at risk for being both perpetrators and victims of TDV, thus aiding in the identification, prevention, and possibly treatment of TDV. Consistent with a developmental psychopathology approach

(Cicchetti & Rogosch, 2002), a crucial next step in this line of research will be to examine interactions over time of borderline features with multiple risk factors for the development of TDV.

Appendices

Appendix 1: Conflict in Adolescent Dating and Relationship Inventory (CADRI; Wolfe et al., 2001)

The following questions ask about things that may have happened to you with your boyfriend/girlfriend (or most recent ex-boyfriend/ex-girlfriend) in the past year (since the last survey).

During a conflict or argument with my boyfriend/girlfriend (or most recent ex-boyfriend/ex-girlfriend) in the <u>past year</u> (since the last survey)...	Yes [1]	No [0]
1.A. I touched him/her sexually when he/she didn't want me to.	yes○	no○
1.B. He/She touched me sexually when I didn't want him/her to.	yes○	no○
2.A. I tried to turn his/her friends against him/her.	yes○	no○
2.B. He/She tried to turn my friends against me.	yes○	no○
3.A. I did something to make him/her feel jealous.	yes○	no○
3.B. He/She did something to make me feel jealous.	yes○	no○
4.A. I destroyed or threatened to destroy something he/she valued.	yes○	no○
4.B. He/She destroyed or threatened to destroy something I valued.	yes○	no○
5.A. I brought up something bad that he/she had done in the past.	yes○	no○
5.B. He/She brought up something bad that I had done in the past.	yes○	no○
6.A. I threw something at him/her.	yes○	no○
6.B. He/She threw something at me.	yes○	no○
7.A. I said things just to make him/her angry.	yes○	no○
7.B. He/She said things just to make me angry.	yes○	no○
8.A. I spoke to him/her in a hostile or mean tone of voice.	yes○	no○
8.B. He/She spoke to me in a hostile or mean tone of voice.	yes○	no○
9.A. I forced him/her to have sex when he/she didn't want to.	yes○	no○
9.B. He/She forced me to have sex when I didn't want to.	yes○	no○
10.A. I threatened him/her in an attempt to have sex with him/her.	yes○	no○

10.B <u>He/She</u> threatened me in an attempt to have sex with me.	yes○	no○
11.A. <u>I</u> insulted him/her with put-downs.	yes○	no○
11.B. <u>He/She</u> insulted me with put-downs.	yes○	no○
12.A. <u>I</u> kissed him/her when he/she didn't want me to.	yes○	no○
12.B. <u>He/She</u> kissed me when I didn't want him/her to.	yes○	no○
13.A. <u>I</u> said things to his friends about him/her to turn them against him/her.	yes○	no○
13.B. <u>He/She</u> said things to my friends about me to turn them against me.	yes○	no○
14.A. <u>I</u> ridiculed or made fun of him/her in front of others.	yes○	no○
14.B. <u>He/She</u> ridiculed or made fun of me in front of others.	yes○	no○
15.A. <u>I</u> kept track of who he/she was with and where he/she was.	yes○	no○
15.B. <u>He/She</u> kept track of who I was with and where I was.	yes○	no○
16.A. <u>I</u> blamed him/her for the problem.	yes○	no○
16.B. <u>He/She</u> blamed me for the problem.	yes○	no○
17.A. <u>I</u> kicked, hit, or punched him/her.	yes○	no○
17.B. <u>He/She</u> kicked, hit, or punched me.	yes○	no○
18.A. <u>I</u> accused him/her of flirting with another girl/guy.	yes○	no○
18.B. <u>He/She</u> accused me of flirting with another girl/guy.	yes○	no○
19.A. <u>I</u> deliberately tried to frighten him/her.	yes○	no○
19.B. <u>He/She</u> deliberately tried to frighten me.	yes○	no○
20.A. <u>I</u> slapped him/her or pulled his/her hair.	yes○	no○
20.B. <u>He/She</u> slapped me or pulled my hair.	yes○	no○
21.A. <u>I</u> threatened to hurt him/her.	yes○	no○
21.B. <u>He/She</u> threatened to hurt me.	yes○	no○
22.A. <u>I</u> threatened to end the relationship.	yes○	no○
22.B. <u>He/She</u> threatened to end the relationship.	yes○	no○

23.A. <u>I</u> threatened to hit him/her or throw something at him/her.	yes <input type="radio"/>	no <input type="radio"/>
23.B. <u>He/She</u> threatened to hit me or throw something at me.	yes <input type="radio"/>	no <input type="radio"/>
24.A. <u>I</u> pushed, shoved, or shook him/her.	yes <input type="radio"/>	no <input type="radio"/>
24.B. <u>He/She</u> pushed, shoved, or shook me.	yes <input type="radio"/>	no <input type="radio"/>
25.A. <u>I</u> spread rumors about him/her.	yes <input type="radio"/>	no <input type="radio"/>
25.B. <u>He/She</u> spread rumors about me.	yes <input type="radio"/>	no <input type="radio"/>

Appendix 2: Borderline Personality Features Scale for Children (BPFS-C; Crick et al, 2005)

Instructions: Here are some statements about the way you feel about yourself and other people. Choose the box that tells how true each statement is about you.					
	Not at all true [1]	Hardly ever true [2]	Sometimes true [3]	Often true [4]	Always true [5]
1. I'm a pretty happy person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. I feel very lonely.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. I get upset when my parents or friends leave town for a few days.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. I do things that other people consider wild or out of control.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. I feel pretty much the same way all the time. My feelings don't change very often.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. I want to let some people know how much they've hurt me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. I do things without thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My feelings are very strong. For instance, when I get mad, I get really really mad. When I get happy, I get really really happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. I feel that there is something important missing about me, but I don't know what it is.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. I've picked friends who have treated me badly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. I'm careless with things that are important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. I change my mind almost every day about what I should do when I grow up.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. People who were close to me have let me down.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. I go back and forth between different feelings, like being mad or sad or happy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. I get into trouble because I do things without thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16. I worry that people I care about will leave and not come back.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. When I'm mad, I can't control what I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. How I feel about myself changes a lot.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. When I get upset, I do things that aren't good for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Lots of times, my friends and I are really mean to each other.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. I get so mad I can't let all my anger out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. I get bored very easily.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. I take good care of things that are mine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Once someone is my friend, we stay friends.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 3: Hostility Subscale from the Symptom Check List (SCL-90; Derogatis et al., 1973)

In general, how often do you:				
	never [1]	once in a while [2]	fairly often [3]	most of the time [4]
1. Feel easily annoyed or irritated?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Have temper outbursts you can't control?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Have urges to beat, injure, or harm someone?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Have urges to break or smash things?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Get into frequent arguments?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Shout or throw things?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix 4: Substance Use (adapted from Johnston et al., 2010)

The next set of questions are about alcohol and drug use. When the statement refers to “drinking alcohol,” please think in terms of any alcoholic beverage such as beer, wine, whiskey, liquor, rum, scotch, vodka, gin, or various alcoholic mixed drinks. Please also keep in mind that one drink of alcohol refers to one beer, one shot of liquor, or one glass of wine.

<u>Since your last survey</u> (About <u>1 year ago</u>), did you use any of the following:	Yes [1]	No [0]
1. Alcohol (more than just a few sips)	yes <input type="radio"/>	no <input type="radio"/>
2. Cigarettes (more than just a puff)	yes <input type="radio"/>	no <input type="radio"/>
3. Marijuana	yes <input type="radio"/>	no <input type="radio"/>
4. Synthetic marijuana (for example, spice, K2)	yes <input type="radio"/>	no <input type="radio"/>
5. Cocaine (powder, crack, or freebase)	yes <input type="radio"/>	no <input type="radio"/>
6. Amphetamines (speed, crystal, crank, ice)	yes <input type="radio"/>	no <input type="radio"/>
7. Inhalants (sniffed glue, huffing...)	yes <input type="radio"/>	no <input type="radio"/>
8. Over the counter cold or cough medicine with the intent of getting high (DXM, Triple Cs, Skittles, drank)	yes <input type="radio"/>	no <input type="radio"/>
9. Ecstasy (MDMA, X, XTC, E)	yes <input type="radio"/>	no <input type="radio"/>
10. Bath salts	yes <input type="radio"/>	no <input type="radio"/>
11. Salvia	yes <input type="radio"/>	no <input type="radio"/>
12. Prescription medications that weren't prescribed by a health professional (Xanax, Vicodin, Oxycontin, Percocet, Ritalin, Adderall, Ludes, Vitamin R, Handlebars)	yes <input type="radio"/>	no <input type="radio"/>

Appendix 5: Exposure to Parental Violence

Instructions: No matter how well parents get along, there are times when they argue, and feel angry towards each other. The following questions deal with things that your father (or male caregiver) and mother (or female caregiver) might have done to each other when they were angry.

Push, grabbed, or shoved.

Twisted arm or pulled hair.

Slapped.

Slammed against wall.

Kicked, bit, punched, or hit with a fist.

Hit or tried to hit with something.

Burned or scalded on purpose.

Choked.

Threatened with a knife or gun.

1. In the PAST YEAR, how many times did your father (or male caregiver) do any of the above behaviors towards your mother (or female caregiver)?

- ☐ Never
- ☐ Once or twice
- ☐ 3-20 times
- ☐ More than 20 times

2. In the PAST YEAR, how many times did your mother (or female caregiver) do any of the above behaviors towards your father (or male caregiver)?

- ☐ Never
- ☐ Once or twice
- ☐ 3-20 times
- ☐ More than 20 times

References

- Akers, R. L. (1985). *Deviant Behavior: A Social Learning Approach*, 3rd ed. Belmont, CA: Wadsworth.
- Akers, R. L. (2000). *Criminological Theories: Introduction, Evaluation, and Application*, 3rd ed. Los Angeles: Roxbury.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- Arthur, M. W., Hawkins, J., Pollard, J. A., Catalano, R. F., & Baglioni, A. r. (2002). Measuring risk and protective factors for substance use, delinquency, and other adolescent problem behaviors: The Communities That Care Youth Survey. *Evaluation Review*, 26(6), 575-601. doi:10.1177/019384102237850
- Babcock, J. C., Jacobson, N. S., Gottman, J. M., & Yerington, T. P. (2000). Attachment, emotional regulation, and the function of marital violence: Differences between secure, preoccupied, and dismissing violent and nonviolent husbands. *Journal Of Family Violence*, 15(4), 391-409. doi:10.1023/A:1007558330501
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. doi:10.1037/0033-295X.84.2.191
- Bandura, A. (1978). The self system in reciprocal determinism. *American Psychologist*, 33(4), 344-358. doi:10.1037/0003-066X.33.4.344
- Beasley, R., & Stoltenberg, C. D. (1992). Personality characteristics of male spouse abusers. *Professional Psychology: Research And Practice*, 23(4), 310-317. doi:10.1037/0735-7028.23.4.310

- Bell, K. M., & Naugle, A. E. (2008). Intimate partner violence theoretical considerations: Moving towards a contextual framework. *Clinical Psychology Review*, 28(7), 1096-1107. doi:10.1016/j.cpr.2008.03.003
- Benjamin, L., & Wonderlich, S. A. (1994). Social perceptions and borderline personality disorder: The relation to mood disorders. *Journal Of Abnormal Psychology*, 103(4), 610-624. doi:10.1037/0021-843X.103.4.610
- Bogat, G., Levendosky, A. A., & von Eye, A. (2005). The Future of Research on Intimate Partner Violence: Person-Oriented and Variable-Oriented Perspectives. *American Journal Of Community Psychology*, 36(1-2), 49-70. doi:10.1007/s10464-005-6232-7
- Bornovalova, M. A., Hicks, B. M., Iacono, W. G., & McGue, M. (2009). Stability, change, and heritability of borderline personality disorder traits from adolescence to adulthood: A longitudinal twin study. *Development And Psychopathology*, 21(4), 1335-1353. doi:10.1017/S0954579409990186
- Bouchard, S., Sabourin, S., Lussier, Y., & Villeneuve, E. (2009). Relationship quality and stability in couples when one partner suffers from borderline personality disorder. *Journal Of Marital And Family Therapy*, 35(4), 446-455. doi:10.1111/j.1752-0606.2009.00151.x
- Bradley, R., Conklin, C., & Westen, D. (2005). The borderline personality diagnosis in adolescents: Gender differences and subtypes. *Journal Of Child Psychology And Psychiatry*, 46(9), 1006-1019. doi:10.1111/j.1469-7610.2004.00401.x

- Browne, A. (1993). Violence against women by male partners: Prevalence, outcomes, and policy implications. *American Psychologist*, 48(10), 1077-1087.
doi:10.1037/0003-066X.48.10.1077
- Carlson, E. A., Egeland, B., & Sroufe, L. (2009). A prospective investigation of the development of borderline personality symptoms. *Development And Psychopathology*, 21(4), 1311-1334. doi:10.1017/S0954579409990174
- Carlson, E. A., Sroufe, L., & Egeland, B. (2004). The Construction of Experience: A Longitudinal Study of Representation and Behavior. *Child Development*, 75(1), 66-83. doi:10.1111/j.1467-8624.2004.00654.x
- Caspi, A. (2000). The child is father of the man: Personality continuities from childhood to adulthood. *Journal Of Personality And Social Psychology*, 78(1), 158-172.
doi:10.1037/0022-3514.78.1.158
- Caspi, A., Harrington, H., Milne, B., Amell, J. W., Theodore, R. F., & Moffitt, T. E. (2003). Children's Behavioral Styles at Age 3 Are Linked to Their Adult Personality Traits at Age 26. *Journal Of Personality*, 71(4), 495-513.
doi:10.1111/1467-6494.7104001
- Centers for Disease Control and Prevention. (2012). *Teen Dating Violence*. Retrieved from
http://www.cdc.gov/violenceprevention/intimatepartnerviolence/teen_dating_violence.html.
- Chang, B., Sharp, C., & Ha, C. (2011). The criterion validity of the Borderline Personality Features Scale for Children in an adolescent inpatient setting. *Journal Of Personality Disorders*, 25(4), 492-503. doi:10.1521/pedi.2011.25.4.492

- Choi-Kain, L. W., Zanarini, M. C., Frankenburg, F. R., Fitzmaurice, G. M., & Reich, D. (2010). A longitudinal study of the 10-year course of interpersonal features in borderline personality disorder. *Journal Of Personality Disorders, 24*(3), 365-376. doi:10.1521/pedi.2010.24.3.365
- Cicchetti, D., & Rogosch, F. A. (2002). A developmental psychopathology perspective on adolescence. *Journal Of Consulting And Clinical Psychology, 70*(1), 6-20. doi:10.1037/0022-006X.70.1.6
- Cohen, P. (2008). Child development and personality disorder. *Psychiatric Clinics Of North America, 31*(3), 477-493. doi:10.1016/j.psc.2008.03.005
- Crawford, T. N., Cohen, P. R., Chen, H., Anglin, D. M., & Ehrensaft, M. (2009). Early maternal separation and the trajectory of borderline personality disorder symptoms. *Development And Psychopathology, 21*(3), 1013-1030. doi:10.1017/S0954579409000546
- Crick, N. R., Murray-Close, D., & Woods, K. (2005). Borderline personality features in childhood: A short-term longitudinal study. *Development And Psychopathology, 17*(4), 1051-1070. doi:10.1017/S0954579405050492
- Critchfield, K. L., Levy, K. N., & Clarkin, J. F. (2004). The Relationship Between Impulsivity, Aggression, and Impulsive-Aggression in Borderline Personality Disorder: An Empirical Analysis of Self-Report Measures. *Journal Of Personality Disorders, 18*(6), 555-570. doi:10.1521/pedi.18.6.555.54795
- Derogatis, L. R., Rickels, K., & Rock, A. F. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *The British Journal Of Psychiatry, 128*, 280-289. doi:10.1192/bjp.128.3.280

- Derogatis, L.R., Lipman, R. S., & Covi, L. (1973). SCL-90: An outpatient psychiatric rating scale--Preliminary report. *Psychopharmacology Bulletin*, 9, 13-28.
- Distel, M. A., Trull, T. J., Derom, C. A., Thiery, E. W., Grimmer, M. A., Martin, N. G., & ... Boomsma, D. I. (2008). Heritability of borderline personality disorder features is similar across three countries. *Psychological Medicine*, 38(9), 1219-1229. doi:10.1017/S0033291707002024
- Dutton, D. G. (1994). The origin and structure of the abusive personality. *Journal Of Personality Disorders*, 8(3), 181-191. doi:10.1521/pedi.1994.8.3.181
- Dutton, D. G. (1995). Male abusiveness in intimate relationships. *Clinical Psychology Review*, 15(6), 567-581. doi:10.1016/0272-7358(95)00028-N
- Eaton, D. K., Davis, K. S., Barrios, L., Brener, N. D., & Noonan, R. K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence, and early initiation of risk behaviors among U.S. high school students. *Journal Of Interpersonal Violence*, 22(5), 585-602. doi:10.1177/0886260506298831
- Edwards, D. W., Scott, C. L., Yarvis, R. M., Paizis, C. L., & Panizzon, M. S. (2003). Impulsiveness, impulsive aggression, personality disorder, and spousal violence. *Violence And Victims*, 18(1), 3-14. doi:10.1891/vivi.2003.18.1.3
- Fals-Stewart, W. (2003). The occurrence of partner physical aggression on days of alcohol consumption: A longitudinal diary study. *Journal Of Consulting And Clinical Psychology*, 71(1), 41-52. doi:10.1037/0022-006X.71.1.41

- Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160.
- Foo, L., & Margolin, G. (1995). A multivariate investigation of dating aggression. *Journal Of Family Violence*, 10(4), 351-377. doi:10.1007/BF02110711
- Foran, H. M., & O'Leary, K. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review*, 28(7), 1222-1234. doi:10.1016/j.cpr.2008.05.001
- Forsstrom-Cohen, B., & Rosenbaum, A. (1985). The effects of parental marital violence on young adults: An exploratory investigation. *Journal of Marriage and the Family*, 467-472.
- Foshee, V. A., Linder, G., Bauman, K. E., Langwick, S. A., Arriaga, X. B., Heath, J. L., & ... Bangdiwala, S. (1996). The Safe Dates Project: Theoretical basis, evaluation design, and selected baseline findings. *American Journal Of Preventive Medicine*, 12(5, Suppl), 39-47.
- Gidycz, C. A., Warkentin, J. B., & Orchowski, L. M. (2007). Predictors of perpetration of verbal, physical, and sexual violence: A prospective analysis of college men. *Psychology Of Men & Masculinity*, 8(2), 79-94. doi:10.1037/1524-9220.8.2.79
- Grant, B. F., Chou, S., Goldstein, R. B., Huang, B., Stinson, F. S., Saha, T. D., & ... Ruan, W. (2008). Prevalence, correlates, disability, and comorbidity of DSM-IV borderline personality disorder: Results from the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions. *Journal Of Clinical Psychiatry*, 69(4), 533-545. doi:10.4088/JCP.v69n0404

- Gratz, K. L., Tull, M. T., Reynolds, E. K., Bagge, C. L., Latzman, R. D., Daughters, S. B., & Lejuez, C. W. (2009). Extending extant models of the pathogenesis of borderline personality disorder to childhood borderline personality symptoms: The roles of affective dysfunction, disinhibition, and self- and emotion-regulation deficits. *Development And Psychopathology*, *21*(4), 1263-1291.
doi:10.1017/S0954579409990150
- Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violent profiles. *Journal Of Interpersonal Violence*, *12*(1), 126-141. doi:10.1177/088626097012001008
- Gunderson, J. G., & Ridolfi, M. E. (2006). Borderline personality disorder. *Annals of the New York Academy of Sciences*, *932*(1), 61-77.
- Gwartney-Gibbs, P. A., Stockard, J., & Bohmer, S. (1987). Learning courtship aggression: The influence of parents, peers, and personal experiences. *Family Relations: An Interdisciplinary Journal Of Applied Family Studies*, *36*(3), 276-282. doi:10.2307/583540
- Hafkenscheid, A. A. (1993). Psychometric evaluation of the Symptom Checklist (SCL-90) in psychiatric patients. *Personality And Individual Differences*, *14*(6), 751-756. doi:10.1016/0191-8869(93)90088-K
- Hamberger, L., & Hastings, J. E. (1988). Characteristics of male spouse abusers consistent with personality disorders. *Hospital & Community Psychiatry*, *39*(7), 763-770.

- Hamberger, L., & Hastings, J. E. (1991). Personality correlates of men who batter and nonviolent men: Some continuities and discontinuities. *Journal Of Family Violence*, 6(2), 131-147. doi:10.1007/BF00978715
- Hastings, J. E., & Hamberger, L. (1988). Personality characteristics of spouse abusers: A controlled comparison. *Violence And Victims*, 3(1), 31-48.
- Henning, K., Jones, A., & Holdford, R. (2003). Treatment needs of women arrested for domestic violence: A comparison with male offenders. *Journal Of Interpersonal Violence*, 18(8), 839-856. doi:10.1177/0886260503253876
- Holtzworth-Munroe, A. (2000). A typology of men who are violent toward their female partners: Making sense of the heterogeneity in husband violence. *Current Directions In Psychological Science*, 9(4), 140-143. doi:10.1111/1467-8721.00079
- Holtzworth-Munroe, A., Bates, L., Smutzler, N., & Sandin, E. (1997). A brief review of the research on husband violence: I. Maritally violent versus nonviolent men. *Aggression And Violent Behavior*, 2(1), 65-99. doi:10.1016/S1359-1789(96)00015-8
- Holtzworth-Munroe, A., Meehan, J. C., Herron, K., Rehman, U., & Stuart, G. L. (2000). Testing the Holtzworth-Munroe and Stuart (1994) batterer typology. *Journal Of Consulting And Clinical Psychology*, 68(6), 1000-1019. doi:10.1037/0022-006X.68.6.1000
- Howard, D. E., & Qi Wang, M. (2003). Risk procedures of adolescent girls who were victims of dating violence. *Adolescence*, 38(149), 1-14.

- Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2010). *Monitoring the Future national survey results on drug use, 1975-2009. Volume I: Secondary school students* (NIH Publication No. 10-7584). Bethesda, MD: National Institute on Drug Abuse, 734.
- Julian, T. W., & McKenry, P. C. (1993). Mediators of male violence toward female intimates. *Journal Of Family Violence*, 8(1), 39-56. doi:10.1007/BF00986992
- Keltner, D., & Kring, A. M. (1998). Emotion, social function, and psychopathology. *Review Of General Psychology*, 2(3), 320-342. doi:10.1037/1089-2680.2.3.320
- Kendler, K. S., Aggen, S. H., Czajkowski, N., Røysamb, E., Tambs, K., Torgersen, S., & ... Reichborn-Kjennerud, T. (2008). The structure of genetic and environmental risk factors for DSM-IV personality disorders: A multivariate twin study. *Archives Of General Psychiatry*, 65(12), 1438-1446. doi:10.1001/archpsyc.65.12.1438
- Kinsfogel, K. M., & Grych, J. H. (2004). Interparental Conflict and Adolescent Dating Relationships: Integrating Cognitive, Emotional, and Peer Influences. *Journal Of Family Psychology*, 18(3), 505-515. doi:10.1037/0893-3200.18.3.505
- Kwong, M. J., Bartholomew, K., Henderson, A. Z., & Trinke, S. J. (2003). The intergenerational transmission of relationship violence. *Journal Of Family Psychology*, 17(3), 288-301. doi:10.1037/0893-3200.17.3.288
- Látalová, K. K., & Praško, J. J. (2010). Aggression in borderline personality disorder. *Psychiatric Quarterly*, 81(3), 239-251. doi:10.1007/s11126-010-9133-3
- Lenzenweger, M. F., Loranger, A. W., Korfine, L., & Neff, C. (1997). Detecting personality disorders in a nonclinical population: Application of a 2-stage for case

- identification. *Archives Of General Psychiatry*, 54(4), 345-351.
doi:10.1001/archpsyc.1997.01830160073010
- Leung, S., & Leung, F. (2009). Construct validity and prevalence rate of borderline personality disorder among Chinese adolescents. *Journal Of Personality Disorders*, 23(5), 494-513. doi:10.1521/pedi.2009.23.5.494
- Lipman, R. S., Covi, L., & Shapiro, A. K. (1979). The Hopkins Symptom Checklist (HSCL). *Journal Of Affective Disorders*, 1(1), 9-24. doi:10.1016/0165-0327(79)90021-1
- Lloyd, S. A. (1990). Conflict types and strategies in violent marriages. *Journal Of Family Violence*, 5(4), 269-284. doi:10.1007/BF00979064
- Maiuro, R. D., Cahn, T. S., Vitaliano, P. P., Wagner, B. C., & Zegree, J. B. (1988). Anger, hostility, and depression in domestically violent versus generally assaultive men and nonviolent control subjects. *Journal Of Consulting And Clinical Psychology*, 56(1), 17-23. doi:10.1037/0022-006X.56.1.17
- Makepeace, J. M. (1981). Courtship violence among college students. *Family Relations*, 97-102.
- Malik, S., Sorenson, S. B., & Aneshensel, C. S. (1997). Community and dating violence among adolescents: Perpetration and victimization. *Journal Of Adolescent Health*, 21(5), 291-302. doi:10.1016/S1054-139X(97)00143-2
- McKenry, P. C., Julian, T. W., & Gavazzi, S. M. (1995). Toward a biopsychosocial model of domestic violence. *Journal Of Marriage And The Family*, 57(2), 307-320. doi:10.2307/353685

- Miller, A. L., Muehlenkamp, J. J., & Jacobson, C. M. (2008). Fact or fiction: Diagnosing borderline personality disorder in adolescents. *Clinical Psychology Review, 28*(6), 969-981. doi:10.1016/j.cpr.2008.02.004
- Molidor, C., & Tolman, R. M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women, 4*(2), 180-194.
doi:10.1177/1077801298004002004
- Norlander, B., & Eckhardt, C. (2005). Anger, hostility, and male perpetrators of intimate partner violence: A meta-analytic review. *Clinical Psychology Review, 25*(2), 119-152. doi:10.1016/j.cpr.2004.10.001
- O'Keefe, M. (1997). Predictors of dating violence among high school students. *Journal Of Interpersonal Violence, 12*(4), 546-568. doi:10.1177/088626097012004005
- O'Keefe, M. (1998). Factors mediating the link between witnessing interparental violence and dating violence. *Journal Of Family Violence, 13*(1), 39-57.
doi:10.1023/A:1022860700118
- O'Keefe, N. K., Brockopp, K., & Chew, E. (1986). Teen dating violence. *Social Work, 31*(6), 465-468.
- O'Leary, K. D., Barling, J., Arias, I., Rosenbaum, A., Malone, J., & Tyree, A. (1989). Prevalence and stability of physical aggression between spouses: A longitudinal analysis. *Journal of consulting and Clinical Psychology, 57*(2), 263.
- Ostrov, J. M., & Houston, R. J. (2008). The utility of forms and functions of aggression in emerging adulthood: Association with personality disorder symptomatology. *Journal Of Youth And Adolescence, 37*(9), 1147-1158. doi:10.1007/s10964-008-9289-4

- Patton, J. H., Stanford, M. S., & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. *Journal Of Clinical Psychology, 51*(6), 768-774.
doi:10.1002/1097-4679(199511)51:6<768::AID-JCLP2270510607>3.0.CO;2-1
- Riggs, D. S., O'Leary, K., & Breslin, F. (1990). Multiple correlates of physical aggression in dating couples. *Journal Of Interpersonal Violence, 5*(1), 61-73.
doi:10.1177/088626090005001005
- Roberts, A. L., McLaughlin, K. A., Conron, K. J., & Koenen, K. C. (2011). Adulthood stressors, history of childhood adversity, and risk of perpetration of intimate partner violence. *American Journal Of Preventive Medicine, 40*(2), 128-138.
doi:10.1016/j.amepre.2010.10.016
- Rogosch, F. A., & Cicchetti, D. (2005). Child maltreatment, attention networks, and potential precursors to borderline personality disorder. *Development And Psychopathology, 17*(4), 1071-1089. doi:10.1017/S0954579405050509
- Roizen, J. (1993). Issues in the epidemiology of alcohol and violence. *Alcohol and interpersonal violence: Fostering multidisciplinary perspectives, 1*(93), 3.
- Roscoe, B., & Benaske, N. (1985). Courtship violence experienced by abused wives: Similarities in patterns of abuse. *Family Relations: An Interdisciplinary Journal Of Applied Family Studies, 34*(3), 419-424. doi:10.2307/583582
- Ross, J. M., & Babcock, J. C. (2009). Proactive and reactive violence among intimate partner violent men diagnosed with antisocial and borderline personality disorder. *Journal Of Family Violence, 24*(8), 607-617. doi:10.1007/s10896-009-9259-y

- Rothman, E.F., Reyes, L.M., Johnson, R.M., & LaValley, M. (2012). Does the alcohol make them do it? Dating violence perpetration and drinking among youth. *Epidemiologic Reviews*, 34, 103-119.
- Schumacher, J. A., Slep, A., & Heyman, R. E. (2001). Risk factors for male-to-female partner psychological abuse. *Aggression And Violent Behavior*, 6(2-3), 255-268. doi:10.1016/S1359-1789(00)00025-2
- Sellers, C. S., Cochran, J. K., & Branch, K. A. (2005). Social learning theory and partner violence: A research note. *Deviant Behavior*, 26(4), 379-395. doi:10.1080/016396290931669
- Sharp, C., & Bleiberg, E. (2007). Borderline personality disorder in children and adolescents. In A.Martin and F. Volkmar (Eds.), *Lewis's child and adolescent Psychiatry: Comprehensive Textbook* (4th ed., pp. 680–691). Baltimore: Lippincott Williams and Wilkins
- Sharp, C., Ha, C., Michonski, J., Venta, A., & Carbonne, C. (2012). Borderline personality disorder in adolescents: evidence in support of the Childhood Interview for DSM-IV Borderline Personality Disorder in a sample of adolescent inpatients. *Comprehensive Psychiatry*, 53(6), 765-774. doi:10.1016/j.comppsy.2011.12.003
- Sharp, C., & Romero, C. (2007). Borderline personality disorder: A comparison between children and adults. *Bulletin Of The Menninger Clinic*, 71(2), 85-114. doi:10.1521/bumc.2007.71.2.85
- 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: Journal Of The American Medical Association*, 286(5), 572-579. doi:10.1001/jama.286.5.572
- Sims, E., Dodd, V., & Tejeda, M. J. (2008). The relationship between severity of violence in the home and dating violence. *Journal Of Forensic Nursing*, 4(4), 166-173. doi:10.1111/j.1939-3938.2008.00028.x
- Smith, P., White, J. W., & Holland, L. J. (2003). A longitudinal perspective on dating violence among adolescent and college-age women. *American Journal Of Public Health*, 93(7), 1104-1109. doi:10.2105/AJPH.93.7.1104
- Soloff, P. H., Meltzer, C., Becker, C., Greer, P. J., Kelly, T. M., & Constantine, D. (2003). Impulsivity and prefrontal hypometabolism in borderline personality disorder. *Psychiatry Research: Neuroimaging*, 123(3), 153-163. doi:10.1016/S0925-4927(03)00064-7
- Soloff, P. H., & Millward, J. W. (1983). Psychiatric disorders in the families of borderline patients. *Archives Of General Psychiatry*, 40(1), 37-44.
- Stith, S. M., Smith, D. B., Penn, C. E., Ward, D. B., & Tritt, D. (2004). Intimate partner physical abuse perpetration and victimization risk factors: A meta-analytic review. *Aggression And Violent Behavior*, 10(1), 65-98. doi:10.1016/j.avb.2003.09.001
- Stuart, G. L., Moore, T. M., Gordon, K., Ramsey, S. E., & Kahler, C. W. (2006). Psychopathology in Women Arrested for Domestic Violence. *Journal Of Interpersonal Violence*, 21(3), 376-389. doi:10.1177/0886260505282888
- Stuart, G. L., Moore, T. M., Ramsey, S. E., & Kahler, C. W. (2003). Relationship aggression and substance use among women court-referred to domestic violence

- intervention programs. *Addictive Behaviors*, 28(9), 1603-1610.
doi:10.1016/j.addbeh.2003.08.038
- Temple, J. R., & Freeman, D. R. (2011). Dating violence and substance use among ethnically diverse adolescents. *Journal Of Interpersonal Violence*, 26(4), 701-718.
doi:10.1177/0886260510365858
- Temple, J.R., Paul, J.A., van den Berg, P., Le, V.D., McElhany, A., Temple, B.W. (2012). Teen sexting and its association with sexual behaviors. *Archives of Pediatrics and Adolescent Medicine*, 166, 828-833.
- Temple, J. R., Weston, R., Stuart, G. L., & Marshall, L. L. (2008). The longitudinal association between alcohol use and intimate partner violence among ethnically diverse community women. *Addictive Behaviors*, 33(9), 1244-1248.
doi:10.1016/j.addbeh.2008.05.005
- Testa, M., Livingston, J. A., Vanzile-Tamsen, C., & Frone, M. R. (2003). The Role of Women's Substance Use in Vulnerability to Forcible and Incapacitated Rape. *Journal Of Studies On Alcohol*, 64(6), 756-764.
- Tontodonato, P., & Crew, B. (1992). Dating violence, social learning theory, and gender: A multivariate analysis. *Violence And Victims*, 7(1), 3-14.
- Torgersen, S., Kringlen, E., & Cramer, V. (2001). The prevalence of personality disorders in a community sample. *Archives Of General Psychiatry*, 58(6), 590-596. doi:10.1001/archpsyc.58.6.590
- Torgersen, S., Lygren, S., Øien, P., Skre, I., Onstad, S., Edvardsen, J., & ... Kringlen, E. (2000). A twin study of personality disorders. *Comprehensive Psychiatry*, 41(6), 416-425. doi:10.1053/comp.2000.16560

- Trull, T. J. (1995). Borderline personality disorder features in nonclinical young adults: I. Identification and validation. *Psychological Assessment*, 7(1), 33-41.
doi:10.1037/1040-3590.7.1.33
- Whisman, M. A., & Schonbrun, Y. (2009). Social consequences of borderline personality disorder symptoms in a population-based survey: Marital distress, marital violence, and marital disruption. *Journal Of Personality Disorders*, 23(4), 410-415. doi:10.1521/pedi.2009.23.4.410
- White, J. W., & Smith, P. (2009). Covariation in the use of physical and sexual intimate partner aggression among adolescent and college-age men: A longitudinal analysis. *Violence Against Women*, 15(1), 24-43. doi:10.1177/1077801208328345
- Winograd, G., Cohen, P., & Chen, H. (2008). Adolescent borderline symptoms in the community: Prognosis for functioning over 20 years. *Journal Of Child Psychology And Psychiatry*, 49(9), 933-941. doi:10.1111/j.1469-7610.2008.01930.x
- Wolf, K. A., & Foshee, V. A. (2003). Family violence, anger expression styles, and adolescent dating violence. *Journal Of Family Violence*, 18(6), 309-316.
doi:10.1023/A:1026237914406
- Wolfe, D. A., Scott, K., Reitzel-Jaffe, D., Wekerle, C., Grasley, C., & Straatman, A. (2001). Development and validation of the Conflict in Adolescent Dating Relationships Inventory. *Psychological Assessment*, 13(2), 277-293.
doi:10.1037/1040-3590.13.2.27
- Wolfe, D. A., Scott, K., Wekerle, C., & Pittman, A. (2001). Child maltreatment: Risk of adjustment problems and dating violence in adolescence. *Journal Of The*

American Academy Of Child & Adolescent Psychiatry, 40(3), 282-289.

doi:10.1097/00004583-200103000-00007

Wolfe, D. A., Wekerle, C., Reitzel-Jaffe, D., & Lefebvre, L. (1998). Factors associated with abusive relationships among maltreated and nonmaltreated youth.

Development And Psychopathology, 10(1), 61-85.

doi:10.1017/S0954579498001345

Wolfe, D. A., Wekerle, C., Scott, K., Straatman, A., Grasley, C., & Reitzel-Jaffe, D.

(2003). Dating violence prevention with at-risk youth: A controlled outcome evaluation. *Journal Of Consulting And Clinical Psychology*, 71(2), 279-291.

doi:10.1037/0022-006X.71.2.279

Wolitzky-Taylor, K. B., Ruggiero, K. J., Danielson, C., Resnick, H. S., Hanson, R. F.,

Smith, D. W., & ... Kilpatrick, D. G. (2008). Prevalence and correlates of dating violence in a national sample of adolescents. *Journal Of The American Academy Of Child & Adolescent Psychiatry*, 47(7), 755-762.

doi:10.1097/CHI.0b013e318172ef5f

Zanarini, M. C., Frankenburg, F. R., Reich, D., Marino, M. F., Haynes, M. C., &

Gunderson, J. G. (1999). Violence in the lives of adult borderline patients.

Journal Of Nervous And Mental Disease, 187(2), 65-71. doi:10.1097/00005053-199902000-00001

