

**Global reports of childhood maltreatment versus
recall of specific maltreatment experiences:
Relationships with dysfunctional attitudes and
depressive symptoms**

Brandon E. Gibb and Lauren B. Alloy
Temple University, Philadelphia, PA, USA

Lyn Y. Abramson
University of Wisconsin, Madison, WI, USA

Although studies have suggested that reports of childhood maltreatment are related to depressive cognitions and symptom levels in adults, it is unclear whether the significant relations reported are due to the recall of specific maltreatment experiences, how individuals globally label their experiences (i.e., whether they believe they were maltreated during childhood), or both. Results from the current study supported the moderating role of global beliefs only for childhood sexual maltreatment. Specifically, the relationship between reports of specific childhood sexual maltreatment experiences and both dysfunctional attitudes and depressive symptom levels was significant only among participants who also globally endorsed a history of childhood sexual maltreatment. In contrast, the correlates of specific childhood emotional and physical maltreatment experiences were, for the most part, independent of whether the participants globally endorsed childhood emotional or physical maltreatment, respectively.

A number of studies have explored the relations between a history of childhood maltreatment and the presence of both symptoms and diagnoses of depression. These studies have suggested that histories of childhood emotional (e.g., Gibb et al., 2001; Kent & Waller, 1998; Rich, Gingerich, & Rosen, 1997), physical (e.g., Flisher et al., 1997; Lizardi et al., 1995; Silverman, Reinherz, & Giaconia, 1996), and sexual (e.g., Kendler et al., 2000; Lizardi et al., 1995; Silverman et al., 1996) maltreatment are related to the presence of both symptoms and diagnoses of depression.

Correspondence concerning this article should be addressed to Brandon E. Gibb, Department of Psychology, Temple University, 1701 N. 13th St., Philadelphia, PA 19122, USA;
e-mail: bgibb@temple.edu

Given evidence that individuals' characteristic ways of interpreting the negative events in their lives may contribute vulnerability to the development of depression (for reviews, see Abramson et al., 1999; Alloy et al., 1999; Clark, Beck, & Alford, 1999; Haaga, Dyck, & Ernst, 1991; Ingram, Miranda, & Segal, 1998; Peterson & Seligman, 1984), researchers have also examined the relationship between childhood maltreatment and cognitive vulnerability to depression. Thus far, however, these studies have focused almost exclusively on the correlates of negative attributional and inferential styles, the cognitive vulnerabilities featured in the reformulated learned helplessness (Abramson, Seligman, & Teasdale, 1978) and hopelessness (Abramson, Metalsky, & Alloy, 1989) theories, respectively. Results from these studies have suggested that the presence of negative attributional or inferential styles is significantly correlated with reports of childhood emotional or sexual, but not physical, maltreatment (for a review, see Gibb, 2002).

In contrast, few studies have explored the developmental antecedents of cognitive vulnerability to depression as defined by Beck (1967, 1987; Clark et al., 1999). Beck proposed that the presence of a maladaptive self-referent schema centring on themes of failure, rejection, or unworthiness contributes vulnerability to the development of depression following the occurrence of negative life events. The assessment of cognitive vulnerability to depression as defined by Beck has been operationalised in two ways. First, the Dysfunctional Attitudes Scale (DAS; Weissman & Beck, 1978) has been used to assess individuals' levels of dysfunctional attitudes, the purported products of maladaptive self-schemata. Second, the Sociotropy-Autonomy Scale (Beck, Epstein, Harrison, & Emery, 1983) has been used to assess personality suborganisations hypothesised to contribute vulnerability to depression following negative interpersonal (sociotropy) or achievement (autonomy) events. Studies have supported both the cross-sectional and prospective relations between cognitive vulnerability as assessed by the DAS or SAS and both symptoms and diagnoses of depression (for a review, see Clark et al., 1999). There is some evidence, however, that the predictive validity of the DAS improves when negative self-schemata are "primed" (Clark et al., 1999; Ingram et al., 1998), which is consistent with Beck's theory that depressotypic schemata are latent until activated by either a schema-congruent negative life event or a depressed mood (Beck, 1967; Beck, Rush, Shaw, & Emery, 1979; Clark et al., 1999).

To date, no studies of which we are aware have directly examined the relations between childhood maltreatment and cognitive vulnerability as defined in Beck's theory. One study, however, has provided indirect evidence for a relation between childhood maltreatment and adults' dysfunctional attitudes. In this study, undergraduates hypothesised to be at high cognitive risk for depression, as defined by Beck's (1967, 1987) theory *and* the hopelessness theory (Abramson et al., 1989) reported more childhood emotional, but not physical or sexual, maltreatment than did students at low cognitive risk for

depression (Gibb et al., 2001).¹ A limitation of this study, however, is that because participants were selected based on the presence versus absence of cognitive vulnerability as defined by *both* Beck's theory and the hopelessness theory, the relationship between reports of childhood maltreatment and dysfunctional attitudes could not be examined specifically. Therefore, it is unclear whether the risk group differences were due to the relationship between childhood maltreatment and students' dysfunctional attitudes, inferential styles, or both. One goal of the current study, therefore, was to determine whether reports of childhood emotional, physical, or sexual maltreatment were related specifically to participants' dysfunctional attitudes.

A more general limitation of studies examining the relations between childhood maltreatment and both depressive symptoms and cognitions is that it is often not clear whether the significant relationships reported are due to the recall of specific maltreatment experiences, how individuals label their experiences (i.e., whether or not they globally believe that they are victims of childhood maltreatment), or both. Thus, it is possible that certain experiences contribute to the development of depressive symptoms and cognitions, whether or not the person believes that he or she was maltreated. On the other hand, it is also possible that a belief that one was maltreated is related to the presence of depressive symptoms and cognitions, regardless of the number of specific maltreatment experiences reported. A third possibility is that reports of specific childhood maltreatment experiences are related to the presence of depressive symptoms and cognitions only among individuals who also believe that they were maltreated (i.e., interpret the specific experiences as maltreatment).

Although few studies have addressed these issues, there is some evidence for the third possibility. For example, one study found that lifetime rates of depression were higher among women who reported both specific experiences of childhood physical maltreatment and a global belief that they were physically maltreated than among women who reported specific childhood physical maltreatment experiences while globally denying a history of childhood physical maltreatment (Carlin et al., 1994). Women reporting specific experiences of childhood physical maltreatment only, in turn, had higher lifetime rates of depression than women reporting no physical maltreatment (either globally or specific experiences).

¹Gibb et al. (2001) also reported that, when the three types of childhood maltreatment were entered simultaneously in a regression equation, high risk participants reported higher levels of emotional maltreatment and lower levels of childhood physical maltreatment than did low risk participants. Given the nonsignificant relation between risk group status and childhood physical maltreatment considered individually, and the high correlation between reports of childhood emotional and physical maltreatment, the significant regression result for childhood physical maltreatment was probably a statistical artifact due to suppression effects (for a discussion of suppressor variables, see Cohen & Cohen, 1983; Tabachnick & Fidell, 1996).

The primary goal of the current study was to further address the relative impact of individuals' reports of specific maltreatment experiences versus their global beliefs of whether they were maltreated during childhood. We hoped to extend Carlin et al.'s (1994) finding in two ways. First, we assessed histories of childhood emotional and sexual maltreatment as well as childhood physical maltreatment. Second, we assessed both depressive symptoms and dysfunctional attitudes. We predicted that participants' reports of specific maltreatment experiences would be significantly related to dysfunctional attitudes and depressive symptom levels even after statistically controlling for the global endorsement of maltreatment. Consistent with the findings of Carlin et al. (1994), we also predicted that participants' global beliefs of whether they were maltreated during childhood would moderate the relationships between reports of specific maltreatment experiences and both dysfunctional attitudes and depressive symptom levels.

METHODS

Participants

A total of 212 undergraduates (156 women and 56 men), recruited from introductory psychology classes, participated in the current study. Of these, 121 (57.1%) were Caucasian, 51 (24.1%) were African American, 21 (9.9%) were Asian, 8 (3.8%) were Hispanic, and the remaining 11 (5.1%) participants either were from other ethnic groups or did not report their ethnicity. The mean age of the participants was 18.79 ($SD = 1.42$).

Measures

Childhood maltreatment. Participants' histories of childhood emotional, physical, and sexual maltreatment were assessed in two ways. First, participants completed the Life Experiences Questionnaire (LEQ; Gibb et al., 2001). The LEQ is a 92-item self-report measure that assesses *specific*, explicitly defined childhood experiences of emotional (Specific-EM; 20 items), physical (Specific-PM; 9 items), and sexual (Specific-SM; 20 items) maltreatment, as well as emotional and physical neglect committed by both peers and adults. For the current study, only the maltreatment items from the LEQ were administered. In addition, given that we were interested in childhood maltreatment specifically and not maltreatment occurring in either adolescence or adulthood, we included only those events endorsed as occurring before age 15. Consistent with Hart, Germain, and Brassard (1987), forms of childhood emotional maltreatment assessed by the LEQ include rejecting, degrading, terrorising, isolating, and denying emotional responsiveness. Forms of physical maltreatment assessed include being hit either with a fist or object, being choked, and being the victim of deliberate physical pain. Forms of sexual maltreatment assessed include both

contact and noncontact sexual behaviours (e.g., exposure to pornography and unwanted intercourse). For each LEQ item, participants indicate if they have ever experienced that event, the age of onset and offset of the event described, its frequency of occurrence, and who the perpetrator was. Continuous levels of each form of maltreatment were determined by summing the number of events endorsed for each maltreatment type (emotional, physical, and sexual). The maltreatment subscales of the LEQ (emotional, physical, and sexual) have been found to correlate highly with levels of emotional, physical, and sexual maltreatment reported in structured maltreatment interviews and the emotional maltreatment subscale has demonstrated predictive validity for episodes of depression (Gibb et al., 2001). In the current study, the LEQ exhibited adequate internal consistency for the childhood emotional ($\alpha = .75$), physical ($\alpha = .64$), and sexual ($\alpha = .82$) maltreatment subscales.

In addition to the LEQ, participants also completed a questionnaire asking, in separate questions, whether they believe that they were emotionally, physically, or sexually maltreated as a child (before the age of 15). For example, participants were asked, "Do you believe you were emotionally abused before reaching the age of 15?" Analogous questions were used to assess for histories of childhood physical and sexual maltreatment. Participants' answers to these questions were coded as dichotomous variables (yes vs. no). In contrast to the specific experiences assessed by the LEQ, these questions assess participants' *global* beliefs of whether they were emotionally (Global-EM), physically (Global-PM), or sexually (Global-SM) maltreated during childhood.

Dysfunctional attitudes. The Dysfunctional Attitudes Scale (DAS; Weisman & Beck, 1978), a 40-item self-report inventory, was used to assess cognitive vulnerability to depression as defined by Beck's (1967, 1987; Clark et al., 1999) theory. The DAS assesses a variety of maladaptive attitudes including sensitivity to social criticism, perfectionistic performance standards, expectations of control, and rigid ideas about the world. Response options to each of the questions range, on a 7-point Likert-type scale, from *totally agree* to *totally disagree*. Total scores for the DAS, which range from 1 to 280, are calculated by summing participants' responses to each of the 40 items, with higher scores indicating higher levels of dysfunctional attitudes. The DAS has been shown to have good internal consistency and moderate concurrent validity in a student population (Dobson & Breiter, 1983). In the current study, the DAS exhibited good internal consistency ($\alpha = .90$).

Depressive symptoms. The Beck Depression Inventory (BDI; Beck et al., 1979) was used to assess participants' levels of depressive symptoms. Total scores on the BDI range from 0 to 63, with higher scores indicating more severe levels of depressive symptoms. Numerous studies have established the validity

and reliability of the BDI (Beck, Steer, & Garbin, 1988). In the current study, the BDI exhibited good internal consistency ($\alpha = .90$).

Procedures

Participants completed each of the questionnaires in groups ranging in size from 1 to 20 people and received course credit for their participation. The measures were administered in counterbalanced order to control for the possibility that participants' responses to the LEQ would affect their global endorsement of maltreatment or vice versa. A series of *t*-tests was conducted to determine whether there was a relation between participants' responses to the global or specific measures of childhood maltreatment and the order in which they were administered. None of these tests was significant (all *ps* > .20).

RESULTS

To test for possible gender and/or ethnic differences in reports of specific childhood maltreatment experiences, dysfunctional attitudes, and depressive symptoms, a series of 2 (Gender: Male vs. Female) \times 2 (Ethnicity: Caucasian vs. Non-Caucasian) ANOVAs was conducted. None of the main effects or interactions was significant. In addition, a series of 2 (Gender: Male vs. Female) \times 2 (Ethnicity: Caucasian vs. Non-Caucasian) \times 2 (Global maltreatment: Yes vs. No) χ^2 tests yielded no significant results. Therefore, all analyses were conducted collapsing across gender and ethnic groups.

The percentages of participants reporting the various forms of global and specific childhood maltreatment are presented in Table 1. As can be seen, a number of individuals were classified as maltreated based on the responses to the LEQ but did not globally endorse a history of childhood maltreatment. This

TABLE 1
Participants' global vs. specific reports of childhood maltreatment

	<i>Specific-CM</i>								
	<i>Emotional</i>		<i>Physical</i>				<i>Sexual</i>		
	Yes	No	Yes	No	Yes	No	Yes	No	
<i>Global-CM</i>	<i>Emotional</i>		<i>Physical</i>				<i>Sexual</i>		
	Yes	34	0	Yes	14	2	Yes	14	3
	No	126	52	No	114	82	No	25	170

Note: Global-CM = global reports of childhood emotional, physical, or sexual maltreatment. Specific-CM = reports of specific childhood emotional, physical, or sexual maltreatment experiences. Frequencies for Specific-CM indicate the number of participants reporting at least one specific childhood maltreatment experience.

is not surprising given findings that individuals often do not report believing that they were maltreated even when they report a history of specific maltreatment experiences (e.g., Carlin et al., 1994).

Correlations among the variables included in this study as well as means and standard deviations (or percentages) are presented in Table 2. As can be seen in Table 2, the three specific measures of childhood maltreatment were significantly correlated with participants' DAS and BDI scores. Of the three global measures of childhood maltreatment, global endorsements of childhood emotional maltreatment were related to DAS and BDI scores and global endorsements of childhood sexual maltreatment were related to BDI, but not DAS, scores. Global endorsements of childhood physical maltreatment were not significantly related to either DAS or BDI scores.

To examine the relations between participants' recall of specific childhood maltreatment experiences versus their global endorsement of childhood maltreatment and their levels of dysfunctional attitudes and depressive symptoms, a series of regression analyses was conducted. In these analyses, participants' specific and global reports of one of the types of childhood maltreatment were entered in the first step of a regression equation (e.g., Specific-EM and Global-EM), with either DAS or BDI scores used as the criterion variable. Results from this first step allowed us to examine the *unique* correlates of global and specific reports of childhood maltreatment, controlling for the overlap between them. In the second step of the regression, the global maltreatment \times specific maltreatment interaction was entered, allowing for an examination of moderation effects.

TABLE 2
Descriptive statistics for study variables

Variable	1	2	3	4	5	6	7	Mean	SD	%
1. Specific-EM	—							2.68	2.64	
2. Specific-PM	.54***	—						1.27	1.43	
3. Specific-SM	.35***	.45***	—					0.50	1.46	
4. Global-EM	.51***	.40***	.30***	—						16.0
5. Global-PM	.37***	.46***	.44***	.51***	—					7.5
6. Global-SM	.19**	.24***	.65***	.30***	.38***	—				8.0
7. DAS	.28***	.15*	.18**	.15*	.10	.04	—	122.05	29.82	
8. BDI	.40***	.21**	.31***	.24***	.09	.17*	.57***	6.80	7.33	

Note: Specific-EM = recalled specific experiences of childhood emotional maltreatment. Specific-PM = recalled specific experiences of childhood physical maltreatment. Specific-SM = recalled specific experiences of childhood sexual maltreatment. Global-EM = global endorsement of childhood emotional maltreatment. Global-PM = global endorsement of childhood physical maltreatment. Global-SM = global endorsement of childhood sexual maltreatment. DAS = Dysfunctional Attitudes Scale. BDI = Beck Depression Inventory. Percentages refer to the percent of participants globally endorsing each form of childhood maltreatment. * $p < .05$; ** $p < .01$; *** $p < .001$.

Statistically controlling for the influence of participants' reports of specific childhood maltreatment experiences, none of the global measures of childhood maltreatment was significantly related to either DAS or BDI scores. In contrast, even after statistically controlling for the influence of participants' global endorsement of childhood maltreatment, several of the relationships between specific maltreatment experiences and both DAS and BDI scores remained significant. Specifically, participants' DAS scores were significantly predicted by Specific-EM, $t(209) = 3.54, p < .001, \beta = .27$, and Specific-SM, $t(209) = 3.11, p = .002, \beta = .28$. In addition, participants' BDI scores were significantly predicted by Specific-EM, $t(209) = 5.06, p < .001, \beta = .37$, Specific-PM, $t(209) = 2.86, p = .005, \beta = .22$, and Specific-SM, $t(209) = 3.91, p < .001, \beta = .34$. Thus, participants reporting higher levels of Specific-EM or Specific-SM reported more dysfunctional attitudes and depressive symptoms than did participants reporting lower levels of these forms of childhood maltreatment. In contrast, participants' reports of Specific-PM were directly related to their depressive symptom levels but not their dysfunctional attitudes.²

Next we explored the tests of moderation. None of the global maltreatment \times specific maltreatment interactions approached significance for childhood emotional or physical maltreatment predicting dysfunctional attitudes or depressive symptoms (lowest $p = .25$). In contrast, the Global-SM \times Specific-SM interaction was marginally significant in predicting DAS scores, $t(208) = 1.91, p = .06, \beta = .32$. Similarly, the Global-SM \times Specific-SM interaction significantly predicted BDI scores, $t(208) = 2.25, p = .03, \beta = .37$.³ To explore the nature of

² Given the significant correlations between global and specific measures of maltreatment and the unknown reliability of the global measures, we conducted analyses to test for the presence of suppressor effects. If suppressor effects were present, the main effect for specific maltreatment experiences should have become stronger, rather than weaker, when the main effect for global reports of maltreatment was entered in the regression equation. Therefore, we reconducted each of the analyses reported entering the specific measure of maltreatment in the first step of the regression and the global measure of maltreatment in the second step. Specifically, we compared the standardised beta weights of the specific maltreatment effects when entered alone (first step) versus when entered together with the global measure of maltreatment (second step). The only evidence of a suppression effect came from the analyses of childhood sexual maltreatment. Given this, caution should be exercised when interpreting the main effects for participants' reports of specific childhood sexual maltreatment experiences. It should be noted, however, that suppressor effects occurring in the main effects do not influence interaction terms. Therefore, our test of moderation should not have been influenced.

³ These analyses were also conducted using only contact forms of specific childhood sexual maltreatment (specific-CSM). In these analyses, the global-SM \times specific-CSM interaction did not significantly predict DAS scores, $t(208) = 1.21, p = .23, \beta = .21$, and only marginally predicted BDI scores, $t(208) = 1.81, p = .07, \beta = .30$. Although these nonsignificant results may have been due, in part, to the small number of participants reporting specific contact experiences of childhood sexual maltreatment (mean number of experiences reported = 0.26, $SD = 0.86$), it should be noted that the zero-order correlations between specific-CSM and both DAS, $r = .22, p = .001$, and BDI, $r = .35, p < .0001$, scores were significant.

these interactions, participants were divided into those endorsing versus not endorsing Global-SM.⁴ Among participants endorsing Global-SM, there were significant correlations between Specific-SM and both DAS, $r(15) = .68$, $p = .003$, and BDI, $r(15) = .69$, $p = .002$, scores. In contrast, among participants not endorsing Global-SM, the correlations between Specific-SM and both DAS, $r(193) = .03$, $p = .68$, and BDI, $r(193) = .05$, $p = .52$, scores were nonsignificant.

Given evidence that the content of depressive schemata (e.g., dysfunctional attitudes) may remain latent until primed by either negative life events or depressed mood (Clark et al., 1999; Ingram et al., 1998), we re-examined the relations between childhood maltreatment and dysfunctional attitudes among participants reporting at least mild to moderate levels of depressive symptoms (BDI scores ≥ 10 ; Beck et al., 1988). The results from analyses of these 60 participants were virtually identical to those reported above.

DISCUSSION

The primary goal of the current study was to examine whether the relationship between childhood maltreatment and dysfunctional attitudes and depressive symptoms was due to reports of specific maltreatment experiences, a belief that one has been maltreated, or both. The current results supported the moderating role of participants' global beliefs only for childhood sexual maltreatment. Specifically, the relationship between reports of specific childhood sexual maltreatment experiences and levels of both dysfunctional attitudes and depressive symptoms was significant only among participants who also reported believing that they were sexually maltreated.

In contrast, reports of specific childhood emotional maltreatment experiences were related to participants' dysfunctional attitudes and depressive symptom levels, whether or not participants reported believing that they were emotionally maltreated during childhood. Similarly, reports of specific childhood physical maltreatment experiences were related to participants' depressive symptom levels, but not dysfunctional attitudes, even after statistically controlling for global endorsements of childhood physical maltreatment.

The current results are consistent with previous findings suggesting significant relationships between histories of childhood emotional, physical, or sexual maltreatment and adults' current depressive symptom levels (e.g., Gibb et al., 2001; Flisher et al., 1997; Kendler et al., 2000; Kent & Waller, 1998; Lizardi et al., 1995; Rich et al., 1997; Silverman et al., 1996). They are also consistent with the results of studies examining cognitive vulnerability to depression as defined by the reformulated learned helplessness theory (Abramson et al., 1978)

⁴Although the interaction term for DAS scores did not quite reach the traditional level of statistical significance, we chose to explore it. Conclusions from this exploration, however, should remain tentative.

and the hopelessness theory (Abramson et al., 1989), which have supported the relationships between childhood emotional and sexual, but not physical, maltreatment and cognitive vulnerability to depression (for a review, see Gibb, 2002). The current results did not, however, replicate Carlin et al.'s (1994) finding that a history of childhood physical maltreatment was most strongly related to depressive episodes among women reporting both specific experiences of childhood physical maltreatment and a global belief that they were physically maltreated during childhood. Although the difference in findings may be due to a difference in samples, future studies are needed to clarify this discrepancy.

There are at least two interpretations of the current results. One view is that specific experiences of childhood emotional and physical maltreatment are deleterious whether or not individuals label their experiences as maltreatment. In contrast, experiences of childhood sexual maltreatment may be most detrimental when the individual labels him or herself as a victim. A different interpretation of the current results, however, is that individuals are simply better able to identify sexual maltreatment when it occurs than either emotional or physical maltreatment. Supporting this possibility, the rates of agreement between global and specific reports of childhood maltreatment presented in Table 1 suggests greater agreement for sexual than for emotional or physical maltreatment. To formally test this possibility, however, future studies should compare global endorsements of maltreatment among participants given explicit definitions and examples of each maltreatment type versus participants given no definitions or examples.

The limitations of the current study should also be noted. First, histories of maltreatment were assessed using self-report questionnaires, which may have been subject to recall biases. However, studies have generally found that individuals' recall of specific childhood events is relatively accurate (for a review, see Brewin, Andrews, & Gotlib, 1993). Although we do assume the accuracy of participants' reports of specific experiences, we made no hypotheses concerning the accuracy of participants' global beliefs of maltreatment. Indeed, with the global maltreatment measures, we were merely interested in the impact of participants' beliefs, whether or not they were based upon actual experiences. This said, however, our one-item global measures of maltreatment were of unknown reliability and validity. Therefore, the significant main effects of our specific maltreatment measures statistically controlling for the effects of the global measures may have been due to the low reliability or poor validity of the global measures. However, the significant zero-order correlations for the global measures and the significant moderation effect for the global measure of childhood sexual maltreatment argue and against this possibility and suggest that these measures had at least fairly good psychometric properties.

A second limitation of the current study is that all of the data are cross-sectional. Reports of childhood maltreatment, therefore, could not be used to prospectively predict changes in participants' dysfunctional attitudes and

depressive symptom levels. Although no causal conclusions can be drawn, the current results were consistent with Beck's hypothesis that negative events in childhood may contribute to the development of depressogenic self-schemata and depressive symptoms. Specifically, the current results suggest that experiences of childhood emotional or physical maltreatment may themselves be deleterious, regardless of how individuals label their experiences. The results were also consistent with the hypothesis that experiences of childhood sexual maltreatment may be most detrimental when participants also label the experiences as maltreatment. Given these suggestive results, the temporal relations among these variables should be evaluated in future longitudinal studies.

A third potential limitation of the current study is the use of the DAS as a measure of participants' depressogenic self-schemata. Specifically, studies have found mixed support for the DAS as a marker of cognitive vulnerability to depression (for a review, see Clark et al., 1999). Results have been more supportive, however, when the DAS has been administered following a mood induction. In the current study, the results of analyses with the subsample of participants with at least mild levels of depressive symptoms were virtually identical to those obtained in the full sample, which allows greater confidence in the current results. Given that Beck (Beck et al., 1983; Clark et al., 1999) has shifted toward defining cognitive vulnerability more in terms of personality suborganisations (i.e., sociotropy and autonomy) than in terms of dysfunctional beliefs, future studies should seek to replicate the current results while assessing participants' levels of sociotropy and autonomy.

In summary, the current study is the first of which we are aware to specifically examine the relationship between reports of childhood maltreatment and cognitive vulnerability to depression as defined by Beck (1967, 1987; Clark et al., 1999). As such it provides preliminary support for Beck's hypothesis that childhood events may contribute to the development of depressogenic self-schemata. Future longitudinal studies should seek to replicate and extend the current findings by using levels of childhood maltreatment to prospectively predict changes in individuals' dysfunctional attitudes and depressive symptoms.

Manuscript received 26 August 2000
Revised manuscript received 26 June 2001

REFERENCES

- Abramson, L.Y., Alloy, L.B., Hogan, M.E., Whitehouse, W.G., Donovan, P., Rose, D., Panzarella, C., & Ranieri, D. (1999). Cognitive vulnerability to depression: Theory and evidence. *Journal of Cognitive Psychotherapy: An International Quarterly*, 13, 5–20.
- Abramson, L.Y., Metalsky, G.I., & Alloy, L.B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, 96, 358–372.

- Abramson, L.Y., Seligman, M.E.P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74.
- Alloy, L.B., Abramson, L.Y., Whitehouse, W.G., Hogan, M.E., Tashman, N.A., Steinberg, D.L., Rose, D.T., & Donovan, P. (1999). Depressogenic cognitive styles: Predictive validity, information processing and personality characteristics, and developmental origins. *Behavior Research and Therapy, 37*, 503–531.
- Beck, A.T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row.
- Beck, A.T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy: An International Quarterly, 1*, 5–37.
- Beck, A.T., Epstein, N., Harrison, R.P., & Emery, G. (1983). *Development of the Sociotropy-Autonomy Scale: A measure of personality factors in psychopathology*. Unpublished manuscript, University of Pennsylvania, Philadelphia, USA.
- Beck, A.T., Rush, A.J., Shaw, B.F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford Press.
- Beck, A.T., Steer, R.A., & Garbin, M.G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8*, 77–100.
- Brewin, C.R., Andrews, B., & Gotlib, I.H. (1993). Psychopathology and early experience: A reappraisal of retrospective reports. *Psychological Bulletin, 113*, 82–98.
- Carlin, A.S., Kemper, K., Ward, N.G., Sowell, H., Gustafson, B., & Stevens, N. (1994). The effect of differences in objective and subjective definitions of childhood physical abuse on estimates of its incidence and relationship to psychopathology. *Child Abuse and Neglect, 18*, 393–399.
- Clark, D.A., Beck, A.T., Alford, B.A. (1999). *Scientific foundations of cognitive theory and therapy of depression*. Philadelphia: Wiley.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Dobson, K.S., & Breiter, H.J. (1983). Cognitive assessment of depression: Reliability and validity of three measures. *Journal of Abnormal Psychology, 92*, 107–109.
- Flisher, A.J., Kramer, R.A., Hoven, C.W., Greenwald, S., Alegria, M., Bird, H.R., Canino, G., Connell, R., & Moore, R.E. (1997). Psychosocial characteristics of physically abused children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 123–131.
- Gibb, B.E. (2002). Childhood maltreatment and negative cognitive styles: A quantitative and qualitative review. *Clinical Psychology Review, 22*, 223–246.
- Gibb, B.E., Alloy, L.B., Abramson, L.Y., Rose, D.T., Whitehouse, W.G., Donovan, P., & Hogan, M.E. (2001). History of childhood maltreatment, depressogenic cognitive style, and episodes of depression in adulthood. *Cognitive Therapy and Research, 25*, 425–446.
- Haaga, D.A.F., Dyck, M.J., & Ernst, D. (1991). Empirical status of cognitive theory of depression. *Psychological Bulletin, 110*, 215–236.
- Hart, S.N., Germain, R.B., & Brassard, M.R. (1987). The challenge: To better understand and combat psychological maltreatment of children and youth. In M.R. Brassard, R. Germain, & S.N. Hart (Eds.), *Psychological maltreatment of children and youth* (pp. 3–24). New York: Pergamon.
- Ingram, R.E., Miranda, J., & Segal, Z.V. (1998). *Cognitive vulnerability to depression*. New York: Guilford Press.
- Kendler, K.S., Bulik, C.M., Silberg, J., Hettema, J.M., Myers, J., & Prescott, C.A. (2000). Childhood sexual abuse and adult psychiatric and substance use disorders in women: An epidemiological and cotwin control analysis. *Archives of General Psychiatry, 57*, 953–959.
- Kent, A., & Waller, G. (1998). The impact of childhood emotional abuse: An extension of the child abuse and trauma scale. *Child Abuse and Neglect, 22*, 393–399.
- Lizardi, H., Klein, D.N., Ouimette, P.C., Riso, L.P., Anderson, R.L., & Donaldson, S.K. (1995). Reports of childhood home environment in early-onset dysthymia and episodic major depression. *Journal of Abnormal Psychology, 104*, 132–139.

- Peterson, C., & Seligman, M.E.P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, *91*, 347-374.
- Rich, D.J., Gingerich, K.J., & Rosen, L.A. (1997). Childhood emotional abuse and associated psychopathology in college students. *Journal of College Student Psychotherapy*, *11*, 13-28.
- Silverman, A.B., Reinherz, H.Z., & Giaconia, R.M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse and Neglect*, *20*, 709-723.
- Tabachnick, B.G., & Fidell, L.S. (1996). *Using multivariate statistics*. New York: HarperCollins College Publishers.
- Weissman, A., & Beck, A.T. (1978). *Development and Validation of the Dysfunctional Attitudes Scale: A preliminary investigation*. Paper presented at the meeting of the American Educational Research Association, Toronto, Canada.

