Research Article

CHILDHOOD EMOTIONAL, PHYSICAL, AND SEXUAL ABUSE, AND DIAGNOSES OF DEPRESSIVE AND ANXIETY DISORDERS IN ADULT PSYCHIATRIC OUTPATIENTS

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Although a number of theorists have hypothesized a link between negative experiences during childhood (e.g., abuse) and the presence of psychopathology in adults, little is known about the relative specificity of childhood emotional, physical, or sexual abuse to different forms of psychopathology. In this study, we hypothesized that adult psychiatric outpatients' reports of childhood emotional abuse would exhibit a specific relationship with diagnoses of depression. Analyses partially supported our hypothesis. Specifically, diagnoses of major depression were significantly more strongly related to reports of childhood emotional abuse than to physical or sexual abuse. However, the same effect was observed for social phobia. In addition, patients with major depression reported equivalent levels of childhood emotional abuse as patients with social phobia, but lower levels of emotional abuse than those with posttraumatic stress disorder. Depression and Anxiety 24:256–263, 2007. Published 2006 Wiley-Liss, Inc.[†]

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INTRODUCTION

Theorists [e.g., Beck, 1967; Bowlby, 1973, 1980] have long thought that negative experiences in childhood may contribute vulnerability to the development of psychopathology across the lifespan. Consistent with this hypothesis, studies have generally supported the relationship between a history of childhood physical or sexual abuse and diagnoses of depressive and anxiety disorders, particularly posttraumatic stress disorder (PTSD), in adulthood [for reviews, see Paolucci et al., 2001; Putnam, 2003; Rodriguez et al., 1998]. Though far less numerous, studies have also supported the link between a history of childhood emotional abuse and diagnoses of depression in adulthood [e.g., Bifulco et al., 2002; Gibb et al., 2001, 2003b]. In addition, there is some evidence for the relation between a history of childhood emotional abuse and the presence of anxiety disorders, particularly social phobia, in adulthood [Harkness and Wildes, 2002; McCabe et al., 2003].

Although some theorists have suggested that childhood abuse is a relatively nonspecific risk factor for psychopathology in adulthood [e.g., Cicchetti et al., 2000], others have hypothesized that certain forms of childhood abuse may contribute specific vulnerability to different types of psychopathology. For example, Rose and Abramson [1992] hypothesized that childhood emotional abuse may contribute specific vulnerability to the development of depression. Specifically, Rose and Abramson suggested that childhood emo-

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tional abuse should be more likely to contribute to the development of a cognitive vulnerability to depression than either childhood physical or sexual abuse because with emotional abuse the depressive cognitions are directly supplied to the child by the abuser. Once developed, this cognitive style is hypothesized to contribute specific vulnerability to depression as opposed to other disorders.

Although, in support of Rose and Abramson's [1992] theory, there is some evidence for the specificity of emotional abuse to depressive cognitions [for a review, see Gibb, 2002], little research has examined the relative specificity of different forms of abuse to different psychiatric diagnoses. Indeed, to our knowledge, only one study [Gibb et al., 2003b] has examined the relative specificity of childhood emotional, physical, and sexual abuse to diagnoses of depression versus other disorders in adulthood. In that study, adult psychiatric outpatients' reports of childhood emotional abuse were more strongly related to the presence of current depressive disorders than anxiety disorders. In contrast, reports of childhood physical and sexual abuse were equally strongly related to both depressive and anxiety disorders.

Despite the strengths of Gibb et al.'s [2003b] study, there were two important limitations. First, histories of childhood abuse were assessed with three dichotomous items inquiring whether the patients had experienced each form of abuse. Second, all anxiety disorders were grouped together in the analyses, which may have obscured significant effects for specific diagnoses. To overcome these limitations in our study, we used a well-validated measure of childhood abuse and examined depressive disorders and each of the anxiety disorders individually in a large sample of adult psychiatric outpatients. This type of investigation is an important step in evaluating models of developmental psychopathology. If specificity is observed between a type of negative event in childhood and a form of adult psychopathology, then theorists and researchers can focus on potential mediators of the relationship. If, on the other hand, each form of abuse is related to a variety of psychopathology, then the search for moderators, or factors that may make the development of one disorder versus another more likely, becomes more important.

Based upon Rose and Abramson's [1992] hypothesis, combined with Gibb et al.'s [2003b] findings, we predicted that reports of childhood emotional abuse would exhibit a specific relationship with depressive disorders among adult psychiatric outpatients. Specifically, we hypothesized that reports of childhood emotional abuse would be more strongly related to outpatients' current diagnoses of depressive disorders than would reports of childhood physical or sexual abuse. In addition, we predicted that reports of childhood emotional abuse would be more strongly related to current diagnoses of depressive disorders than anxiety disorders. However, given evidence of

the relation between childhood emotional abuse and diagnoses of social phobia [e.g., McCabe et al., 2003], we made no specific hypotheses regarding the relative specificity of childhood emotional abuse to depression versus social phobia.

It should be noted at the outset that comorbidity among abuse types is common [see Edwards et al., 2003; Manly et al., 2001], which makes our effort to find specific effects for individual forms of abuse more difficult. This said, however, there is some evidence that the various forms of childhood abuse may have different developmental effects and researchers have emphasized the need to examine the various forms of abuse separately [e.g., Gibb et al., 2003b; Lau et al., 2005; Manly et al., 2001; Cicchetti and Rogosch, 2001]. Two characteristics of our study make this search for specific effects more feasible. First, to ensure adequate power for the specificity analyses, we focus on a large sample of psychiatric outpatients. Second, although it is relatively rare for childhood physical or sexual abuse to occur in the absence of other forms of abuse [Edwards et al., 2003; Manly et al., 2001], it is not uncommon for emotional abuse to occur in isolation [for a review, see Binggeli et al., 2001; Cicchetti and Rogosch, 2001], which is the abuse type of primary focus in our study. Despite our primary interest in the specific correlates of childhood emotional abuse, however, we also examined whether any of the various combinations of abuse types significantly incremented prediction of patients' current depressive and anxiety disorder diagnoses.

METHODS

PARTICIPANTS

Participants in this study included 857 psychiatric outpatients who were evaluated as part of the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project [Zimmerman, 2003]. Of the participants in this study, 517 (60.3%) were women, 755 (88.1%) were European American, 347 (40.5%) were married, and 535 (62.5%) had completed at least some college. Participants' average age was 38.36 years (SD = 13.16) and their average Global Assessment of Functioning (GAF) score was 53.56 (SD = 10.32).

MEASURES AND PROCEDURE

Participants in the MIDAS project were recruited from consecutive admissions to a hospital-affiliated outpatient clinic. All patients presenting to the clinic were eligible for participation. Although not all patients presenting for treatment participated in the project, there were no significant differences between those who did versus those who did not in terms of demographic characteristics or self-reported symptom severity [Zimmerman and Mattia, 1999]. As part of the intake assessment, patients participating in the MIDAS

project were administered the Structured Clinical Interview for DSM-IV Axis I Disorders—Patient edition [SCID; First et al., 1995]. Our study focused on patients' current diagnoses of depressive (major depressive disorder [MDD] and dysthymia) and anxiety (posttraumatic stress disorder [PTSD], panic disorder with or without agoraphobia, or agoraphobia without history of panic [Panic/Agoraphobia], social phobia, obsessive–compulsive disorder [OCD], and generalized anxiety disorder [GAD]) disorders.[1] All diagnostic raters were trained to reliability standards. Specifically, raters completed a minimum of 3 months of training, during which they observed at least 20 interviews and were then supervised in the administration of at least 20 interviews, at least five of which were supervised by Ph.D.-level diagnosticians and the remainder were supervised by trained research assistants. Raters were then required to demonstrate exact or near-exact agreement with a senior diagnostician on five consecutive interviews. During the course of the project, joint-interview diagnostic reliability information was collected for 48 patients and κ coefficients for diagnoses included in this study were: MDD ($\kappa = 0.91$), dysthymic disorder ($\kappa = 0.88$), PTSD ($\kappa = 0.91$), panic disorder ($\kappa = 1.00$), social phobia ($\kappa = .84$), OCD ($\kappa = 1.00$), and GAD ($\kappa = 0.93$). For additional details regarding interviewer training and diagnostic reliability see Zimmerman and Mattia [1999]. The prevalence of current diagnoses in this sample was 444 (51.8%) patients with depressive disorders, 445 (51.9%) with anxiety disorders, 94 (11%) with alcohol and/or substance abuse/dependence, 52 (6.1%) with bipolar spectrum disorders, 52 (6.1%) with adjustment disorders, 25 (2.9%) with eating disorders, and 17 (2.0%) with psychotic disorders. Comorbidity was common, with 346 (40.4%) of the patients meeting current criteria for diagnoses in more than one of these categories.

Following completion of the SCID, participants completed a series of questionnaires, including the Childhood Trauma Questionnaire [CTQ; Bernstein, 1995; unpublished manuscript], which we used to assess patients' levels of childhood emotional, physical, and sexual abuse. Although patients were administered the 53-item version of the CTQ, the scoring protocol for the current 28-item version [see Bernstein et al., 2003] was used in all analyses, as recommended by the scale's author [D. Bernstein, personal communication, April 3, 2003]. Each item on the CTQ is rated on a 5-point, Likert-type scale, with response options ranging from *Never true* to *Very often true*. Subscale scores are calculated by summing responses within each abuse type, with higher scores indicating higher levels of childhood abuse. The CTQ has demonstrated excellent psychometric properties in both clinical and nonclinical samples, including high levels of criterion-related validity with therapists' ratings of abuse [Bernstein et al., 2003]. In this sample, the three CTQ suscales exhibited good internal consistency (α's = .88, .85, and .94 for the emotional, physical, and sexual abuse scales, respectively).

ANALYSIS PLAN

The relative specificity of childhood emotional, physical, and sexual abuse to depressive and anxiety disorders was assessed in two ways. First, within each diagnosis, we compared the magnitude of the relations between the three forms of abuse and the presence versus absence of that diagnosis using point-biserial correlations. We should note that point-biserial correlations are equivalent to effect sizes ($r_{effect\ size}$) for the relations between each diagnosis and each form of abuse. A benefit of this analysis is that it included a built-in psychiatric control group. Thus, for example, when examining the relation between emotional abuse and major depression, we compared reports of emotional abuse among patients with major depression versus all other diagnoses. We then examined whether there were significant differences in the magnitude of the relations among the three forms of abuse within each diagnosis. To do this, we compared the relative magnitudes of the point-biserial correlations (effect sizes) using tests of dependent correlations [Meng et al., 1992]. We hypothesized that reports of childhood emotional abuse would be more strongly related to the presence of depressive disorders than would reports of childhood physical or sexual abuse.

Second, within each form of abuse, we examined the relative specificity of reports of abuse to diagnoses of depressive versus anxiety disorders. In these one-way analyses of variance (ANOVAs), the focus was on whether a given form of abuse was more strongly related to a specific depressive disorder than to a specific anxiety disorder. We hypothesized that patients meeting criteria for a depressive disorder would report higher levels of childhood emotional abuse than would patients meeting criteria for an anxiety disorder (with the possible exeption of social phobia).

RESULTS

PRELIMINARY ANALYSES

The percentage and number of participants meeting criteria for each depressive and anxiety disorder are presented in Table 1. In addition, an inspection of the CTQ revealed that participants' scores spanned the full range of the scale (scores on all three subscales ranged from 5 to 25). On average, however, reports of childhood emotional abuse fell in the low to moderate range ($M = 11.02$, $SD = 5.76$), reports of childhood physical abuse fell in the low range ($M = 7.72$, $SD = 4.35$), and reports of childhood sexual abuse fell

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[1]Results based upon lifetime diagnoses of these disorders mirror those obtained with current diagnoses. To maximize the likelihood that abuse preceded the onset of the disorders, we focus on results for current diagnoses.

TABLE 1. Effect sizes for relations between the three forms of childhood abuse and patients' diagnoses of depressive and anxiety disorders

	%	*n*	CTQ-EA	CTQ-PA	CTQ-SA
Any depressive disorder	48.2	413	**0.13**[a]	0.06[b]	0.05[b]
Major depression	44.7	383	**0.14**[a]	0.07[b]	0.05[b]
Dysthymia	7.6	65	0.10	0.03	0.05
Any anxiety disorder	51.9	445	**0.21**[a]	**0.11**[b]	**0.12**[b]
PTSD	10.9	93	**0.30**	**0.32**	**0.35**
Panic/agoraphobia	19.0	163	0.10	0.07	0.02
Social phobia	29.4	252	**0.19**[a]	0.07[b]	0.07[b]
OCD	6.8	58	0.04	0.02	0.04
GAD	18.1	155	0.04	−0.01	0.00

Note. Percentages and *n*s refer to the percent and number of patients meeting criteria for each disorder. All other values represent effect sizes ($r_{effect\ size}$) for comparisons of abuse levels between patients with and without the respective disorder. Values $\geq .11$ (presented in **bold**) are significant at $P < .002$. Effect sizes within each diagnosis with different superscripts differ significantly ($P < .02$). CTQ-EA, Childhood Trauma Questionnaire—Emotional Abuse subscale; CTQ-PA, CTQ —Physical Abuse subscale; CTQ-SA, CTQ —Sexual Abuse subscale.

in the low to moderate range [$M = 7.37$, $SD = 5.10$; Bernstein and Fink, 1998].[2] Finally, preliminary analyses revealed that reports of the three forms of childhood abuse were significantly intercorrelated. Specifically, reports of childhood emotional abuse were significantly related to reports of both physical ($r = .64$, $P < .001$) and sexual ($r = .38$, $P < .001$) abuse. In addition, reports of childhood physical abuse were significantly related to reports of childhood sexual abuse ($r = .47$, $P < .001$).[3]

We then conducted analyses to determine whether any of the study variables were significantly related to participants' demographic characteristics (i.e., age, gender, and race/ethnicity [European American, African American, Hispanic, other]). Given the number of tests conducted, the critical α level was adjusted to reduce the likelihood of Type I errors. To also reduce the likelihood of Type II errors, we conducted a Bonferroni correction for the number of tests within each demographic variable ($n = 12$) rather than the number of overall tests conducted ($n = 36$). This gave

us a critical α level of .004 (.05/12). Using this adjusted critical α level, we found that younger, compared to older, participants reported higher levels of emotional abuse ($r = -.12$, $P = .001$) and were more likely to meet current criteria for "any anxiety disorder" ($r = -.15$, $P < .001$) PTSD ($r = -.13$, $P < .001$), social phobia ($r = -.13$, $P < .001$) and OCD ($r = -.10$, $P = .003$). In addition, women in this sample, compared to men, reported significant higher levels of childhood emotional abuse [$Ms = 11.89$ ($SD = 6.09$) vs. 9.73 ($SD = 4.96$), $t(826) = 5.31$, $P < .001$, $r_{effect\ size} = 0.18$], and childhood sexual abuse [$Ms = 7.99$ ($SD = 5.71$) vs. 6.42 ($SD = 3.81$), $t(823) = 4.31$, $P < .001$, $r_{effect\ size} = 0.15$]. Women were also more likely to meet criteria for a current diagnosis of PTSD that were men [13.3% vs. 7.1%, $\chi^2(1, N = 856) = 8.30$, $P = .004$, $r_{effect\ size} = 0.10$]. The only significant racial/ethnic difference to emerge was for current diagnoses of PTSD [$\chi^2(1, N = 856) = 16.85$, $P = .001$]. Examining the pairwise comparisons, the only significant effect was that Hispanics were significantly more likely to meet current criteria for PTSD than were European Americans [38.1% vs. 10.2%, $\chi^2(1, N = 776) = 16.30$, $P < .001$, $r_{effect\ size} = 0.15$]. Given these results, participants' age was entered as a covariate for all analyses in which "any anxiety disorder," social phobia, or OCD served as the dependent variable. For analyses in which PTSD served as the dependent variable, age, gender, and three dummy-coded variables representing the four racial/ethnic groups were entered as covariates.

TESTS OF SPECIFICITY WITHIN EACH DIAGNOSIS

Analyses were then conducted to examine the relations between current diagnoses of depressive and anxiety disorders, and reported levels of each of the three forms of abuse. Given the number of analyses conducted ($n = 27$), we adjusted our critical α level to reduce the likelihood of Type I errors ($\alpha_{critical} = .002$;

[2]We should note that 22.4% of our sample fell within the severe range on the CTQ [Bernstein and Fink, 1998] in terms of childhood emotional abuse (score ≥ 16), 12.1% fell within the severe range in terms of childhood physical abuse (score ≥ 13), and 13.9% fell within the severe range in terms of childhood sexual abuse (scores ≥ 13). Although we conducted analyses using dichotomous classifications of each abuse type (severe vs. not severe), the pattern of results from these analyses was identical to that obtained using continuous scores. Given the problems inherent in dichotomizing continuous scores [MacCallum et al., 2002], we present only the results we obtained using continuous scores.

[3]Focusing on reports of "severe" abuse as defined by the CTQ [Bernstein and Fink, 1998], 70.1% of our sample reported no severe abuse, 10.6% reported severe emotional abuse only, 1.4% reported severe physical abuse only, 5.8% reported severe sexual abuse only, 4.4% reported severe emotional and physical abuse, 2.5% reported severe emotional and sexual abuse, 0.8% reported severe physical and sexual abuse, and the remaining 4.4% reported severe emotional, physical, and sexual abuse.

.05/27). Point-biserial correlations from these analyses, which are equal to the effect sizes ($r_{effect\ size}$) of the relations between the abuse and diagnostic variables, are presented in Table 1. Using the adjusted critical α level, higher levels of childhood emotional abuse were significantly associated with the presence of "any depressive disorder" and "any anxiety disorder." In terms of specific disorders, emotional abuse was significantly related to MDD, PTSD, and social phobia. In addition, reports of both childhood physical and sexual abuse were significantly related the presence of "any anxiety disorder," which appears to have been due largely to their relation with PTSD. In contrast, neither childhood physical nor sexual abuse was significantly related to the depressive disorders.[4]

Next, we used tests of dependent correlations [Meng et al., 1992] to examine the relative strength of the relations between each of the diagnoses and the three abuse types. Thus, for example, we examined whether the magnitude of the relationship between MDD and emotional abuse was significantly stronger than the relationships between MDD and physical or sexual abuse. These analyses were not conducted for diagnoses that were not significantly related to any of the forms of abuse (i.e., dysthymia, panic/agoraphobia, OCD, and GAD). As expected, diagnoses of "any depressive disorder" were significantly more strongly related to reports of childhood emotional abuse than to physical ($z = 2.42$, $P = .008$), or sexual ($z = 2.07$, $P = .02$) abuse. Similar results were obtained for diagnoses of MDD, which were related significantly more strongly to reports of childhood emotional abuse than to physical ($z = 2.39$, $P = .009$), or sexual ($z = 2.43$, $P = .008$) abuse. However, diagnoses of "any anxiety disorder" were also related significantly more strongly to reports of childhood emotional abuse than to physical ($z = 3.20$, $P = .001$) or sexual ($z = 2.21$, $P = .01$) abuse. This appeared to be largely due to social phobia, which was related significantly more strongly to reports of childhood emotional abuse than to physical ($z = 4.04$, $P < .001$) or sexual ($z = 3.13$, $P = .001$) abuse. In contrast, there were no significant differences in the magnitude of relations between PTSD and the three forms of abuse (lowest $P = .10$). The results of these analyses are also depicted in Table 1, with significant between–effect size differences denoted with different superscripts.

TESTS OF SPECIFICITY WITHIN EACH FORM OF ABUSE

Next, we examined the relative specificity of each form of abuse to depressive versus anxiety disorders. Given the substantial comorbidity of depressive

and anxiety disorders in this sample (29.4% of the sample met criteria for at least one current depressive and anxiety disorder), we conducted analyses comparing patients with pure versus comorbid depressive and anxiety disorder diagnoses. Given the results we reported earlier, and to reduce the number of analyses, we focused on MDD, PTSD, and social phobia. Thus, we compared reports of childhood emotional, physical, and sexual abuse among patients meeting criteria for MDD and/or PTSD. For patients meeting criteria for MDD and/or social phobia, we focused on reports of emotional abuse given that neither physical nor sexual abuse was significantly related to diagnoses of either disorder (for these analyses, $\alpha_{critical} = .013$; .05/4).

In conducting these analyses, we first compared reports of emotional, physical, and sexual abuse among patients meeting current criteria for MDD ($n = 217$), PTSD ($n = 19$), or both disorders ($n = 27$). To provide a more focused examination of these disorders, patients meeting criteria for social phobia were excluded from these analyses. As can be seen in Table 2, patients meeting criteria for PTSD, with our without comorbid MDD, reported higher levels of emotional, physical, and sexual abuse than did patients meeting criteria for MDD alone. Next, we focused on reports of childhood emotional abuse among patients with current diagnoses of MDD ($n = 217$), social phobia ($n = 90$), or both disorders ($n = 115$). Parallel to the previous set of analyses, patients meeting criteria for PTSD were excluded to provide a more focused test of MDD versus social phobia specifically. The omnibus ANOVA was significant [$F (2, 408) = 6.97$, $P = .001$]. The results of Student–Newman–Keuls post hoc tests indicated that patients with comorbid MDD and social phobia reported higher levels of childhood emotional abuse ($M = 12.71$) than did patients with MDD without comorbid social phobia ($M = 10.28$). Patients meeting criteria for social phobia without comorbid MDD did not differ significantly from the other two groups ($M = 11.13$).

ADDRESSING THE COMORBIDITY AMONG ABUSE TYPES

As noted in our Introduction, comorbidity among forms of childhood abuse is common and, as reported in our preliminary analyses, this was also the case in our sample. Therefore, it is not clear whether the results reported above can be attributed to any specific type of abuse. To address this point, we conducted two additional sets of analyses. First, given that our primary interest in this study was to examine the effects of childhood emotional abuse, we reconducted our analyses omitting participants reporting any experiences of childhood physical or sexual abuse. This left us with a sample of 331 participants. The results of these analyses were virtually identical to those we reported earlier for emotional abuse. The only difference was that, using the same critical α level as that in the original set of analyses reported earlier ($\alpha_{critical} = .002$),

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[4]We also evaluated whether participants' demographic characteristics (e.g., age, sex, ethnicity) moderated any of the relations between childhood abuse and current diagnoses ($\alpha_{critical} = .002$; .05/27). None of these analyses was significant.

TABLE 2. Summary of ANOVA results comparing levels of childhood abuse among patients with MDD and/or PTSD

	MDD Only	PTSD Only	Comorbid MDD and PTSD	df	F
Emotional abuse	10.28[a]	14.00[b]	17.52[b]	2,248	22.07*
Physical abuse	7.37[a]	12.39[b]	11.15[b]	2,257	18.33*
Sexual abuse	6.63[a]	13.22[b]	12.24[b]	2,252	26.05*

Note. Values represent mean levels of abuse for each diagnostic category. Means with different superscripts differ significantly ($P<.013$).
*$P<.001$.

reports of childhood emotional abuse were no longer significantly related to diagnoses of PTSD ($r_{effect\ size} = 0.14$, $P=.01$). Focusing next on childhood physical abuse, excluding participants reporting any experiences of childhood emotional or sexual abuse (leaving us with $n = 160$), reports of childhood physical abuse were no longer significantly related to "any anxiety disorder" ($r_{effect\ size} = -0.01$, $P=.88$) or PTSD ($r_{effect\ size} = 0.10$, $P=.19$). Similarly, excluding participants reporting any experiences of childhood emotional or physical abuse (leaving us with $n = 141$), reports of childhood sexual abuse were also no longer significantly related to "any anxiety disorder" ($r_{effect\ size} = 0.18$, $P=.04$) or PTSD ($r_{effect\ size} = 0.15$, $P=.08$).

As a second approach to addressing the co-occurrence of abuse types, we examined the specificity of abuse correlates within each diagnostic group using a series of logistic regression analyses. In these analyses, each of the nine diagnostic categories served, in turn, as the criterion variable and the three abuse types were entered simultaneously as predictor variables. By entering the three forms of abuse simultaneously, the overlap among them was statistically controlled, allowing an examination of the unique relation of each abuse type to the various diagnoses. The pattern of results from these analyses was virtually identical to that reported earlier. The only difference was that, statistically controlling for the overlap among the three forms of abuse, reports of emotional [odds ratio (OR) = 1.06, 95% confidence interval (CI) = 1.02–1.10, $P=.002$], but not physical (OR = 0.97, 95% CI = 0.92–1.03, $P=.31$) or sexual (OR = 1.04, 95% CI = 1.00–1.08, $P=.06$), abuse was significantly related to the presence of "any anxiety disorder." Also, reports of childhood physical abuse were no longer significantly related to diagnoses of PTSD (OR = 1.07, 95% CI = 1.00–1.13, $P=.04$). We also examined the relative impact of comorbid abuse by examining all two- and three-way interactions among abuse types to determine whether specific combinations of abuse incrementally increased risk for specific disorders ($\alpha_{critical} = .006$; .05/9). However, none of these interactions was significant.

DISCUSSION

The primary goal of this study was to examine the relative specificity of childhood emotional, physical, and sexual abuse to depressive versus anxiety disorders. Supporting Rose and Abramson's [1992] hypothesis, we found that reports of childhood emotional abuse were more strongly related to the presence versus absence of MDD than were reports of childhood physical or sexual abuse. Interestingly, the same pattern of findings was observed for diagnoses of social phobia. In contrast, patients with current PTSD reported higher levels of all three forms of childhood abuse than did patients without PTSD. Thus, there was some evidence for the specificity of emotional (vs. physical or sexual) abuse to diagnoses of MDD and social phobia.

When directly comparing levels of abuse reported among patients meeting criteria for MDD versus the anxiety disorders, however, we found little evidence for specificity. Based upon our specificity hypothesis, we would have expected that patients who met criteria for MDD, with or without a comorbid anxiety disorder, would have reported higher levels of childhood emotional abuse than patients meeting criteria for an anxiety disorder without comorbid MDD. In contrast, however, we found that patients meeting criteria for PTSD, with or without a comorbid diagnosis of MDD, reported higher levels of emotional, as well as physical and sexual, abuse compared to patients meeting criteria for MDD without a comorbid PTSD diagnosis. In addition, patients with comorbid MDD and social phobia reported higher levels of emotional abuse than did patients with MDD but not social phobia. In this latter analysis, reports of emotional abuse did not differ between patients meeting criteria for MDD versus social phobia alone.

These results suggest that whereas PTSD appears to be broadly related to a history of childhood abuse, MDD and social phobia appeared to be related specifically to childhood emotional abuse. An important question for future research, therefore, is to determine what factors may make the likelihood of developing MDD versus social phobia versus their combination more likely. The search for moderators is also important given the relatively modest effects obtained in this study, which were generally small to medium in size [Cohen, 1988]. These effect sizes are not surprising given our focus on adult correlates of childhood events. Indeed, a number of factors may have occurred in the intervening years that either mitigate or strengthen the negative impact of the abuse [see Cicchetti et al., 2000]. Future studies are also

needed to understand the process or mechanism by which childhood abuse contributes to the development of psychopathology. Rose and Abramson [1992] suggested that with repeated experiences of childhood emotional abuse, children may begin to make more negative attributions and inferences for its occurrence, which then may develop into a more general negative attributional style that would contribute vulnerability to depression. Although preliminary, there is evidence from both cross-sectional and longitudinal studies to support this model [e.g., Gibb and Alloy, 2006; Gibb et al., 2001, 2003a]. However, it is not clear whether this process would also be observed for social phobia and/or PTSD.

Strengths of this study include its large sample of psychiatric outpatients, the use of structured diagnostic interviews to assess a wide range of current depressive and anxiety disorders, and the use of a well-validated measure of childhood abuse. However, limitations are also inherent in our use of a cross-sectional retrospective design. For example, given the cross-sectional design, we could not directly examine whether the three forms of childhood abuse actually contribute to the development of psychopathology. This said, there is growing evidence from longitudinal studies that reports of childhood emotional abuse do predict the development of both symptoms and diagnoses of depression [e.g., Gibb and Alloy, 2006; Gibb et al., 2001]. In addition, there is evidence that a subset of children who experience physical and sexual abuse do later develop PTSD [for a review, see Rodriguez et al., 1998].

Another limitation of this study is the reliance upon patients' retrospective self-report in the assessment of childhood abuse, which may be subject to recall biases. Studies have suggested, however, that adults' recall of specific childhood events such as abuse is relatively accurate [for a review, see Brewin et al., 1993] and the measure of childhood abuse used in this study has shown good criterion-related validity with therapists' ratings of abuse [Bernstein et al., 2003]. Although some researchers have chosen to focus on documented cases of childhood abuse, many instances of childhood abuse, particularly childhood emotional abuse, go unreported, leaving researchers with an unrepresentative sample of abuse survivors [see Binggeli et al., 2001; Moran et al., 2002]. Nonetheless, future research would benefit from multimethod assessments of abuse, including the use of both self-report assessments and interviewer-rated assessments [e.g., the Childhood Experience of Care and Abuse interview; Moran et al., 2002].

In conclusion, this study provided partial support for our specificity hypothesis. Specifically, whereas PTSD appears to be globally related to a history of childhood trauma, there is some evidence that emotional abuse is more strongly related to the presence of major depression and social phobia in adulthood than either physical or sexual abuse. Future research is needed to examine whether emotional abuse actually contributes to the development of these disorders, as well to identify factors that may contribute to the development of one disorder versus another (e.g., negative attributional styles). Given evidence that social phobia itself may contribute vulnerability to the development of depression [Lampe et al., 2003], longitudinal studies should focus on the potential sequential development of these two disorders among individuals with a history of childhood emotional abuse.

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