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The Protective Role of Friendship on the Effects of Childhood Abuse and Depression

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Abstract

Background—This study explored the relationships between childhood maltreatment (sexual, physical, and emotional abuse, as well as neglect), adult depression, and perceived social support from family and friends.

Methods—As part of an NIH-funded study of risk and resilience at a public urban hospital in Atlanta, 378 men and women recruited from the primary care and obstetrics gynecology clinic waiting areas answered questions about developmental history, traumatic experiences, current relationship support, and depressive symptoms.

Results—Childhood emotional abuse and neglect proved more predictive of adult depression than childhood sexual or physical abuse. In females only, perceived friend social support protected against adult depression even after accounting for the contributions of both emotional abuse and neglect.

Conclusions—These findings may elucidate the particular importance of understanding the effects that emotional abuse and neglect have on adult depression and how perceived friendship support may provide a buffer for women with a history of early life stress who are at risk to develop adult depression.

Keywords

Child Abuse; Childhood Maltreatment; Trauma; Depression; Social Support; Women

Introduction

Research into childhood maltreatment (e.g. sexual, physical, emotional abuse, and neglect) has demonstrated the long-term psychological effects that can occur in those reporting a history of maltreatment (Brown et al. 1999; Hinson et al. 2002). Specifically, the relationship between child maltreatment and adult depression has been firmly established (Bernet and Stein, 1999; Heim and Nemeroff, 2001; Kaufman and Charney, 2001; Vranceanu et al. 2007;). Studies show that reports of multiple forms of maltreatment in childhood is linked to higher rates of depressive symptoms in adulthood (Bifulco et al. 2002; Vranceanu et al. 2007). However, the relationships between different types of maltreatment and adult depression has not been amply explored (Bifulco et al. 2002).

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Childhood emotional abuse and neglect are the least studied types of childhood maltreatment (McSherry 2007; Wright 2007). Both, however, are clearly linked to adult psychopathology (Bifulco et al. 2002; McSherry 2007). Mullen et al. (1996) examined the effects of childhood maltreatment in a community-based sample of women and found that emotional abuse was related to depression and suicidal behavior. Additionally, a study by Bifulco et al. (2002) demonstrated that emotional abuse adds to the prediction of lifetime major depression above and beyond other forms of childhood maltreatment (e.g., sexual, physical abuse, and neglect). Although childhood neglect has been largely ignored in studies examining reports of maltreatment, its common co-occurrence with maltreatment demonstrates a clear link between neglect and adult psychopathology (McSherry 2007).

The impact of deficient social support on an individual's mental health has also been well documented (Kinard 1996). Research has shown that the *perception* of social support, one's subjective sense of other's availability to provide emotional support and aid with tangible needs, can influence how an individual reacts to stressful situations (Hyman et al. 2003; Maher et al. 2006; Peirce et al. 2000). Social support that is perceived as adequate can shape an individual's cognitive experience of a stressful event and, therefore, can potentially buffer against negative reactions including depression (Charuvastra and Cloitre 2008; Hyman et al. 2003). Because much of the trauma that occurs with childhood maltreatment is experienced within the family, an individual's subjective perception of family support in adulthood may be affected by their memory of abuse or neglect in childhood. The interconnection between perceived family support and the experiences within the family as a child could have an important effect on whether family support can act as a buffer for adult victims of child abuse.

There is limited research available on how perceived social support in adulthood may mediate the impact of stressful childhood events (e.g., childhood abuse or neglect) as a risk factor for depression. Because both the effects of childhood maltreatment and the perception of social support have been shown to impact the risk for adult depression, understanding the relationship among these three variables is important. Thus the goal of the present paper is to provide an exploratory investigation that examines childhood emotional abuse and neglect more closely in relation to perceived social support and depression in adulthood. Specifically, the current study has three primary goals: 1) to evaluate the relative contributions of childhood sexual, physical and emotional abuse as well as childhood emotional neglect to the prediction of adult depression, 2) to gain a richer understanding of the different effects from perception of family support and friend support in the prediction of adult depression, particularly as it relates to childhood maltreatment, and 3) to examine the role of gender in understanding the relationship between these variables.

Method

Procedure

Participants were recruited from the General Medical and Obstetric/Gynecological Clinics at a publicly funded, not-for-profit healthcare system that serves the low-income and homeless population in Atlanta, Georgia. The clinic population is overwhelmingly minority (>80% African American and 5–10% Hispanic) and poor (87% with monthly household income < \$1000). Data were collected as part of the Grady Trauma Project, a 5-year NIH-funded study of risk and resilience to PTSD at Grady Hospital (see Bradley et al. 2008 for a more detailed description of study methods). Data was limited in this study to those subjects for whom we had full social support scale (SSB) data as described below.

Interviewers approached participants waiting for appointments and asked if they would like to participate in a study. Of those approached, 70% agreed to participate in the study. Once

participants agreed, they were read a consent form and asked to sign after verification of their understanding. Participants were then read each question by a trained interviewer who recorded their responses onto a tablet computer. If participants were called for their appointment before the interview was finished, they were paid the full amount for their time, scheduled for their next appointment with our team, and the interview was completed at that follow-up time. All study procedures were approved by the Human Subjects/Institutional Review Boards of both Emory University and Grady Health System.

Measures

Beck Depression Inventory (BDI-II) (Beck et al. 1996b)—This is a brief 21-item measure of depression symptoms. It is a commonly used screening instrument of depressive symptoms in normal populations. The scale provides reliable psychometric properties across a variety of clinical and nonclinical samples (Beck et al. 1996a).

Childhood Trauma Questionnaire (CTQ) (Bernstein et al. 1997; Bernstein et al. 1994)—This is a 28-item, self-report inventory assessing 3 domains of childhood abuse (sexual, physical, and emotional), and two domains of childhood neglect (physical and emotional). Bernstein and Fink (1998) used the following definitions to describe each subscale. Emotional abuse refers to verbal assaults on a child's sense of worth or well-being, or any threatening behavior directed toward a child by an older person. Physical abuse refers to bodily assaults on a child by an older person that pose a risk of, or result in, injury. Sexual abuse refers to sexual contact or conduct between a child and an older person, including explicit coercion. Emotional neglect refers to the failure of caretakers to provide basic psychological and emotional needs, such as love and support. Physical neglect refers to the failure to provide basic physical needs including food and shelter. The impact of physical neglect will not be explored in this study. In this and other significantly impoverished populations, the questions related to physical neglect such as 'I didn't have enough to eat' or 'I had to wear dirty clothes' can be confounded by level of poverty separate from neglect, thus this is not considered a fully valid subscale in this population. Cutoff scores dividing each category of maltreatment into none, mild, moderate and severe levels have shown excellent sensitivity and specificity in correctly classifying cases of abuse and neglect in psychiatric patients (Bernstein et al. 1997; Bernstein et al. 2003). We created a categorical variable by dividing participants with none and mild levels of abuse/neglect into one group and participants with moderate or severe levels of abuse/neglect into a second group. We have found in prior studies from this population that separating the levels of abuse into these combined categories leads to the strongest effects on adult symptomatology (Bradley et al., 2008; Binder et al., 2008). The group with none and mild levels of abuse/neglect will be referred to as the 'no abuse' group within the categorical analyses. Note that the continuous CTQ subscale scores are used for the correlation and regression analyses.

Social Support Behaviors Scale (SSB)—This is a 45-item instrument that assesses five modes of social support (emotional, socializing, practical assistance, financial assistance, advice/guidance) separately for family and friends. The subscales have been confirmed through factor analysis, including with a multi-ethnic sample. The SSB has good internal consistency, α 's exceed .85 for each subscale. The measure has good concurrent validity, and is sensitive to the types of support related to each mode (Corcoran et al. 1998).

Results

Demographics

The sample consisted of 378 individuals, with 54% females. The subjects were all adult (≥ 18 yo), with a median age of 43. The sample is almost exclusively African American

(93%), followed by White (3.7%), mixed and other (3.0%), and Hispanic or Latino (0.3%). The sample was predominately poor with 73.2% of individuals unemployed and 69.6% coming from households with a monthly income of less than \$1,000. Table 1 presents further demographics of the study sample.

Rates of Child Abuse and Overall Effect on Depression Symptoms

As we have demonstrated previously (Bradley et al. 2008), this is a highly traumatized population. Using our categorical abuse variables we found that 25% of the males and 26% of the females reported moderate to severe levels of childhood physical abuse, 17% of the males and 32% of the females reported childhood sexual abuse, 17% of the males and 26% of the females reported childhood emotional abuse and that 15% of males and 19% of females reported childhood emotional neglect. We conducted univariate analysis of variance using presence/absence for any of the above types of maltreatment and gender as independent variables and BDI score as the dependent variable. As Table 2 demonstrates, the average BDI score was significantly higher ($F(1, 378) = 64.32, p < .001$) in those who experienced some form of moderate to severe maltreatment as a child ($n=120$) compared to those that did not ($n=258$). Female BDI scores for child maltreatment sufferers were higher than males, although both were significant. In addition we found a significant interaction ($F(1, 376) = 3.850, p \leq .05$) between childhood maltreatment and gender such that in the participants with no reported history of maltreatment, males and females reported similar levels of depression symptoms while in those participants with a reported history of maltreatment, females reported higher levels of depression symptoms.

Correlation Analyses of Depression and Abuse with Perceived Social Support

We then examined the relationship strength between these variables and perceived family and friend support using bivariate correlation analyses. Adult depression, and reports of childhood sexual, physical, emotional abuse, and neglect were all significantly negatively correlated with *perceived family support*. Adult depression, emotional abuse and neglect were also significantly negatively correlated with *perceived friend support*. Reports of physical and sexual abuse were not related to *perceived friend support*. When separated by gender, only emotional abuse and neglect were significantly related to *perceived family support* in both males and females. For females, adult depression, emotional abuse and neglect were also significantly related to *perceived friend support*. None of the variables were significantly related to *perceived friend support* in males. Table 3 presents the results of the correlation analyses.

Regression Analyses of Depression Symptoms with Abuse, Support, and Gender

To assess whether reports of childhood emotional abuse and neglect predicted adult depression over and above childhood sexual and physical abuse, we performed two hierarchical linear regressions. As shown in Table 4, childhood sexual and physical abuse significantly predicted adult depression in Step 1. Adding emotional abuse in Step 2, however, reduced the predictive effects of physical and sexual abuse and demonstrated that childhood emotional abuse significantly increases the predictive validity of adult depression. No significant gender differences were found.

We found similar results when examining reports of emotional neglect. Table 4 shows that although childhood sexual and physical abuse do significantly predict adult depression in Step 1, childhood emotional neglect significantly increases the predictive validity in Step 2, making the effects of physical and sexual abuse no longer significant. No significant gender differences were found.

Next, we examined if perceived family or friend support may provide a buffer against the effects of emotional abuse and neglect on adult depression. Our result with perceived family support is shown in Table 5. We found that reports of childhood emotional abuse and neglect significantly predict adult depression in Step 1. When perceived family support was added in Step 2, the predictive value of emotional abuse and neglect remained significant, while perceived family support did not increase the predictive value on adult depression. No significant gender differences were found.

Finally, Table 6 illustrates the effect of perceived friend support. Reports of childhood emotional abuse and neglect significantly predict higher levels of adult depression symptoms in Step 1. When perceived friend support was added in Step 2, the predictive value increased, showing that perceived friend support added to the predictive value above and beyond childhood emotional abuse and neglect. Thus perceived friend support predicts lower levels of symptoms of depression in the presence of reports of emotional abuse and neglect. When split by gender, the result was shown even more strongly in females. This result was not significant with males.

Discussion

Our data are consistent with prior findings (Bifulco et al. 2002; Vranceanu et al. 2007) that reports of childhood abuse and neglect are associated with increased symptoms of depression in adulthood. This is increasingly supported by a growing literature on the role of child abuse on the neural mechanisms of stress responsiveness (Heim and Nemeroff, 2001; Kaufman and Charney, 2001). Our findings are consistent with recent studies pointing to the importance of specific aspects of child abuse in understanding the long-term effect of childhood maltreatment (Bifulco et al. 2002; McSherry 2007). In accordance with this research, in our highly traumatized population we found that the effects of reported emotional abuse and neglect on adult depression were stronger than that of reported sexual and physical abuse. Furthermore, these measures added significant predictive validity when measuring the risk for adult depression. Consistent with prior research, we also found higher levels of depression in females with a history of child abuse. Some research has shown that gender differences in adult psychopathology that emerge following childhood maltreatment may stem from the varying ways that females and males cope with traumatic experiences (Cutler and Nolen-Hoeksema 1991; Sigmon et al. 1996). This possibility should be further explored in future studies examining the interaction between gender, adult depression, and childhood maltreatment.

Our data also point to the important relationship of symptoms of depression and level of perceived family and friend support in maltreatment survivors, particularly women. Bivariate correlation analyses made evident the clear link between adult depression, each form of maltreatment, and perceived family support. The strong correlations suggest an intertwined relationship between the memory of childhood maltreatment and the perception of family support. Because childhood maltreatment often occurred in the family, it may be difficult for survivors to separate their perception of their abuse or neglect and their perception of their family. Perceived family support did not add to the prediction of adult depression in males or females, and therefore does not appear to provide a buffer against the development of adult depression.

Bivariate correlations showed that perceived friend support was significantly related to adult depression, emotional abuse, and neglect. A test of linear regression showed that even after accounting for all 4 types of childhood maltreatment, perceived friend support appears to be associated with lower levels of depression symptoms. The gender differences that were found show that the effects that perceived friend support have on buffering against adult

depression are only significant in females in this study population. This finding is consistent with prior literature suggesting that perceiving strong friend support can help women fight the development of adult psychopathology and depression (Charuvastra and Cloitre 2008; Hyman et al. 2003).

Limitations

The primary limitation of this study was the use of self-report questionnaires to obtain information on depression, history of childhood maltreatment, and perception of social support. There is a potential for retrospective reporting bias when using self-report measures. In future studies, using multiple informants in addition to self-report would reduce such bias. Additionally, we measured depressive symptoms using the Beck Depression Inventory instead of a structured clinical diagnostic tool, although our BDI measures have been well-validated against the SCID within this study sample (Bradley et al. 2008). In addition, the gathered data was cross-sectional in nature. To fully understand the relationship between childhood maltreatment, perceived family and friend social support and symptoms of depression, longitudinal data are needed. Lastly our sample is homogeneous in terms of both race and socioeconomic status which limits the generalizability of the results. However, several studies have now indicated that multiple trauma exposure across the lifespan is the rule rather than the exception in samples similar to this one (Alim et al. 2006; Liebschutz et al. 2007; Schilling et al. 2007) (e.g., low income, urban, high percentage of black or Latino participants) and that multiple trauma exposure is related to increased mental and physical health risk (Breslau et al. 1999; Green et al. 2000; Schwartz et al. 2006). Thus an understanding of factors related to risk and resilience for depression in this population is of significant public health importance.

Implications for future research and clinical practice

This study replicated the important link between reports of childhood maltreatment and adult depression in a highly traumatized, impoverished, minority sample. More importantly, the results demonstrated the importance of understanding how childhood emotional abuse and neglect may put individuals at a particularly high risk for developing adult depression. Because emotional abuse and neglect are studied and understood to a lesser degree than physical and sexual abuse, our findings show the need for additional focus on these types of maltreatment, so that a better understanding of their implications can be established. Childhood emotional abuse and maltreatment occur at a critical time in development when children are learning how to regulate emotions, develop social skills, and understand the world in relation to others (Charuvastra and Cloitre 2008). An inability to regulate emotions can cause severe problems for an individual, making it difficult to cope with stress, have positive interactions with others, and build relationships. Treatment interventions provided to men and women with a history of childhood emotional abuse and neglect should take this potential impact into account. Interventions that focus on development of emotional regulation and related psychosocial skills may be useful. A number of such interventions include Dialectical Behavioral Therapy (Wagner et al. 2007), Seeking Safety (Najavits 2003), and Skills Training in Affective and Interpersonal Regulation/Narrative Story-Telling (Levitt and Cloitre 2005). These and other treatment approaches that focus on regulation of emotions within the therapy relationships, such as Mentalization Based Therapy (Bateman et al. 2007), have been proposed for treatment of disorders more common among men and women with a history of childhood maltreatment (e.g., borderline personality disorder and co-morbid PTSD and substance abuse). In addition, particular for women, our findings highlight the importance of the presence of a perceived strong social support system as mitigating the symptoms of adult depression. Interventions aimed at strengthening social support systems (including those focused on emotional regulation skills within interpersonal

relationships) may be successful in the treatment of depression associated with a history of emotional maltreatment.

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Table 1

Demographics

	(N = 378)
<i>Gender</i>	
Male	46.0
Female	54.0
<i>Race</i>	
Caucasian	3.7
African American	93.1
Hispanic	0.3
Mixed	1.9
Other	1.1
<i>Household Monthly Income</i>	
\$0 – \$249	34.8
\$250 – \$499	8.9
\$500 – \$999	25.9
\$1,000 – 1,999	22.4
\$2,000 or greater	8.1
<i>Age: (mean, SD)</i>	
	43.1(12.7)

Note: Data are presented as percentage of patients unless otherwise specified.

Table 2
Univariate Analysis of Variance Showing Rates of Depression (BDI) and Child Abuse (CTQ)

	Mean BDI score with none to mild Child Abuse	SD	Mean BDI score with moderate to severe Child Abuse	SD	F	Sig.
Female	13.65 (n=127)	11.38	24.64 (n=77)	14.78	35.50	.000**
Male	10.63 (n=129)	9.95	19.28 (n=43)	12.89	20.89	.000**
Combined	12.09 (n=258)	10.74	22.71 (n=120)	14.31	64.32	.000**

* represents significance at the p<.05 level, and ** p<.01.

Table 3
 Correlational Analyses between Perceived Social Support (SSB), Depression (BDI), and Child Abuse/Neglect (CTQ)

Correlation Analyses		Depression	Physical Abuse	Sexual Abuse	Emotional Abuse	Emotional Neglect
<i>Perceived Family Support</i>						
Female	- Pearson Correlation	-.329	-.263	-.270	-.375	-.531
	- Significance (2-tail)	.000**	.000**	.000**	.000**	.000**
Male	- Pearson Correlation	-.075	-.124	-.164	-.298	-.270
	- Significance (2-tail)	.326	.104	.031*	.000**	.000**
Combined	- Pearson Correlation	-.199	-.202	-.202	-.325	-.409
	- Significance (2-tail)	.000**	.000**	.000**	.000**	.000**
<i>Perceived Friend Support</i>						
Female	- Pearson Correlation	-.373	-.097	-.108	-.241	-.282
	- Significance (2-tail)	.000**	.168	.124	.001**	.000**
Male	- Pearson Correlation	-.058	.102	.057	-.038	-.097
	- Significance (2-tail)	.446	.185	.495	.617	.206
Combined	- Pearson Correlation	-.218	-.017	-.026	-.142	-.191
	- Significance (2-tail)	.000**	.745	.620	.006**	.000**

* represents significance at the p<.05 level, and ** p<.01.

Table 4

Hierarchical Linear Regression Predicting Depression from Childhood Sexual and Physical Abuse (Step 1), Childhood Emotional Abuse (Step 2a), and Childhood Emotional Neglect (Step 2b)

Predicting Depression (BDI; N=378)	Stand.β	T	P	R	R ²	F change	P change
<u>Step 1: Childhood Sexual and Physical Abuse</u>				.300	.090	18.609	.000**
<u>Step 2a: Childhood Emotional Abuse</u>				.422	.178	39.837	.000**
<u>Step 2b: Childhood Emotional Neglect</u>				.408	.166	34.172	.000**
<u>Step 1</u>							
Sexual Abuse	.186	3.295	.001**				
Physical Abuse	.162	2.859	.004**				
<u>Step 2a</u>							
Sexual Abuse	.056	.969	.333				
Physical Abuse	-.061	-.953	.341				
Emotional Abuse	.428	6.312	.000**				
<u>Step 2b</u>							
Sexual Abuse	.091	1.604	.110				
Physical Abuse	.054	.936	.350				
Emotional Neglect	.327	5.846	.000**				

* represents significance at the $p < .05$ level, and ** $p < .01$.

Table 5
 Hierarchical Linear Regression Predicting Depression from Child Abuse/Neglect (Step 1) and Perceived Family Support (Step 2)

Predicting Depression (BDI; N=378)	Stand.β	T	P	R	R ²	F change	P change
Step 1: Child Abuse/Neglect (CTIQ)							
<i>Female</i>				.444	.197	46.118	.000**
<i>Male</i>				.458	.209	26.619	.000**
Step 2: Perceived Family Support							
<i>Female</i>				.422	.178	18.299	.000**
<i>Male</i>				.445	.198	.370	.543
				.472	.223	3.546	.061
				.426	.182	.796	.374
Step 1							
Emotional Neglect	.205	3.276	.001**				
Emotional Abuse	.279	4.451	.000**				
<i>Female Emotional Neglect</i>	.301	3.349	.001**				
<i>Female Emotional Abuse</i>	.191	2.121	.035*				
<i>Male Emotional Neglect</i>	.114	1.298	.196				
<i>Male Emotional Abuse</i>	.342	3.888	.000**				
Step 2							
Emotional Neglect	.195	2.985	.003**				
Emotional Abuse	.276	4.391	.000**				
Perceived Family Support	-.031	-.609	.543				
<i>Female Emotional Neglect</i>	.226	2.316	.022*				
<i>Female Emotional Abuse</i>	.192	2.152	.033*				
<i>Female Perceived Family Support</i>	-.139	-1.883	.061				
<i>Male Emotional Neglect</i>	.124	1.393	.165				
<i>Male Emotional Abuse</i>	.356	3.982	.000**				
<i>Male Perceived Family Support</i>	.066	.892	.374				

* represents significance at the p<.05 level, and ** p<.01.

Table 6
 Hierarchical Linear Regression Predicting Depression from Child Abuse/Neglect (Step 1) and Perceived Family Support (Step 2)

Predicting Depression (BDI; N=378)	Stand.β	T	P	R	R ²	F change	P change
<u>Step 1: Child Abuse/Neglect (CTQ)</u>							
				.444	.197	45.936	.000**
<i>Female</i>				.457	.209	26.361	.000**
<i>Male</i>				.422	.178	18.299	.000**
<u>Step 2: Perceived Family Support</u>							
				.465	.216	9.040	.003**
<i>Female</i>				.519	.269	16.404	.000**
<i>Male</i>				.423	.179	.231	.632
<u>Step 1</u>							
Emotional Neglect	.205	3.256	.001**				
Emotional Abuse	.279	4.448	.000**				
<i>Female Emotional Neglect</i>	.299	3.312	.001**				
<i>Female Emotional Abuse</i>	.192	2.124	.035**				
<i>Male Emotional Neglect</i>	.114	1.298	.196				
<i>Male Emotional Abuse</i>	.342	3.888	.000**				
<u>Step 2</u>							
Emotional Neglect	.180	2.872	.004**				
Emotional Abuse	.276	4.441	.000**				
Perceived Family Support	-.140	-3.007	.003**				
<i>Female Emotional Neglect</i>	.241	2.738	.007**				
<i>Female Emotional Abuse</i>	.171	1.966	.051**				
<i>Female Perceived Family Support</i>	-.256	-4.050	.000**				
<i>Male Emotional Neglect</i>	.110	1.245	.215				
<i>Male Emotional Abuse</i>	.343	3.891	.000**				
<i>Male Perceived Family Support</i>	-.034	-.480	.632				

* represents significance at the $p < .05$ level, and ** $p < .01$.

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