

Social Support as a Moderator Between Dating Violence Victimization and Depression/Anxiety Among African American and Caucasian Adolescents

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Abstract. Victimization in dating relationships was examined among 681 African American and Caucasian adolescents. Specifically, perceived social support was evaluated as a moderator between (a) physical dating violence victimization and anxiety/depression and (b) emotional abuse in dating relationships and anxiety/depression. Youth completed self-report measures of victimization in dating relationships, psychological functioning, and perceived familial and peer social support. Results indicated that 37% reported physical dating violence and 62% reported emotional abuse in dating relationships. Greater physical and emotional dating victimization was associated with more anxiety/depression. Moreover, social support moderated the association between victimization and psychological well-being, particularly for African American males. Findings highlight the powerful influence of perceived social support among adolescent targets of physical violence and emotional abuse in dating relationships.

Dating violence is a pervasive form of victimization within our society, and has been linked to deleterious outcomes including depression, anxiety, and physical injury (Carlson, 1987; DeKeseredy & Schwartz, 1994). Initial efforts aimed at better understanding interpersonal violence focused on college students and adults. More recently, investigations have started to address the prevalence of dating violence among adolescents, although the litera-

ture base for this population is less extensive, particularly with respect to minority youth. Additional research is necessary given that adolescence is a developmentally important time period in which negative repercussions of violence might have lasting detrimental effects. In particular, exploring moderating and mediating factors that might protect adolescent targets of violence is a critical step in helping youth achieve optimal development despite

Author's Note. This project was supported in part by a dissertation grant to the first author provided by the University of Illinois at Urbana-Champaign. The authors wish to thank Racheal Henkel, Adva Steiner, and Ryan Adams for their help in data collection and members of the Family Research Laboratory Seminar for their helpful comments on a previous draft of the manuscript for this article.

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adversity (Becker, Barham, Eron, & Chen, 1994). Given the documented link between social support and resilient outcomes among youth, the current study focused on the protective role of social support (Connell, Spencer, & Aber, 1994; Grant et al., 2000). Specifically, this investigation examined physical violence and emotional abuse in dating relationships among African American and Caucasian adolescents and evaluated perceived social support as a moderating factor between victimization and self-reported depression/anxiety symptoms.

Dating Violence

Extant research has documented that dating violence begins to emerge in early adolescence. According to one investigation, 29% of victims experienced their first incident of dating violence between the ages of 12 and 13 and 40% were first victimized between the ages of 14 and 15 (Burcky, Reuterman, & Kopsky, 1988). Prevalence rate estimates have varied due to the definition of dating violence used, type of dating violence under consideration, and method of assessment. Broadly, between 10% (Roscoe & Callahan, 1985) and 55% (O'Keefe, 1998) of adolescents have been the targets of dating violence. Estimates tend to be the highest when emotional abuse is considered to constitute dating violence (Bookwala, Frieze, Smith, & Ryan, 1992). Between 20% (O'Keefe, Brockopp, & Chew, 1986) and 50% (Sudermann & Jaffe, 1993) of adolescents report experiencing physical forms of dating violence.

Conflicting information exists with respect to differences in dating violence rates by sex and race. In a study of ethnically diverse high school students, the rate of physical dating violence victimization did not differ for males and females (Malik, Sorenson, & Aneshensel, 1997). Conversely, among high school students surveyed who were in violent dating relationships, significantly more females (65%) than males (35%) were the targets of violence (Roscoe & Callahan, 1985). With respect to psychological abuse, a study of adolescents in an alternative high school program revealed that males and females were victim-

ized at approximately the same rate (James, West, Deters, & Armijo, 2000). This contrasted Molidor's (1995) finding that males reported higher amounts of psychological abuse than females and Foshee's (1996) finding that females experienced more psychological abuse than males did.

Less research has explored dating violence victimization rates across ethnic/racial groups. In a study of eighth and ninth grade students, results showed that Caucasian adolescents reported less nonsexual victimization than African American adolescents (Foshee, Linder, Bauman, & Langwick, 1996). Another study of high school students revealed that African American females were less frequently targets of dating violence than their Caucasian female peers (O'Keefe & Treister, 1998). Additional research is necessary to build upon these preliminary findings and clarify the extent to which victimization in dating relationships varies as a function of sex and/or race.

Dating violence experiences are often associated with negative emotional outcomes, although little research exists linking dating violence victimization to psychological functioning. Carlson's (1987) review of the literature suggests that effects of victimization include anger, sadness, and diminished self-esteem. In another study, 56% of high school victims indicated that the incident(s) upset them but resulted in no long-term effects. However, 8% of victims reported more long-standing emotional disturbance (Burcky et al., 1988). Surprisingly, 6% of the students noted that having experienced violence did not have any effect on them. Research also suggests that boys and girls respond differently to dating violence. For example, 40% of high school girls versus 3% of boys noted that they cried in reaction to the worst instance of dating violence they experienced (Molidor & Tolman, 1998).

Although these studies provide a general perspective on how dating violence affects victims, a more comprehensive evaluation is important. This study adds to existing literature by exploring both physical violence and emotional abuse in dating relationships among African American and Caucasian adolescents and by

evaluating whether victimization is associated with anxiety/depression in these populations.

Social Support as a Resource Factor

Perceived social support has been widely acknowledged to play a buffering role between stress and psychological well-being (Cohen & Wills, 1985). Among adolescents, support can be derived from a number of sources for beneficial effects to result. For example, as Masten, Best, and Garmezy (1990) noted, children who have a positive relationship with at least one caring adult fare better in the face of adversity than children without any relationship of this nature. This adult can be a parent (Kolbo, 1996; Zimmerman, Steinman, & Rowe, 1998) or a mentor such as a teacher, clergy member, or neighbor (Rak & Patterson, 1996). Peer support has also been shown to promote psychological well-being despite adversity (McCreary, Slavin, & Berry, 1996). Additionally, literature on perceived social support has documented that familial and peer social support are differentially related to outcomes and therefore should be evaluated independently (Lyons, Perrotta, & Hancher-Kvam, 1988). It has also been suggested that assessing a global measure of perceived social support from a particular provider (e.g., friends) has greater empirical value than evaluating types of support (e.g., emotional, instrumental) across providers (Seidman et al., 1995).

Some research has also addressed how race and sex are related to perceived social support. For example, in a study focused on understanding educational outcomes among African American youth, parental support had a positive influence on outcomes above and beyond the impact of sex and adverse conditions (Connell et al., 1994). In another study of 60 children, boys (but not girls) who reported high levels of support from their guardians maintained their self-worth despite exposure to family violence (Kolbo, 1996). Conversely, in an investigation of 850 ninth graders, results indicated that despite the influence of violent friends and adults, girls (but not boys) were less likely to exhibit violent behaviors themselves if they perceived support from either of their parents (Zimmerman et al., 1998).

Although no research has evaluated perceived social support as a moderator between dating violence and outcomes among adolescents, a recent study found that religious service attendance and high parental monitoring did protect adolescents against being victimized in dating relationships (Howard, Qiu, & Boekeloo, 2003). Research on other forms of victimization bolsters the potential moderating effect of social support. Luster and Small (1997) found that sexually abused adolescents who reported high levels of support from one or both parents had fewer negative outcomes than individuals with less support. Similar processes might exist among targets of dating violence. It is plausible that youth who perceive higher social support from family and peers might feel more comfortable revealing their victimization experiences. Furthermore, the opportunity to discuss these issues might help them experience less distress. The current study contributes to the literature by providing the first examination of the potential influence of perceived social support for African American and Caucasian youth who have been targets of dating violence. Given the possibility that childhood sexual abuse history might heighten an individual's likelihood of experiencing subsequent victimization (Frazier & Cohen, 1992) and because of the relation between childhood sexual abuse and psychological functioning (Luster & Small, 1997), childhood sexual abuse was also included in analyses to maintain conceptual clarity.

After a thorough review of extant literature on dating violence and abuse (e.g., Foshee, 1996; Jezl, Molidor, & Wright, 1996), we formulated definitions of physical and emotional abuse that were consistent with those used by scholars who have examined dating violence and abuse among teens, and in line with the research on youth dating violence/abuse summarized above. Physical abuse dating violence was defined to include physically violent acts such as slapping or punching a partner. Emotional/psychological abuse was defined to include behaviors such as manipulation and verbal battering (e.g., swearing, derogatory comments). It was hypothesized that greater physical violence and emotional abuse would be

associated with higher anxiety/depression after controlling for childhood sexual abuse history and age. It was also hypothesized that these associations would be moderated by perceived social support. Specifically, it was expected that among victimized youth, those with higher social support levels would experience less anxiety/depression. We did not formulate directional hypotheses related to race or gender, but rather considered these analyses to be exploratory in nature given the lack of previous research.

Method

Participants

Participants were 367 (54%) middle school students in a suburb of a Midwestern city and 314 (46%) high school students in a small Midwestern city.¹ All students from these schools who were enrolled in physical education classes were invited to participate. This encompassed all students from these schools except for 10th graders, for whom only a subset participated because physical education classes were not typically part of 10th graders' curricula. One hundred percent of students whose parents tacitly permitted their participation using a passive consent procedure (see below) elected to complete the survey. There were 319 (47%) males and 362 (53%) females. With respect to race, 267 respondents were African American (39%) and 414 students were Caucasian (61%). Of these students, 197 were 7th graders (29%), 170 were 8th graders (25%), 111 were 9th graders (16%), 21 were 10th graders (3%), 101 were 11th graders (15%), and 81 were 12th graders (12%). The mean age for the sample was 14.49 ($SD = 1.97$). School district records indicated that approximately 42% of middle school students and 43% of high school students were classified as low income.

Procedure

Parental consent. Permission was obtained from the University of Illinois at Urbana-Champaign Institutional Review Board to use passive parental consent in this investigation.² Parents of all students enrolled in physical education classes were sent letters

informing them about the purpose of the study. They were asked to sign and return the form only if they were unwilling to have their child participate in the investigation. Three middle school parents and no high school parents returned this form. At the beginning of each survey administration teachers removed students from the room if they were not allowed to participate, and researchers also reminded students that they should not complete the survey if their parents had returned a form. In addition to passive parental consent, students were asked to consent to participate in the study through an informed consent form included in the questionnaire packet.

Survey administration. The researchers and six trained research assistants administered surveys, which took an average 45 minutes to complete. At least two of these individuals administered surveys to each physical education class, which ranged in size from 25 to 50. Students were first informed about the general nature of the investigation. Next, researchers made certain that students were sitting far enough from one another to ensure confidentiality. Students were then given survey packets and asked to answer all questions honestly. The survey was approximately at a fifth grade reading level. The survey was read to the middle school students to control for possible reading difficulties of middle school students reading below a fifth grade level. Researchers were available to answer questions for both middle school and high school students, and were trained to recognize and respond to signs of distress in participants should they become upset by any of the questions. Last, a raffle was held in each group in which one student won a \$10 gift certificate to local stores. The raffle was used as an incentive for students to complete the survey, although all students were included in the raffle regardless of whether they filled out a survey. Researchers gave all students a list of community resources such as counseling agencies.

Measures

Each participant first completed a demographic questionnaire. The questionnaire in-

cluded questions about the participant's sex, age, grade, and race.

Abusive Behavior Inventory. The Abusive Behavior Inventory (ABI; Shepard & Campbell, 1992) measures physical, emotional/psychological, and sexual abuse in dating relationships. Only the emotional abuse scale was used in this study. Nine items tapping a range of psychologically abusive behaviors (e.g., "How often has a dating partner said something to scare you?") that were appropriate for an adolescent sample were administered. Response options ranged from 0 (*never*) through 4 (*often*), and participants were also given the opportunity to select "Not sure" as a response (total sum scores range from 0 to 36).

Coefficient alphas for the ABI ranged from .79 to .92 for males and females in abusive and nonabusive relationships (Shepard & Campbell, 1992) and alphas for the current study were comparable (middle school = .80, high school = .90). In the development sample, ABI items successfully differentiated individuals in abusive and nonabusive relationships, providing support for the ABI's criterion validity (Shepard & Campbell, 1992).

Childhood Trauma Questionnaire.

Five items from the Childhood Trauma Questionnaire sexual abuse scale were used (CTQ; Bernstein & Fink, 1998). Items on the scale inquire specifically about sexual abuse (e.g., "Someone molested me") and ask about behaviors consistent with sexual abuse (e.g., "Someone tried to make me do sexual things or watch sexual things"). For each item, participants respond on a scale from 1 (*never true*) to 5 (*very often true*) and total sum scores range from 5 to 25. Scores on the CTQ are significantly correlated with the Childhood Trauma Inventory, providing evidence for the CTQ's convergent validity (Fink, Bernstein, Handlesman, Foote, & Lovejoy, 1995). The test-retest coefficient over a 2-week period for 74 students was .76 (Wolfe, Wekerle, & Scott, 1997) and the coefficient alpha was .72 for middle school students and .85 for high school students for this study.

Support/Cohesion Microsystem Scale. The 21-item Support/Cohesion

Microsystem Scale (Seidman et al., 1995) assesses the degree to which adolescents perceive they are supported by individuals in their lives. Participants were asked to rate support in relationships with their mothers, fathers, and close friends. Individuals rate how helpful the person is "when I have a personal problem" (emotional support), "when I need money and things" (instrumental support), and how much "I have fun with this person" (satisfaction). If the individual did not have a father or mother (or comparable figure such as a step-parent), they did not complete that portion of the scale. Scores are summed across three types of support for each source (e.g., maternal). Response options range from 1 (*not at all*) to 3 (*a great deal*) and total sum scores for each source range from 3 to 9.

The inventory was developed in a sample of 998 urban adolescents attending school in three cities. Items were derived by modifying the Social Support Rating Scale (SSRS; Cauce, Felner, & Primavera, 1982). In the development sample, alpha coefficients for each specific microsystem ranged from .74 to .81 (Seidman et al., 1995). In the current sample coefficient alphas were .81 (middle school) and .86 (high school) for the mother subscale, .78 (middle school) and .83 (high school) for the father subscale, and .66 (middle school) and .75 (high school) for the peer subscale.

Victimization in dating relationships.

The Victimization in Dating Relationships scale (Foshee et al., 1996) is an 18-item inventory that measures physically violent victimization within dating relationships. The measure was developed specifically for adolescents. Participants are asked to indicate how often their dating partners engaged in particular behaviors (e.g., scratched me) and are instructed to count only behaviors that their partners inflicted on them first. Response options include 0 (*never*), 1 (*1 to 3 times*), 2 (*4 to 9 times*), and 3 (*10 or more times*) and total sum scores range from 0 to 54. This inventory was developed in a sample of 1,967 eighth and ninth grade students and the internal consistency coefficient was .90 (Foshee et al., 1996). For the current sample, coefficient alpha was .92

for middle school students and .95 for high school students.

Youth Self-Report. Participants completed the Anxiety and Depression scale from the Youth Self-Report (YSR; Achenbach, 1991), a 16-item scale that assesses self-reported feelings of anxiety and depression. Participants are presented with the items and asked to indicate the degree to which particular statements apply to them (e.g., “I feel lonely”, “I am nervous or tense”). Response options range from 0 (*not true*) to 2 (*often true or very true*) with total sum scores ranging from 0 to 32.

The coefficient alpha for the Anxious/Depressed scale was .86 in a sample of 556 boys (Achenbach, 1991). Over a 3-year period, the test-retest reliability coefficient for the Anxious/Depressed Scale was .60 in a sample of individuals ranging in age from 4 to 18 years at Time 1 (Visser, Van Der Ende, Koot, & Verhulst, 1999). Because only the Anxiety/Depression scale was used in this study, and therefore administered under different conditions than the standardization sample, psychometric characteristics might differ as a result. Nonetheless, for the current investigation, coefficient alpha was .90 for both middle and high school students.

Results

Victimization Frequencies

Adolescents were considered to have experienced physical violence or emotional abuse if they experienced at least one indicator of violence on at least one occasion within the last year. This is consistent with procedures followed by previous researchers examining teen dating violence (e.g., Foshee, 1996; Jezl et al., 1996). Using this method, 43% of males and 32% of females reported physical dating violence victimization, and 61% of males and 63% of females reported emotional abuse in dating relationships. More high school than middle school students reported physical (40% vs. 34%) and emotional abuse in dating relationships (67% vs. 58%). These prevalence rates could, however, be influenced by the fact that high school and middle school students

were in different districts in different types of cities. More African American than Caucasian students reported physical dating violence victimization (45% vs. 32%), but rates were similar for emotional abuse in dating relationships (65% African American, 61% Caucasian). Examination of victimization by sex and race revealed that 53% of African American males and 37% of African American females reported physical dating violence victimization; 64% of African American males and 66% of African American females reported emotional abuse in dating relationships. Finally, 35% of Caucasian males and 29% of Caucasian females reported physical dating violence, and over 50% of Caucasian males and females revealed emotional abuse victimization in dating relationships (59% males, 62% females).

Participants who responded affirmatively to the statement “I believe I was sexually abused” were considered to have experienced child sexual abuse (CSA). Accordingly, an equivalent number of males and females reported CSA (9% males, 8% females). More high school students reported CSA than middle school students (4% males, 14% females). Similar percentages of African American and Caucasian youth revealed CSA (8%, 9% respectively). Ten percent of African American males and 5% of African American females reported CSA. Rates of sexual abuse among Caucasian students were identical for males and females (9%).

Preliminary Analyses

Means, standard deviations, and ranges of scale scores are presented in Table 1. To compare our study participants to other samples on depression/anxiety scores, raw mean and standard deviation values for our sample were compared to raw scores for the nonreferred normative sample presented in Achenbach and Rescorla (2001). Our sample means for males ($M = 5.1$, $SD = 6.14$) and females ($M = 6.8$, $SD = 6.2$) were higher than those reported in the normative sample (males, $M = 3.4$, $SD = 3.0$; females, $M = 5.1$, $SD = 4.0$), and there was more score variability.

As hypothesized, CSA was associated with more physical and emotional forms of

Table 1
Means, Standard Deviations, and Score Ranges for Study Variables

Variable	Total sample (<i>N</i> = 681)	African American Adolescents		Caucasian Adolescents	
		Males (<i>N</i> = 135)	Females (<i>N</i> = 132)	Males (<i>N</i> = 184)	Females (<i>N</i> = 230)
Physical dating violence	2.5 (6.1) 0–54	4.6 (8.6) 0–51	1.9 (5.4) 0–54	2.1 (5.0) 0–34	1.9 (5.1) 0–39
Emotional abuse	3.8 (5.2) 0–27	3.3 (4.2) 0–22	3.9 (5.3) 0–27	3.4 (4.5) 0–20	4.3 (6.0) 0–27
Child sexual abuse	6.8 (3.5) 5–25	7.6 (3.9) 5–23	6.8 (3.6) 5–25	6.6 (3.2) 5–21	6.5 (3.3) 5–23
Maternal social support	7.4 (1.8) 3–9	7.7 (1.5) 3–9	7.7 (2.1) 3–9	7.0 (1.7) 3–9	7.3 (1.7) 3–9
Paternal social support	6.8 (1.9) 3–9	7.1 (1.8) 3–9	6.4 (2.0) 3–9	7.0 (1.8) 3–9	6.5 (1.8) 3–9
Peer social support	7.8 (1.45) 3–9	7.0 (1.5) 3–9	7.7 (1.4) 3–9	7.4 (1.5) 3–9	8.5 (0.9) 4–9
Anxiety/depression	5.9 (6.2) 0–32	4.0 (5.6) 0–30	6.2 (5.4) 0–32	5.8 (6.4) 0–29	7.1 (6.6) 0–31

victimization in dating relationships ($r_s = .43, .38, p_s < .001$) and more anxiety/depression symptoms ($r = .29, p < .01$). These findings support controlling for CSA in the regression models. In addition, perceived social support indicators were minimally correlated across source (r_s from $.02$ to $.31$), highlighting the distinct qualities of maternal, paternal, and peer social support and indicating they should be examined separately. Finally, the correlation between physical violence and emotional abuse was $.49$, suggesting that these behaviors are related yet distinct, and therefore should be examined separately.

Regression Analyses

Hierarchical regression models were computed to determine: (a) the degree to which dating violence experiences were associated with psychological functioning, and (b) whether social support moderated the association between victimization and depression/anxiety. Equations were calculated for the two types of victimization (i.e., physical and emotional abuse in dating relationships) with depression/anxiety as the outcome variable.

In each case there were three steps. In Step 1, CSA and age were entered to control for their effects. In Step 2, the specific victimization experience under consideration—maternal, paternal, and peer social support—were entered as predictors. In Step 3, two-way interaction terms were included. Predictor and interaction terms at Steps 2 and 3 were centered as recommended by Aiken and West (1991). R^2 statistics across the three steps were evaluated to determine the degree to which predictors were associated with depression and anxiety. Significant interactions were plotted following Aiken and West (1991) guidelines using ModGraph (Jose, 2003). The y-axis reflects predicted anxiety/depression values for each group from the full regression equation including unstandardized beta weights and the constant. If there were no statistically significant interaction terms in Step 3, conclusions were drawn from the second step of the model that contained only main effects. Because of the large number of predictors, the significance level was set at $p < .01$.

Prior to conducting regression analyses, we tested whether demographic groups differed on dependent variables to assess whether groups should be combined. T -tests revealed that females reported more anxiety/depression than males ($t = -3.58, p < .001$) and Caucasian adolescents experienced more anxiety/depression than African American youth ($t = -2.94, p < .05$). As such, equations were calculated separately by race and sex.

Physical Dating Violence

African American participants. CSA was significantly related to anxiety/depression among African American males in Steps 1 and 2 ($\beta = .42, .33, p < .001$), but age was not a significant predictor (See Table 2). Step 1 with age and CSA explained 20% of the variance in anxiety/depression ($p < .001$). Physical dating violence and social support predictors in Step 2 resulted in a significant change in the R^2 statistic and explained an additional 12% of the variance in anxiety/depression. More dating violence was strongly associated with greater anxiety/depression ($\beta = .33, p < .001$), even after controlling for CSA experiences. Step 3 explained an additional 10% of the variance in anxiety/depression ($p < .01$). More CSA and physical dating violence were significantly associated with greater anxiety/depression ($\beta = .35, .42, p < .001$), and maternal social support was associated with less anxiety/depression ($\beta = .27, p < .01$).

A significant interaction between physical dating violence and maternal social support was also found ($\beta = .39, p < .01$). Figure 1 displays the main effect (i.e., physical dating violence) along the X-axis, and the moderating variable (i.e., maternal social support) is depicted with three lines designated as low, medium, and high. The three levels of low, medium, and high (for both the continuous main effect and the continuous moderating variable) were computed using the mean as the medium value, one standard deviation above the mean as the high mean, and one standard deviation below the mean as the low mean (Aiken & West, 1991). Results indicated that African American males who reported high levels of

Table 2
Summary of Hierarchical Regression Analysis for Physical Dating Violence and Social Support Variables Predicting Anxiety/Depression Among African American and Caucasian Adolescents

Variable	African American Adolescents						Caucasian Adolescents					
	Males (N = 135)			Females (N = 132)			Males (N = 184)			Females (N = 230)		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1												
Age	.32	.29	.09	-.27	.24	-.10	-.22	.25	-.07	-.43	.21	-.13
CSA	.59	.11	.42**	.41	.13	.28**	.37	0.15	.19*	.83	.12	.41**
Step 2												
Age	-.21	.29	-.06	-.11	.22	-.04	-.27	.24	-.08	-.55	.21	-.16*
CSA	.46	.11	.33**	-.00	.13	.00	.10	.15	.05	.66	.15	.33**
DV	1.26	.32	.32**	2.71	.54	.45**	2.49	.60	.32**	.51	.10	.07
Mom SS	-.94	.55	-.15	.12	.35	.03	-1.22	.51	-.18	-1.08	.27	-.16
Dad SS	-.24	.44	-.04	-.27	.39	-.05	-.38	.52	-.06	-.65	.24	-.10
Peer SS	.09	.41	.02	-1.01	.42	-.19	-.70	.45	-.11	-.88	.42	-.09

(Table 2 continues)

(Table 2 continued)

Variable	African American Adolescents						Caucasian Adolescents					
	Males (N = 135)			Females (N = 132)			Males (N = 184)			Females (N = 230)		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Step 3												
Age	-.18	.28	-.05				-.57	.20	-.17*			
CSA	.49	.11	.35**				.68	.15	.34**			
DV	1.66	.06	.42**				.19	.83	.03			
Mom SS	-1.74	.31	-.27*				-1.20	.47	-.17			
Dad SS	-.11	.23	-.02				-.51	.45	-.08			
Peer SS	-.16	.27	-.03				-.83	.60	-.08			
DV X Mom SS	1.30	.40	.39*				.34	.46	.05			
DV X Dad SS	-.49	.32	-.13				-1.32	.44	-.21*			
DV X Peer SS	.14	.34	.05				.25	.93	.03			

Note. For African American males: $R^2 = .20$ for Step 1 ($p < .001$); $\Delta R^2 = .12$ for Step 2 ($p < .001$); $\Delta R^2 = .10$ for Step 3 ($p < .001$). For African American females: $R^2 = .08$ for Step 1 ($p < .01$); $\Delta R^2 = .22$ for Step 2 ($p < .001$). For Caucasian males: $R^2 = .03$ for Step 1 ($p < .05$); $\Delta R^2 = .15$ for Step 2 ($p < .001$). For Caucasian females: $R^2 = .17$ for Step 1 ($p < .001$); $\Delta R^2 = .06$ for Step 2 ($p < .001$); $\Delta R^2 = .04$ for Step 3 ($p < .001$). CSA = Child Sexual Abuse; DV = Physical dating violence; Mom SS = Maternal social support; Dad SS = Paternal social support; Peer SS = Peer social support. For African American females, and Caucasian males, because there were no statistically significant interaction terms in Step 3, results were presented and conclusions were drawn from the second step of the model.

* $p < .01$. ** $p < .001$.

dating violence and high perceived maternal social support experienced less anxiety/depression than males who reported high levels of dating violence but low or medium perceived maternal social support, although the effect size was not large. Results were even more striking for African American males who reported low physical dating violence and high perceived maternal social support; these youth revealed significantly fewer symptoms of anxiety/depression than their counterparts who reported low physical dating violence and low or medium perceived maternal social support.

For African American females, several notable differences emerged. At Step 1, CSA was significantly related to anxiety/depression

($\beta = .28, p < .001$), age was not significant, and the model explained 8% of the variance in the outcome variable ($p < .01$). Step 2 resulted in a significant increase in variance explained (22% increase, $p < .001$). At Step 2, greater dating violence was strongly associated with anxiety/depression ($\beta = .45, p < .001$). At Step 3, no significant interaction terms emerged.

Caucasian participants. Among Caucasian males, age and CSA were not significantly associated with anxiety/depression at Steps 1 or 2 (Table 2). Step 1 explained only 3% of the variance; however, the inclusion of dating violence and social support domains at Step 2 yielded an increase of 15% of variance

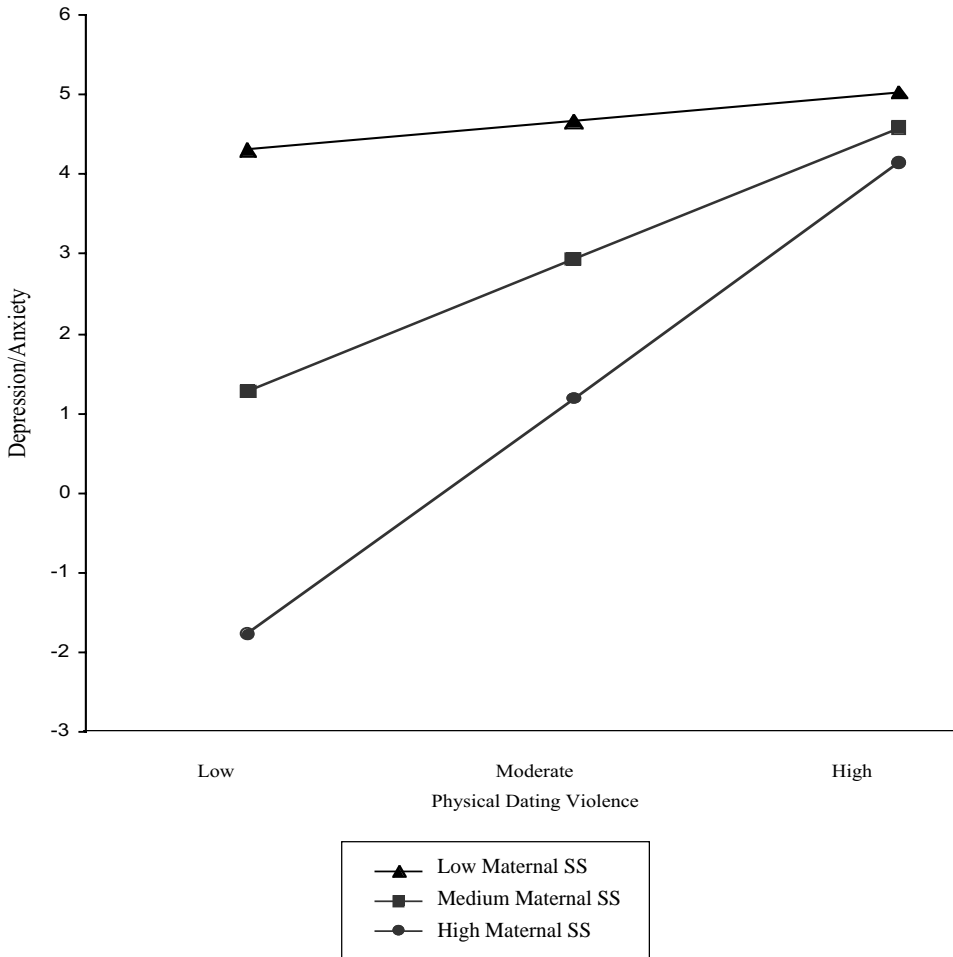


Figure 1. Maternal social support as a moderator between physical dating violence victimization and anxiety/depression among African American males.

explained. Physical dating violence was the single significant predictor of anxiety/depression ($\beta = .32, p < .001$). At Step 3, no significant interaction terms emerged.

Different patterns emerged for Caucasian females (Table 2). Age and CSA in Step 1 explained 17% of the variance in anxiety/depression ($p < .01$); with CSA being strongly and positively associated with this outcome ($\beta = .41, p < .001$). Step 2 yielded a significant 6% increase in variance explained ($p < .01$); CSA remained a significant predictor ($\beta = .33, p < .001$) with age emerging as a significant predictor ($\beta = -.16, p < .001$). Dating violence was not associated with the outcome in Step 2, but Step 3 yielded a significant moderating effect for paternal social support on the association between dating violence and anxiety/depression. Given the small beta weight associated with this interaction, however, the interaction is not displayed graphically. For Caucasian females with high levels of physical dating violence, those with the highest perceived paternal social support reported the fewest anxiety/depression symptoms. Conversely, among females reporting low levels of dating violence, females with low rather than high perceived paternal social support reported the least anxiety/depression.

Emotional Abuse in Dating Relationships

Similar analyses were conducted with emotional abuse in dating relationships as the predictor rather than physical dating violence. Results are summarized more succinctly here and the reader is therefore encouraged to review Table 3 for complete results, including R^2 statistics.

African American participants. For males, Step 1 was significant and indicated that CSA was significantly associated with anxiety/depression ($R^2 = .20, \beta = .42, p < .001$). Step 2 yielded an increase of 5% of the variance explained ($p < .01$), but CSA was the only significant predictor of anxiety/depression ($\beta = .36, p < .001$). Step 3 yielded a significant increase of 9% in variance explained ($p < .01$). Maternal social support moderated the asso-

ciation between emotional abuse in dating relationships and anxiety/depression among African American males (See Figure 2), although the effect size was not large. The most striking differences emerged among African American males who had experienced little emotional abuse in dating relationships. In this case, African American males reported the lowest levels of anxiety/depression when they perceived high maternal social support and the highest levels of anxiety/depression when they perceived low maternal social support. Among African American males who reported high levels of emotional abuse in dating relationships, differences related to perceived maternal social support were less striking, although generally those males who perceived high support reported somewhat more anxiety/depression than those who revealed low maternal social support.

For African American females, CSA was associated with anxiety/depression at Step 1 only ($R^2 = .08, \beta = .28, p < .01$). At Step 2, emotional abuse was related to more anxiety/depression ($\beta = .35, p < .001$) and peer social support was associated with less anxiety/depression ($\beta = -.27, p < .001$). Social support did not serve as a moderator.

Caucasian participants. Among Caucasian males, those reporting more CSA in Step 1 indicated greater levels of depression/anxiety ($\beta = .19, p < .001$). In Step 2, emotional abuse in dating relationships indicated higher levels of anxiety/depression ($\beta = .36, p < .001$; see Table 3). Social support was not significantly associated with anxiety/depression in this equation and did not moderate the association between emotional abuse and the outcome.

With respect to Caucasian females, different patterns emerged. In Step 1, CSA was significantly associated with more anxiety/depression ($R^2 = .17, \beta = .41, p < .001$). At Step 2, CSA remained as a significant predictor ($\beta = .24$) and age and emotional abuse emerged as significant ($R^2 = .26, \beta_s = -.21, .24, ps < .01$). Social support, however, did not moderate the association between emotional abuse and social support.

Table 3
Summary of Hierarchical Regression Analysis for Emotional Abuse in Dating Relationships and Social Support Variables Predicting Anxiety/Depression Among African American and Caucasian Adolescents

Variable	African American Adolescents						Caucasian Adolescents					
	Males (N = 135)			Females (N = 132)			Males (N = 184)			Females (N = 23)		
	B	SE B	β	B	SE B	β	B	SE B	β	B	SE B	β
Step 1												
Age	.32	.29	.09	-.27	.24	-.10	-.22	.25	-.07	-.43	.21	-.13
CSA	.59	.11	.42**	.41	.13	.28**	.37	.15	.19*	.83	.12	.41**
Step 2												
Age	.09	.30	.03	-.37	.22	-.13	-.36	.24	-.11	-.69	.21	-.21**
CSA	.51	.12	.36**	.18	.12	.12	.20	.14	.10	.48	.15	.24**
EA	.74	.61	.11	1.84	.43	.35**	2.60	.53	.36**	1.35	.42	.24*
Mom SS	-1.05	.61	-.16	.00	.35	.00	-.87	.50	-.13	-1.14	.46	-.16
Dad SS	-.26	.47	-.05	-.12	.40	-.03	-.07	.50	-.01	-.49	.44	-.07
Peer SS	.04	.44	.01	-1.45	.43	-.27**	-.92	.43	-.15	-.86	.59	-.08

(Table 2 continues)

(Table 2 continued)

Variable	African American Adolescents				Caucasian Adolescents				
	Males (N = 135)		Females (N = 132)		Males (N = 184)		Females (N = 23)		
	B	SEB	β	B	SEB	β	B	SEB	β
Step 3									
Age	.12	.29	.03						
CSA	.60	.11	.43**						
EA	1.48	.63	.21						
Mom SS	-1.29	.59	-.20						
Dad SS	-.24	.45	-.04						
Peer SS	-.27	.42	-.05						
EA X Mom SS	1.61	.49	.31*						
EA X Dad SS	-1.05	.53	-.15						
EA X Peer SS	-.09	.43	-.02						

Note. For African American males: $R^2 = .20$ for Step 1 ($p < .001$); $\Delta R^2 = .05$ for Step 2 ($p < .001$); $\Delta R^2 = .09$ for Step 3 ($p < .001$). For African American females: $R^2 = .08$ for Step 1 ($p < .01$); $\Delta R^2 = .18$ for Step 2 ($p < .001$). For Caucasian males: $R^2 = .03$ for Step 1 ($p < .05$); $\Delta R^2 = .18$ for Step 2 ($p < .001$). For Caucasian females: $R^2 = .17$ for Step 1 ($p < .001$); $\Delta R^2 = .09$ for Step 2 ($p < .001$). CSA = Child Sexual Abuse; EA = Emotional abuse in dating relationships; Mom SS = Maternal social support; Dad SS = Paternal social support; Peer SS = Peer social support. For African American females, Caucasian males, and Caucasian females, because there were no statistically significant interaction terms in Step 3, results were presented and conclusions were drawn from the second step of the model.

* $p < .01$. ** $p < .001$.

Discussion

The present study examined dating violence victimization among African American and Caucasian adolescents. Thirty-seven percent of the participants reported that they had incurred physical abuse in a dating relationship and 62% indicated that they had been emotionally abused. These prevalence rates are consistent with those cited in previous literature (O’Keefe, 1998; Roscoe & Callahan, 1985). Findings highlight that dating violence is a pervasive form of victimization among the

adolescents surveyed. Combining these findings with the startling statistics that 20% of all female homicide victims are between the ages of 15 and 24 and one out of three female homicides is committed by the victim’s husband or boyfriend (Smith & Donnelly, 2001), the critical need for additional research to address adolescent dating violence becomes apparent.

Results also supported the broad expectation that victimization experiences would be associated with greater depression/anxiety symptoms, even after controlling for the well-documented relation between CSA and psy-

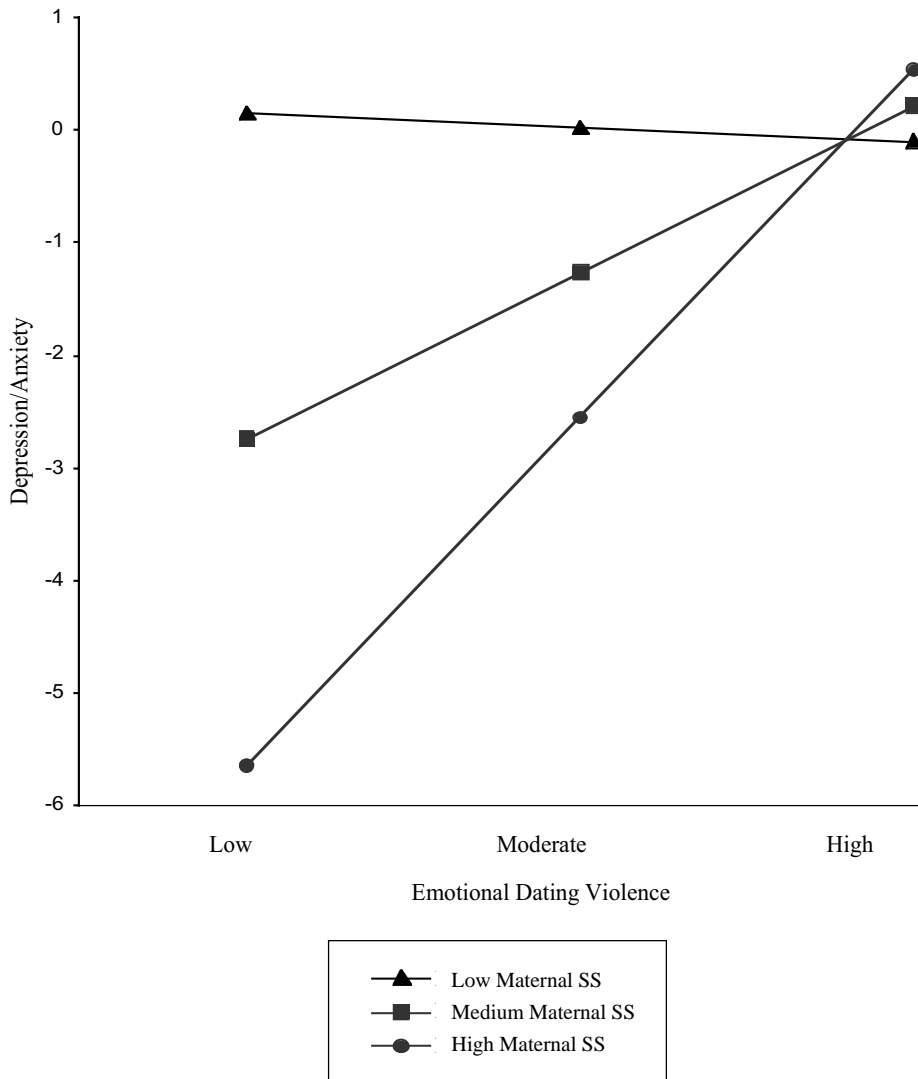


Figure 2. Maternal social support as a moderator between emotional abuse in dating relationships and anxiety/depression among African American males.

chological functioning. With respect to physical dating violence, social support appeared to play a particularly salient role. For African American males who had experienced high levels of physical dating violence, youth reported the least anxiety/depression when they indicated high maternal social support. The influence of maternal social support was even more striking at low levels of dating violence; in this case African American males reporting high levels of maternal social support revealed much less anxiety/depression than those males with low maternal social support. Among Caucasian females paternal social support was a salient factor, but findings were somewhat contrary to expectations. Specifically, paternal social support appeared to buffer effects of physical dating violence among Caucasian females with high, but not low, levels of physical dating violence. It should be noted, however, that this difference was quite small. The above findings provide an initial perspective on associations among social support, dating victimization, and psychological functioning; future studies should explore this phenomenon more thoroughly.

Emotional abuse in dating relationships also was linked to anxiety/depression. Among African American females and Caucasian males and females, emotional abuse was related to anxiety/depression; higher emotional abuse scores were associated with more anxiety/depression. For African American males, however, this association was moderated by maternal social support. Specifically, African American youth with low levels of emotional dating abuse reported the least anxiety/depression when they also perceived high levels of maternal social support. Conversely, among African American males with high levels of emotional abuse, those with high maternal social support experienced somewhat more anxiety/depression than those with low maternal social support. This difference was small, however. These findings indicate the importance of considering perceived maternal social support at all levels of emotional dating abuse victimization, even when the emotional abuse is not severe. Moreover, in line with previous research in the broader literature on resiliency

among African American youth, findings suggest that parental social support, in this case perceived maternal social support, plays a buffering role for African American youth with low and moderate levels of emotional dating abuse (Connell et al., 1994).

Effect sizes resulting from models including both physical dating violence and emotional abuse were strongest for African American youth, suggesting that the combination of experiences examined might be particularly relevant to anxiety/depression symptoms within this group. Conversely, effect sizes were weakest for Caucasian males. However, it should be noted that even for African American youth effect sizes were relatively small.

Given that dating violence among adolescents is likely to be associated with domestic violence across the lifespan (see Schewe, 2002 for a review), it is important to consider the findings of the current study in relation to the domestic violence literature. Social support has certainly been implicated as an important buffer between domestic violence and psychological adjustment for women (Mahlstedt & Keeny, 1993), including Black women (Fraser, McNutt, Clark, Williams-Muhammed, & Lee, 2002). However, it is also evident that as abuse continues, social support becomes less effective (Carlson, McNutt, Choi, & Rose, 2002). It is therefore plausible that the buffering role of social support in the current study of dating violence and depression/anxiety was found because the victimization was relatively new. Unfortunately, as the abuse continues victims might become less willing to disclose to their support network if they are unwilling to end the relationship. Therefore, future research should extend these findings to examine the association between social support and adolescent dating violence within a longitudinal design. This would allow for a closer exploration of how utilization of social support varies across a violent dating relationship.

Implications for School Mental Health Professionals

In response to the growing recognition that dating violence is a pressing issue among youth, dating violence programs have emerged

Table 4
Universal, Selective, and Indicated Prevention Measures for Adolescent Dating Violence and Abuse

	Universal	Selective	Indicated
Designed for	All adolescents	Adolescents in a subgroup with an elevated risk for dating violence/abuse	Adolescents with individual characteristics heightening their risk for dating violence/abuse
Applicable prevention efforts	(1) Increase knowledge about dating violence & abuse dynamics (2) Encourage youth to make healthy choices in relationships (3) Create safe school environments in which youth feel comfortable asking for help	(1) Develop dating programs designed specifically for youth in particular populations (MacGowan, 1997) (2) Include issues particularly salient for a subgroup in prevention efforts (e.g., the role of maternal social support among African American males)	(1) Focus on strengthening social support among youth without such resources (2) Encourage youth to draw from other personal resources that might serve as protective factors against dating violence/abuse and/or the negative effects of dating violence/abuse

that attempt to enhance students' knowledge about dynamics of dating violence. Some such interventions have been found to be helpful in modifying students' attitudes toward dating violence (e.g., Avery-Leaf, Cascardi, O'Leary, & Kano, 1997), although the effects on behavior are unclear. Interventions targeted at particular populations have also been developed, either focusing on members of a particular racial group or sex. For example, MacGowan (1997) found a five-session program designed to decrease relationship violence in a sample of primarily African American middle school students to be effective. Another prevention program was successful in empowering female high school and college students to make healthy choices in relationships and to recognize dynamics of abusive relationships (Rosen & Bezold, 1996).

In the absence of formal dating violence programs within schools, school personnel should at a minimum promote awareness about this issue, and create opportunities for adolescents to approach school staff to obtain help in curbing abusive behaviors directed toward them. When counseling students, school mental health professionals should inquire about victimization youth might have experienced by

dating partners, and educate adolescents about the cycle of interpersonal violence. Suggested prevention strategies targeted at the universal, selective, and indicated levels are outlined in Table 4.

Limitations

This study is cross-sectional in nature and therefore inferences about causality cannot be made. Longitudinal investigations are needed to address the causal ordering of victimization and outcomes. In addition, only one outcome was assessed (i.e., anxiety/depression), whereas victimization likely affects myriad factors (Callahan, Tolman, & Saunders, 2003). Further, we did not assess the extent and nature of students' dating relationships, and as such, a portion of the students who reported that they had never experienced dating violence likely responded in this manner because they had never been on a date. This could have influenced prevalence rates.

Our definition of emotional abuse in dating relationships was relatively liberal, and as such could have inflated prevalence rates and influenced multivariate findings. Additionally, given that the middle and high schools were from different geographic regions, a potential

confound exists that could have influenced findings. However, because findings are in line with previous research (i.e., dating violence was more prevalent in the high school), we do not anticipate this confound to have resulted in significantly erroneous findings. Another study limitation is that the research was conducted in two Midwestern cities, and accordingly findings might not generalize to other regions of the country or to suburban or rural populations. Finally, given that all data were derived through youth self-report, relationships among variables might have been inflated due to method variance. Future studies should use multi-informant designs.

Despite its limitations, this study provides an initial perspective on the potential function of perceived social support among African American and Caucasian adolescents who have been the targets of dating violence. It was encouraging that social support appears to minimize damaging effects of adolescent dating violence, including physical and emotional forms. As violence in relationships often isolates the victims from their social networks, adolescence appears to be a time in which prevention programming might be beneficial in stopping escalation of violence. Future studies should address additional resource factors, and should explore the role of perceived social support more systematically. Through identifying protective factors, researchers, educators, and clinicians will be better able to promote positive psychological well-being among African American and Caucasian adolescents.

Footnotes

¹ This study was part of a larger investigation and focuses only on African American and Caucasian participants from the two schools surveyed.

² The University of Illinois at Urbana-Champaign approved passive consent for this project in September 2000. To minimize participant risk we implemented multiple safeguards. First, for every survey administration a doctoral-level psychologist who was appropriately trained to provide an immediate response to the participant and direct him or her to appropriate resources was in the room. Second, we provided all participants a sheet listing

information about counseling and additional local resources. Third, we highlighted school-based resources to all students (e.g., guidance counselors). Finally, we told students that they could stop the survey at any time should they feel upset by the questions. It should also be noted that to the best of our knowledge no child was disturbed by survey questions; no child appeared upset on survey administration days nor did either school report student distress during subsequent discussions with school officials.

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