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Child maltreatment severity and adult trauma symptoms: Does perceived social support play a buffering role?

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Abstract

Objectives: The current study investigates the moderating effect of perceived social support on associations between child maltreatment severity and adult trauma symptoms. We extend the existing literature by examining the roles of severity of multiple maltreatment types (i.e., sexual, physical, and emotional abuse; physical and emotional neglect) and gender in this process. *Methods:* The sample included 372 newlywed individuals recruited from marriage license records. Participants completed a number of self-report questionnaires measuring the nature and severity of child maltreatment history, perceived social support from friends and family, and trauma-related symptoms. These questionnaires were part of a larger study that investigated marital and intrapersonal functioning. We conducted separate, two-step hierarchical multiple regression models for perceived social support from family and perceived social support from friends. In each of these models, total trauma symptomatology was predicted from each child maltreatment severity variable, perceived social support, and the product of the two variables. In order to examine the role of gender, we conducted separate analyses for women and men. *Results:* As hypothesized, increased severity of several maltreatment types (sexual abuse, emotional abuse, emotional neglect, and physical neglect) predicted greater trauma symptoms for both women and men, and increased physical abuse severity predicted greater trauma symptoms for women. Perceived social support from both family and friends predicted lower trauma symptoms across all levels of maltreatment for men. For women, greater perceived social support from friends, but not from family, predicted decreased trauma symptoms. Finally, among women, perceived social support from family interacted with child mal-

treatment such that as the severity of maltreatment (physical and emotional abuse, emotional neglect) increased, the buffering effect of perceived social support from family on trauma symptoms diminished. *Conclusions:* The results of the current study shed new light on the potential for social support to shield individuals against long-term trauma symptoms and suggest the importance of strengthening perceptions of available social support when working with adult survivors of child maltreatment.

Keywords: child abuse, childhood sexual abuse, long-term effects, psychological functioning, social support

Introduction

Child maltreatment (i.e., sexual, physical, and emotional abuse; physical and emotional neglect) has long been recognized as a traumatic event capable of producing long-term psychological distress, including post-traumatic stress symptoms. However, there is substantial variability in the degree of long-term psychological difficulties reported by adult survivors. Recent research has focused on factors that may explain this variation. One such factor is the nature and severity of the maltreatment itself. Several studies of sexual abuse survivors suggest that abuse characteristics indicative of increased severity (e.g., more invasive, frequent, or enduring acts) contribute to increased long-term difficulties, including trauma symptoms (Risser, Hetzel-Riggin, Thomson, & McCanne, 2006; Steel, Sanna, Hammond, Whipple, & Cross, 2004; Trickett, Noll, Reiffman, & Putnam, 2001). In fact, in one population-based study of adult women, abuse involving penetration was found to be the single best predictor of PTSD (Kilpatrick et al., 1989). Although maltreatment types other than CSA have been less often studied, abuse severity of these types also appears to play a role in adjustment following maltreatment. For example, child physical abuse (CPA) resulting in greater physical injury has been linked to increased psychotic symptoms among adults (Schenkel, Spaulding, DiLillo, & Silverstein, 2005), while increased severity of emotional abuse, as rated by trained interviewers, is associated with more severe levels of depression (Bifulco, Moran, Baines, Bunn, & Stanford, 2002).Together, these findings suggest the importance of considering maltreatment severity—rather than simply dichotomizing samples into victims and nonvictims—when examining these experiences as risk factors for adult psychological symptoms.

Social support as a protective factor

Social support is another factor that may contribute to the variability in long-term impairment among adult victims of child maltreatment. Social support has been theorized to shield trauma-exposed individuals from the development of post-traumatic symptoms (Brewin, Andrews, & Valentine, 2000; Guay, Billette, & Marchand, 2006). According to the stress-buffering model, social support may mitigate the psychological impact of a stressful event by attenuating the stress appraisal response (Cohen & Wills, 1985). That is, an individual may deem an event less stressful if he or she perceives that others will provide resources needed to cope with the event. Social support following the stressful event may also facilitate cognitive and emotional processing, allowing victims to reappraise the event

in a more adaptive manner (Thoits, 1986; Williams &Joseph, 1999). Meta-analytic findings show that a lack of social support is the single strongest predictor of the development of traumatic stress symptoms among military and civilian populations exposed to psychological trauma (ES = 0.40; Brewinet al., 2000). While the studies included in this meta-analysis examined varying types of social support (e.g., perceived social support, structural support, functional support), researchers (Cohen & Wills, 1985; Sarason, Sarason, & Gurung, 2001) have found that perceived social support, in particular, best moderates psychological distress. In other words, the perception of one's ability to access social support, if needed, is likely more valuable than the actual support received immediately following a stressful event.

A number of studies support the notion that perceived social support lessens the long-term impact of maltreatment. For example, perceived social support may protect against feelings of loss among adult female victims of CSA attending college (Murthi & Espealage, 2005). Similarly, greater perceived social support from a spouse may increase resilience to difficulties in various domains of functioning among both female and male survivors of CSA, CPA, and neglect (Dumont, Widom, & Czaja, 2007). Among women seeking treatment at an outpatient clinic for psychological difficulties related to CSA, treatment focused on increasing the perception of available social support as a means of improving self-esteem also attenuated symptoms of post-traumatic stress disorder (Hyman, Gold, & Cott, 2003).

Despite these findings, there may be limits to the protective function conveyed by social support, particularly in cases of severe child maltreatment. Specifically, victims of severe maltreatment may perceive that the resources provided by family and friends will not provide sufficient benefit to aid in coping with intense post-traumatic reactions associated with severe victimization (e.g., fear, anger, avoidance). Findings from two prior studies support the possibility. In a study of undergraduate students (Scarpa, Haden, & Hurley, 2006), perceived social support from friends served as a buffer between community violence victimization (i.e., violence experienced within one's home, school, or surrounding neighborhood) and PTSD symptoms only when individuals had experienced fewer incidents of violence. In a second study, which examined adolescents and young adults transitioning out of the child welfare system, the effect of perceived social support in buffering relations between child maltreatment and depression diminished as the number of types of maltreatment experienced increased (Salazar, Keller, & Courtney, 2011). These studies suggest an attenuated benefit of social support with increasing trauma severity.

In sum, considerable evidence indicates that more severe child maltreatment is associated with increased psychological difficulties, including trauma symptoms, among adult victims (Bifulco et al., 2002; Risser et al., 2006; Schenkel et al., 2005). Further, theory and accumulating evidence indicate that perceived social support may buffer against the negative psychological consequences of child maltreatment (Dumont et al., 2007; Hyman et al., 2003; Murthi & Espealage, 2005). However, as indicated by recent empirical findings, the buffering effect of social support may vary depending on the severity and complexity of victimization experienced (Salazar et al., 2011; Scarpa et al., 2006).

The present study

Building on this work, a major goal of the present study was to examine the moderating effect of perceived social support on associations between maltreatment severity and adult trauma symptoms. In doing so, we extended the current literature by considering the severity of multiple abuse types and gender in this process. Although most studies have focused on *female* victims of *sexual abuse*, physical abuse, emotional abuse, and neglect have also been linked to long-term trauma symptoms and are reported as often by men as by women (U.S. Department of Health and Human Services, 2008). Moreover, men generally seek less social support, perceive lower levels of social support, and experience less psychological benefit from social support than do women (Cutrona, 1996; Flaherty & Richman, 1989; Turner, 1994; Walen & Lachman, 2000). Thus, it is possible that perceived social support plays a lesser role in buffering against maltreatment-related trauma symptoms among men.

Consistent with the above literature, we hypothesized that: (1) more severe child maltreatment of any type would independently predict increased trauma symptoms in both men and women; (2) increased perceived social support from both family and friends would predict decreased trauma symptoms in men and women; (3) an interaction would occur, such that associations between child maltreatment severity and trauma symptoms would diminish for both men and women as social support from family or friends increased; (4) as the severity of child maltreatment increased, the buffering effect of social support would be attenuated; and (5) the buffering effect of perceived social support would be less likely among men than among women.

Methods

Participants

Participants for this study were 372 spouses recruited from a public database of marriage license records in a Midwestern county as part of a larger prospective study on the associations between child maltreatment history and adult interpersonal functioning. To qualify for the study, individuals had to be 19 years of age or older (the age of majority in the state where data collection took place) and be married for less than one year at the time of initial recruitment. Participants in the resulting sample ranged in age from 19 to 50 (M = 26.59, SD = 4.13) and had been married 11–15 months (M = 11.06; SD = 2.46) at the time of data collection. Regarding demographics, 94.1% of participants identified as European American, 1.5% Hispanic/Latino, 0.7% African American, 0.7% Asian American, and 0.7% Native American. Finally, reports of current household income were as follows: $40,000 or less = 44.5%; $41,000–80,000 = 47.5%; and greater than $81,000 = 8.2%.

Measures

Childhood Trauma Questionnaire (CTQ; Bernstein & Fink, 1998). The CTQ is a 25-item self-report inventory that retrospectively assesses childhood abuse experiences, including sexual abuse, physical abuse, emotional abuse, physical neglect, and emotional neglect. Regarding the abuse scales, CTQ respondents utilize a five-point Likert scale anchored from

1 (never true)to 5 (very often true) to indicate whether they experienced a variety of abusive acts before age 18. Scores on each of the CTQ subscales range from 5 to 25 with higher scores indicative of greater abuse severity. The authors (Bernstein & Fink, 1998) provide cut scores, requiring individuals to meet a specified minimum raw score in order to be classified as abused or neglected. The CTQ has demonstrated excellent psychometric properties on each of the abuse subscales (Bernstein, Fink, & Handelsman, 1994; Bernstein & Fink, 1998). In the current sample, the mean internal consistency reliability estimate across the five CTQ subscales was 0.81.

Perceived Social Support Index (PSS; Procidano & Heller, 1983). The PSS is a 40-item questionnaire designed to detect the level of social support from family and friends that respondents feel they can access. The questionnaire contains a 20-item Family subscale (PSS-FAM) and a 20-item Friend subscale (PSS-FRI). The PSS-FAM asks participants to agree, disagree, or indicate uncertainty about statements such as "Members of my family seek me out for companionship." The PSS-FRI asks participants to agree, disagree, or indicate uncertainty about statements such as "My friends enjoy hearing about what I think." Higher scores on each subscale are indicative of greater levels of perceived social support. Both PSS subscales have well-established psychometric properties (Procidano & Heller, 1983). Coefficient alpha in the current sample for the PSS-FAM was 0.91 while coefficient alpha for the PSS-FRI was 0.90.

Trauma Symptom Inventory (TSI; Briere, 1995). The TSI is a 100-item self-report measure developed to assess a variety of psychosocial, behavioral, and emotional trauma-related symptoms. The questionnaire contains ten clinical scales: anxious arousal, depression, anger/irritability, intrusive experiences, defensive avoidance, dissociation, sexual concerns, dysfunctional sexual behavior, impaired self-reference, and tension reduction behavior. Respondents are asked to utilize a four-point Likert scale, anchored from 0 (it has never happened) to 3 (it has happened frequently) to indicate the frequency of symptoms within the past six months. For purposes of the current study, only the TSI total score, a measure of total trauma symptoms, was utilized. The TSI has excellent psychometric properties (Briere, Elliott, Harris, & Cotman, 1995; McDevitt-Murphy, Weathers, & Adkins, 2005). Coefficient alpha in the current sample was 0.96.

Procedure

Letters were mailed to all couples who applied for marriage licenses in the county during the time of recruitment, inviting them to participate in the study. Of those contacted, 14.7% responded and ultimately enrolled in the study. This response rate is consistent with other studies employing similar recruitment procedures (e.g., Davila, Bradbury, Cohan, & Tochluk, 1997). Those participating in the study completed questionnaires in private at a self-set pace and received monetary compensation following completion of the study tasks. These questionnaires were part of a larger battery of measures and tasks designed to assess marital and intrapersonal functioning.

Analytic strategy

Using the techniques outlined by Baron and Kenny (1986), a two-step hierarchical regression model was built to predict total trauma symptoms from each centered child maltreatment severity variable, centered perceived social support from family, and the product of the two centered variables. Next, a two-step hierarchical regression model was built to predict total trauma symptoms from each centered child maltreatment severity variable, centered perceived social support from friends, and the product of the two centered variables. While the data used in the current study were collected from married couples, because each spouse reported on his or her own maltreatment history and perceptions of their own distress and perceived social support, we ran separate regression models for women and men. This analytic strategy is consistent with calls by Guay and colleagues (2006) for studies examining the unique relationships between social support and trauma symptoms for each gender.

Results

Descriptive characteristics of the sample

Data analyses began with an assessment of descriptive data. Using dichotomous cutoff scores employed by Bernstein and Fink, 1998, (201) (54.0%) participants reported experiences that met the criteria for one or more forms of child maltreatment on the CTQ. Twenty-nine (15.6%) women and 9 (4.8%) men met criteria for sexual abuse, 29 (15.6%) women and 50 (26.9%)men met criteria for physical abuse, 61 (32.8%) women and 46 (24.7%) men met criteria for emotional abuse, 34 (18.3%)women and 40 (21.5%) men met criteria for physical neglect, and 46 (24.7%) women and 66 (35.5%) men met criteria for emotional neglect. Descriptive statistics of the sample are presented in table 1.

Also in table 1, Analyses of Variance (ANOVA) revealed that women endorsed slightly more severe sexual abuse and emotional neglect victimization than did men. Men endorsed significantly higher levels of physical abuse victimization than did women. No differences were found between men and women with regard to emotional abuse or physical neglect severity. Women also endorsed perceiving significantly more social support from both family and friends than did men. Finally, there was no significant difference in trauma symptoms scores between women and men in the overall sample. In table 2, bivariate correlations shown along the diagonal quantify the extent of relationships between all independent variables, hypothesized moderating variables, and the dependent variable. Off-diagonal elements quantify the correlations between all variables within men (above the diagonal) and within women (below that diagonal).

Table 1. Descriptive statistics by gender.

	Overall		Women		Men		
Variable	Mean	S.D.	Mean	S.D.	Mean	S.D.	$F(1, 369)$
Childhood Trauma Questionnaire	$N = 372$		$n = 186$		$n = 186$		
Sexual abuse	5.61	2.21	5.89	2.56	5.32	1.76	6.18*
Physical abuse	6.77	2.83	6.43	2.64	7.11	2.98	5.84*
Emotional abuse	7.72	3.41	8.00	3.68	7.43	3.01	2.56
Physical neglect	6.25	2.15	6.04	1.76	6.46	2.49	3.54
Emotional neglect	8.41	3.85	8.01	3.66	8.81	4.01	4.03*
Perceived social support							
Family	15.24	5.03	16.14	4.44	14.32	5.43	12.45**
Friends	15.15	4.49	15.75	4.23	14.55	4.67	6.63*
Trauma Symptom Inventory							
Total score	48.30	25.57	49.45	25.97	47.14	25.17	0.75

*$p < 0.05$, **$p < 0.01$

Table 2. Intercorrelations by gender.

Variable	1	2	3	4	5	6	7	8
1. CTQ sexual abuse	—	0.40**	0.41**	0.36**	0.30**	–0.11	–0.04	0.17*
2. CTQ physical abuse	0.24**	—	0.67**	0.52**	0.46**	–0.32**	–0.18*	0.16*
3. CTQ emotional abuse	0.26**	0.61**	—	0.63**	0.60**	–0.41**		–0.15*
4. CTQ physical neglect	0.17*	0.36**	0.48**	—	0.63**	–0.41**	–0.20**	0.23**
5. CTQ emotional neglect	0.32**	0.49**	0.75**	0.46**	—	–0.63**	–0.19**	0.28**
6. PSS family	–0.24**	–0.20**	–0.26**	–0.13	–0.46**	—	–0.29**	–0.24**
7. PSS friends	–.10	–0.00	0.02	–0.05	–0.08	0.25**	—	–0.21**
8. TSI total score	0.18*	0.22**	0.31**	0.17*	0.28**	–0.09	–0.29**	—

Note: $N = 186$ men and 186 women. Correlations for men are above the diagonal; correlations for women are below the diagonal.

*$p < 0.05$, ** $p < 0.01$

Women's perceived social support from family

As shown in table 3, results revealed significant main effects for women for every form of child maltreatment in predicting trauma symptoms: sexual abuse model, $R^2 = 0.04$, $F(2, 181) = 3.28$, $p < 0.05$, physical abuse model, $R^2 = 0.05$, $F(2, 181) = 4.77$, $p = 0.01$, emotional abuse model, $R^2 = 0.10$, $F(2, 181) = 9.53$, $p < 0.001$, physical neglect model, $R^2 = 0.04$, $F(2, 181) = 3.29$, $p < 0.05$, and emotional neglect model, $R^2 = 0.08$, $F(2, 181) = 8.01$, $p < 0.001$. The main effect of perceived social support from family did not independently predict trauma symptoms in any model. However, perceived social support from family interacted with physical abuse, $R^2 = 0.09$, $R^2\Delta = 0.04$, $p = 0.007$, emotional abuse, $R^2 = 0.13$, $R^2\Delta = 0.03$, $p = 0.009$, and emotional neglect, $R^2 = 0.12$, $R^2\Delta = 0.04$, $p = 0.008$, to predict moderation of the relationship between these forms of abuse severity and trauma symptoms. Specifically, women

experiencing low to moderate severity abuse who received higher levels of social support reported less severe trauma symptoms. However, the buffering effect of perceived social support from family decreased for women who experienced more severe physical abuse (see fig. 1), emotional abuse (see fig. 2), or emotional neglect (see fig. 3). Perceived social support from family did not moderate the relationship between sexual abuse and trauma symptoms or between physical neglect and trauma symptoms for women.

Table 3. Perceived social support from family as a moderator of child maltreatment severity in predicting symptoms of trauma.

	Women			Men		
Variable	B	SEB	β	B	SEB	β
Step 1 – main effects						
Sexual abuse	1.65	0.76	0.16*	2.04	1.02	0.15*
Perceived family support	–0.34	0.48	–0.06	–1.01	0.33	–0.22**
Step 2 – interaction						
Sexual abuse × perceived family support	0.17	0.12	0.11	0.09	0.13	0.06
Step 1 – main effects						
Physical abuse	2.00	0.72	24**	0.89	0.64	0.11
Perceived family support	–0.34	0.43	–0.06	–0.93	0.35	–0.20**
Step 2 – interaction						
Physical abuse × perceived family support	0.34	0.13	0.20**	0.06	0.09	0.06
Step 1 – main effects						
Emotional abuse	2.12	0.51	0.30***	2.80	0.61	0.35***
Perceived family support	–0.11	0.43	–0.02	–0.42	0.35	–0.09
Step 2 – interaction						
Emotional abuse × perceived family support	0.26	0.10	0.19**	0.10	0.08	0.11
Step 1 – main effects						
Physical neglect	2.36	1.08	0.16*	1.72	0.79	0.17*
Perceived family support	–0.45	0.43	–0.08	–0.76	0.36	–0.17*
Step 2 – interaction						
Physical neglect × perceived family support	0.44	0.25	0.13	0.12	0.11	0.12
Step 1 – main effects						
Emotional neglect	2.13	0.57	0.30***	1.39	0.57	0.23*
Perceived family support	0.24	0.47	0.04	–0.044	0.42	–0.10
Step 2 – interaction						
Emotional neglect × perceived family support	0.26	0.01	0.20**	0.02	0.07	0.03

*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

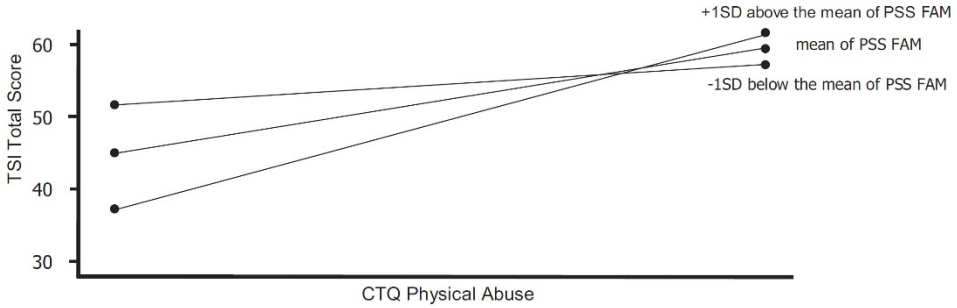

Figure 1. Relationship between physical abuse severity and trauma symptomatology for different levels of perceived social support from family.

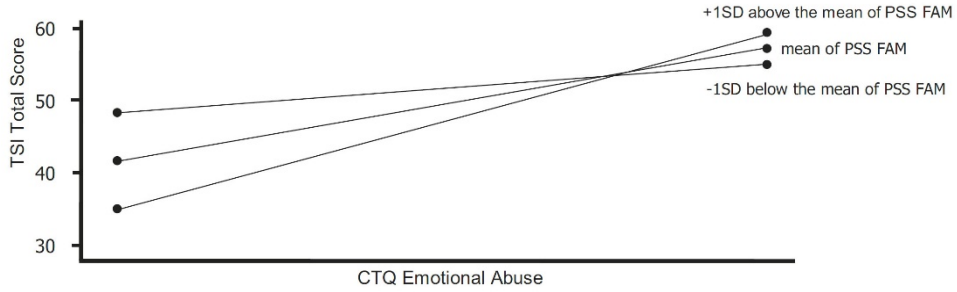

Figure 2. Relationship between emotional abuse severity and trauma symptomatology for different levels of perceived social support from family.

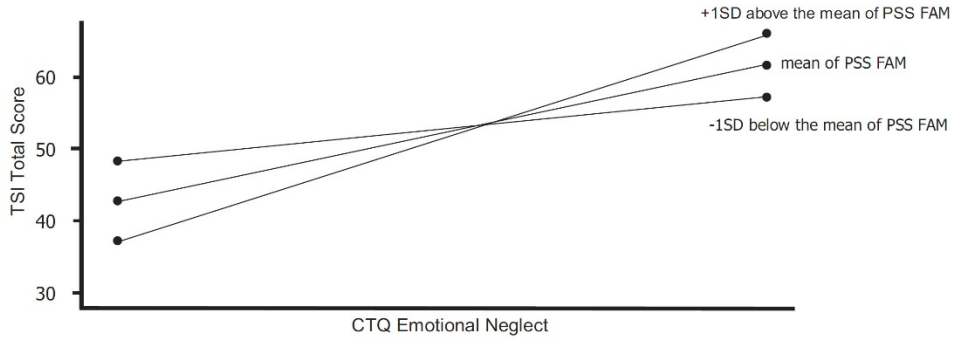

Figure 3. Relationship between emotional neglect severity and trauma symptomatology for different levels of perceived social support from family.

Women's perceived social support from friends

As shown in table 4, for women, analyses revealed significant main effects on trauma symptoms for every form of child maltreatment: sexual abuse, $R^2 = 0.11$, $F(2, 181) = 11.03$, $p < 0.001$, physical abuse, $R^2 = 0.13$, $F(2, 181) = 13.82$, $p < 0.001$,emotional abuse, $R^2 = 0.19$, $F(2, 181) = 20.57$, $p < 0.001$, physical neglect, $R^2 = 0.11$, $F(2, 181) = 11.21$, $p < 0.001$, and emotional neglect, $R^2 = 0.15$, $F(2, 181) = 16.48$, $p < 0.001$. Moreover, increased perceived social

support from friends independently predicted decreased trauma symptoms in all models of child maltreatment severity. However, perceived social support from friends did not moderate associations between any maltreatment type and trauma symptoms for women.

Men's perceived social support from family

Also seen in table 3, results for men revealed significant main effects on trauma symptoms for sexual abuse, $R^2 = 0.08$, $F(2, 178) = 7.42$, $p = 0.001$, emotional abuse, $R^2 = 0.16$, $F(2, 178) = 16.61$, $p < 0.001$, physical neglect, $R^2 = 0.08$, $F(2, 178) = 7.81$, $p = 0.001$, and emotional neglect, $R^2 = 0.09$, $F(2, 178) = 8.46$, $p < 0.001$, but not for physical abuse. The main effect for perceived social support from family independently predicted decreased trauma symptoms in models of sexual abuse, physical abuse, and physical neglect. Perceived social support did not independently predict trauma symptom levels in models of emotional abuse or emotional neglect. However, no type of child maltreatment severity significantly interacted with perceived social support from family to moderate associations between child maltreatment and trauma symptoms for men.

Men's perceived social support from friends

As shown in table 4, results for men also revealed significant main effects on trauma symptoms for the severity of: sexual abuse, $R^2 = 0.07$, $F(2, 178) = 6.43$, $p = 0.002$, emotional abuse, $R^2 = 0.17$, $F(2, 178) = 18.43$, $p < 0.001$, physical neglect, $R^2 = 0.08$, $F(2, 178) = 8.03$, $p < 0.001$, and emotional neglect, $R^2 = 0.10$, $F(2, 178) = 10.34$, $p < 0.001$. The main effect of physical abuse on trauma symptoms trended toward significance for men (i.e., $\beta = 0.14$, $p < 0.10$; $R^2 = 0.06$, $F[2, 178] = 5.68$, $p = 0.004$). Moreover, the main effect of perceived social support from friends independently predicted decreased trauma symptoms in all models of child maltreatment severity. Consistent with the results for women, however, perceived social support from friends did not moderate associations between any maltreatment type and trauma symptoms for men.

Table 4. Perceived social support from friends as a moderator of child maltreatment severity in predicting symptoms of trauma.

	Women			Men		
Variable	B	SEB	β	B	SEB	β
Step 1 – main effects						
Sexual abuse	1.53	0.71	0.15*	2.28	1.02	0.16*
Perceived friend support	–1.70	0.43	–0.28***	–1.05	0.39	–0.20**
Step 2 – interaction						
Sexual abuse × perceived friend support	–0.12	0.15	–0.56	–0.31	0.32	–0.08
Step 1 – main effects						
Physical abuse	2.11	0.67	22**	1.16	0.62	0.14†
Perceived friend support	–1.78	0.42	–0.29	–0.96	0.40	–0.18*
Step 2 – interaction						
Physical abuse × perceived family support	–0.03	0.17	–0.01	0.12	0.14	0.07
Step 1 – main effects						
Emotional abuse	2.21	0.47	32***	2.93	0.55	37***
Perceived friend support	–1.83	0.41	30	–0.79	0.37	–0.15
Step 2 – interaction						
Emotional abuse × perceived friend support	0.03	0.12	0.02	0.03	0.10	0.02
Step 1 – main effects						
Physical neglect	2.29	1.03	0.16*	2.08	0.74	21*
Perceived friend support	–1.174	0.43	–0.29	–0.87	0.39	–0.16*
Step 2 – interaction						
Physical neglect × perceived friend support	–0.01	0.25	0.010	0.05	0.15	0.03
Step 1 – main effects						
Emotional neglect	1.85	0.48	26***	1.78	0.45	26***
Perceived friend support	–1.66	0.42	–0.27	–0.83	0.39	–0.15
Step 2 – interaction						
Emotional neglect × perceived friend support	–0.05	0.11	–0.03	–0.01	0.08	–0.01

† < .10, *p < 0.05, **p < 0.01, ***p < 0.001

Discussion

The primary aim of this study was to examine the unique and interactive impact of child maltreatment severity and perceived social support on adult trauma symptoms. We expected that increased maltreatment severity and decreased social support would individually and jointly predict greater trauma symptoms. Consistent with these predictions, greater severityof several maltreatment types (sexual abuse, emotional abuse, emotional neglect, and physical neglect) was associated with greater trauma symptoms reported by

both women and men. These findings extend previous work with female victims(Bifulco et al., 2002; Risser et al., 2006; Steel et al., 2004) by suggesting that maltreatment severity may increase the risk of trauma symptoms for adult men as well. Moreover, while more severe sexual and physical abuse has previously been linked to trauma symptoms, the present study indicates that neglect and psychological abuse in childhood may also increase adult trauma symptoms. These findings comport with an emerging literature that identifies these more pervasive but less discrete acts of abuse as potential contributors to later trauma symptoms (Lang et al., 2006; Taft, Schumm, Marshall, Panuzio, & Holtzworth-Munroe, 2008). One exception to this overall pattern was that physical abuse severity did not predict greater trauma symptoms for men. This unexpected finding may be due in part to a propensity for traumatic stress symptoms among men to manifest in externalizing tendencies (e.g., substance use, violence; Tolin & Foa, 2006)—behaviors that are not well captured by the trauma measure used here.

A number of findings regarding social support, independent of maltreatment history, bear mentioning. Women reported more perceived social support than did men, from both friends and family. These gender differences are consistent with the broader social support literature (e.g., Cutrona, 1996) and may reflect masculine gender-role socialization, which includes an emphasis on independence and emotional constriction that may conflict with beliefs associated with support-seeking behavior (Addis & Mahalik, 2003). While we expected that increased perceived social support from both family and friends would predict decreased trauma, only their perceived social support from friends (not family) predicted lower levels of trauma symptoms among women. By contrast, we found full support for our hypothesis in men, as greater social support from both friends and family predicted lower trauma symptoms across abuse types. Together these findings suggest that although men perceive less overall social support than do women, they may derive more benefit from that support in the form of reduced trauma symptoms associated with multiple forms of maltreatment. Finally, the lack of interaction between child maltreatment severity and perceived social support is contrary to our hypothesis and suggests that men seem to benefit from perceived social support, regardless of the severity of their maltreatment.

Consistent with our expectations as well as the stress buffering model (Cohen & Wills, 1985), perceived social support from family protected against trauma symptoms among women reporting physical abuse, emotional abuse, and emotional neglect. However, as the severity of each abuse type increased, the mitigating effect of social support from family diminished. Thus, perceived social support from family served as a buffer between maltreatment and trauma symptoms only when individuals had experienced low to moderate severity maltreatment. This finding is consistent with others showing a decreasing impact of social support associated with increasing types and incidents of reported violence (Salazar et al., 2011; Scarpa et al., 2006).These results may reflect that female victims of mild or moderate abuse feel more comfortable turning to family members, such as a nonabusing parent or other relatives, for support. Compared to those experiencing more severe abuse, these individuals may perceive that social support from family will aid them in coping with their abuse experiences, perhaps by helping them reappraise the maltreatment in a more adaptive manner (Williams & Joseph, 1999). On the other hand, women who endured more severe maltreatment may feel unable to turn to nonoffending family

members who may have known of the abuse but did nothing to stop it. In such cases, women may feel isolated and perceive little or no familial social support. Even in situations where victims of more severe abuse turn to family members, the greater trauma symptoms associated with those experiences may exceed that which can be ameliorated through social support. This possibility is consistent with other recent findings (Salazar et al., 2011; Scarpa et al., 2006) showing that social support's buffering effect is limited by severity across various populations, trauma types, and mental health outcomes.

Limitations and future directions

Limitations of the present study should be acknowledged. First, the current sample was predominately European American, reflective of the state in which the data were collected. However, research indicates that the lifetime prevalence of trauma symptoms varies significantly across ethnic groups (Roberts, Gilman, Breslau, Breslau, & Koenen, 2011). Thus, future studies should employ more ethnically diverse samples to examine whether social support differentially buffers against trauma symptoms across these groups. In addition, participants were newlyweds who had been married less than one year at the time of study recruitment. It is possible that the perception and benefit of social support from family and friends may shift as couples advance in their relationships. For example, partners may become more reliant on spouses as a primary source of support, as opposed to other family and friends. Thus, the current findings may be less generalizable to couples who have been married for a more extended period. A third limitation is the use of a retrospective, self-report measure of child maltreatment. Retrospective measures of child maltreatment are frequently used (Hulme, 2004), and have been shown to have convergent validity with documented abuse cases (Goodman et al., 2003). Even so, participant recollection of traumatic experiences may be susceptible to underreporting. Social support data were also assessed via self-report, which may be subject to response bias in that cognitively appraised perceptions of social support may be influenced by an individual's mood, stress level, or preexisting psychopathology (Cutrona, 1996; Yap & Devilly, 2004). Future work might employ observational measures of social support (e.g., Social Support Interaction Coding System [Pasch & Bradbury, 1997], Social Support Behavior Code [Cutrona & Suhr, 1992]) to shed further light on the role of these processes in buffering against the long-term impact of maltreatment.

Clinical implications

Results of this study have important implications for clinicians seeking to increase protective factors among victims of maltreatment, especially given that many empirically supported treatment protocols emphasize the importance of social support in recovery (e.g., Hansen, Hecht, & Futa, 1998; Najavits, 2002). When encouraging clients to rely on their social networks as a means of coping with abuse-related distress, clinicians should consider the level of social support an individual feels is available. If limited support is perceived, it may be necessary to focus on strengthening perceptions of available support prior to encouraging victims to rely on such support as a coping mechanism. Moreover, clinicians must be vigilant to the influence of trauma symptoms such as avoidance, feelings of detachment, and emotional numbing in affecting the ability of victims to seek fulfilling

support. Clients experiencing deficits in support-seeking behavior may benefit from strengthening skills for identifying and inviting support from others. Finally, this is among the first studies to find that perceived social support from family may be less effective in helping victims of severe abuse to overcome trauma symptoms. Obviously, clinicians should be cautious to refrain from encouraging adult victims to seek support from the same family environment that may have perpetrated or unknowingly colluded in the abuse. In these cases, strengthening the support victims perceive from extrafamilial sources may be an alternative to the painful task of repairing strained family relationships. Strengthening perceptions of available support may be particularly important for male survivors of abuse, who may be less inclined to seek supportive resources due to pressure to conform to the gender norms of independence and tempered emotional expression (Addis & Mahalik, 2003). Finally, as research continues to suggest that male victims of maltreatment may experience distress levels similar to that of females, clinicians should take care to thoroughly assess symptoms levels, bearing in mind that even mild to moderate trauma symptoms may still hinder functioning. Clinicians should also consider that men may evidence traumatic stress by exhibiting externalizing symptoms, such as substance use or violent behavior (Tolin & Foa, 2006) rather than more classic trauma symptoms (e.g., hypervigilence, reexperiencing).

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