

Research report

# Parental verbal abuse and the mediating role of self-criticism in adult internalizing disorders

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## Abstract

**Background:** Researchers (e.g., [Gibb, B.E., 2002. Childhood maltreatment and negative cognitive styles. A quantitative and qualitative review. *Clinical Psychology Review*, 22 (2), 223–246]; [Rose, D.T., Abramson, L.Y., 1992. Developmental predictors of depressive cognitive styles: developmental perspectives on depression. In Cicchetti, D., Toth, S.L. (Eds.), *Developmental Perspectives on Depression*. Rochester symposium on developmental psychopathology, vol. 4, pp. 323–349]) have proposed that when childhood abuse is verbal (rather than sexual or physical), the child is more likely to develop a negative self-schema because the negative self-cognitions are directly supplied to the child by the abuser (e.g., “you are stupid”).

**Methods:** In a test of this theory in adult participants, and drawing on the National Comorbidity Survey (NCS) ( $N=5877$ ), we investigate the mediating role of current levels of self-criticism on the relationship between retrospective reports of parental verbal abuse, as well as sexual and physical abuse, and adult internalizing symptoms.

**Results:** We found self-criticism, but not dependency traits, to fully mediate the relationship between childhood verbal abuse perpetrated by parents and internalizing (depression, anxiety) symptoms. On the other hand, self-criticism was only a partial mediator of the relationship between the other types of abuse and internalizing symptoms.

**Limitations:** The NCS data is cross-sectional, which limits any firm conclusions regarding causality. While these results are suggestive that self-criticism is a mediator of the relationship between abuse and internalizing symptoms, longitudinal data are necessary to help rule out alternative explanations.

**Conclusions:** Results of this study suggest that childhood abuse experiences, and in particular verbal abuse, may confer risk for internalizing disorders in part because verbal abuse influences the development of a self-critical style.

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**Keywords:** Parental verbal; Sexual and physical abuse; Self-criticism; Internalizing symptoms

## 1. Introduction

Over the last several decades, considerable research has accumulated documenting the long-term negative

sequelae of childhood abuse. Most notably, childhood abuse has been linked to psychiatric disorders in adulthood (e.g., (Bergen et al., 2004), including disorders within the internalizing and externalizing spectrums (Toth et al., 2002). There are several mechanisms by which childhood abuse may confer risk for psychopathology. However, there is some

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evidence that childhood verbal abuse, in particular, confers risk for development of a negative cognitive style (Gibb, 2002), which is a risk factor for depression (Alloy et al., 1999). Negative cognitive style has been defined as a characteristic way of attributing the causes of negative life events to stable, internal, and global factors (e.g., I failed the test because I am stupid), inferring negative consequences (e.g., I will never succeed), and making self-critical judgments of one's character (e.g., I am worthless) (Alloy et al., 2004), as well as having dysfunctional attitudes and maladaptive self-schemas (Beck, 1987). Thus, one aspect of a negative cognitive style can be operationalized as self-criticism (Blatt, 1974).

In the current study we examined the impact of childhood parental verbal abuse on adult internalizing symptoms. We contend that the effect of verbal abuse on internalizing symptoms is mediated by a negative self-schema (i.e., self-criticism). That is, verbal abuse confers risk for internalizing symptoms because verbal abuse is directly related to the development of self-criticism, which, in turn, influences the development of internalizing symptoms.

Childhood abuse has been associated with the development of a negative cognitive style (Gibb et al., 2004). Rose and Abramson (1992) speculated that childhood verbal abuse would be more likely than other forms of maltreatment to lead a negative cognitive style, in that the negative self-schema is supplied by the abuser (e.g., "you are worthless"). In a study testing this theory, Gibb et al. (2003) found retrospective reports of childhood verbal abuse, but not physical or sexual maltreatment, were related to a negative cognitive style. However, not all studies have supported the unique relationship between verbal abuse and negative cognitive style. Gibb (2002) conducted a qualitative and quantitative review of the literature examining the effects of different types of abuse on negative cognitive style (predominately attributional style). Among the handful of studies identified, most included small samples of undergraduate students and adult psychiatric patients; there were two studies that included children. Gibb (2002) concluded that whereas there was an association between verbal abuse and negative cognitive style, there was a similar relation for sexual abuse, although only among the relatively older participants. Gibb did not find an association between physical abuse and negative cognitive style. As the author noted, only a handful of studies has examined the relationships between different types of childhood abuse and cognitive style, and more research in this area is needed.

Self-criticism is a construct related to negative cognitive style, and represents the negative evaluation of the self and a relentless belief that others share one's pernicious view (Blatt, 1974). Researchers have characterized the self-critical type as being consumed by feelings of failure, worthlessness, inferiority and self-doubt (Blatt and Homann, 1992). Self-criticism has been identified as a vulnerability marker for depression (Bagby et al., 1992). Self-criticism is also associated with anxiety disorders. In a series of studies, Cox et al. (2004a,b,c) have shown that self-criticism is related to disorders within the internalizing spectrum, including social phobia, PTSD, and depression.

The high comorbidity of anxiety and depression (Kessler et al., 1998) bears relevance to the understanding of self-criticism as a vulnerability for anxiety and depression. Krueger (1999) has suggested that patterns of comorbidity represent meaningful covariance. Specifically, he validated a two-factor model of common mental disorders, with an internalizing factor representing mood and anxiety disorders and an externalizing factor including antisocial personality disorder and substance dependence. This dimensional model suggests that each factor represents a common underlying process of psychopathology (Krueger et al., 2002). Thus anxiety and depressive disorders may be comorbid because they share common vulnerabilities, and in this study, we investigated self-criticism as a potential psychological vulnerability to internalizing symptoms.

The current study will expand upon the extant literature in several ways. First, past studies examining the mechanisms by which verbal abuse confers risk for psychopathology have focused predominantly on one aspect of negative cognitive style, specifically attributional style, whereas there has been less focus on the role of self-criticism in the development of psychopathology. Secondly, prior work has examined relationships between negative cognitive style and depressive symptoms, whereas there is strong evidence for the co-occurrence of depression and anxiety. In this study, we examine self-criticism as a common vulnerability to anxiety and depressive symptoms.

Furthermore, prior work has not investigated the specificity of self-criticism as a mediator of the relationship between verbal abuse and internalizing disorders. For example, a dependent interpersonal style has been posited as vulnerability marker for depression (Blaney and Kutcher, 1991; Blatt, 1974). Dependent characteristics reflect extreme distress in relation to the loss or abandonment of a significant other, or a strong need for approval (Zuroff et al., 1999). Independent effects of dependency and self-criticism on depression

have emerged in some studies (Mongrain et al., 2004), but none have investigated the extent to which dependency and self-criticism serve as mediators of the relationship between childhood abuse and internalizing symptoms.

The present study will investigate the mediating role of self-criticism on the relationship between retrospective reports of parental abuse and adult internalizing symptoms using data from the National Comorbidity Survey (NCS). We attempted to determine whether childhood abuse (verbal, sexual or physical) and negative cognitive style (e.g., self-criticism) were associated with adult internalizing symptoms. We also examined to what extent dependency serves as a mediator of the relationship between childhood abuse and adult internalizing symptoms to help establish the specificity of self-criticism as a mediator. Finally, we attempted to control for other important childhood variables that may account for variance in internalizing symptoms (e.g., parental psychopathology, parental absence, and the financial situation of the family-of-origin).

We hypothesized that, while childhood experiences of parental abuse would predict internalizing symptoms, self-criticism would mediate the relationship between verbal abuse (but not physical or sexual abuse) and internalizing symptoms. That is, parental verbal abuse was expected to confer risk for internalizing disorders *because* it was associated with self-criticism. Whereas we expected that dependency would be related to internalizing symptoms, we hypothesized that dependency, in contrast to self-criticism, would not be a mediator of the relationship between childhood abuse and internalizing symptoms.

## 2. Method

### 2.1. Sample and participants

The current study draws on the National Comorbidity Survey (NCS), which is a nationwide epidemiological study of over 8000 respondents designed to assess the prevalence of DSM III-R psychiatric disorders (Kessler, 1994). A subsample of the respondents received the psychosocial survey ( $N=5877$ ). Our data are based on this subsample, and we included participants for whom we had complete data used in the analyses ( $N=5614$ ).

Participants were interviewed in their home and informed consent was obtained. The gender distribution was equal. Participants' ages ranged from 15 to 54, with the average age being 33.2 years ( $SD=10.7$ ). Ethnicity was as follows: 75.6% Caucasian, 11.6% African American, 9.4% Hispanic, and 3.4% categorized as "Other".

### 2.2. Participants' psychiatric symptoms

Participants' lifetime DSM III-R psychiatric diagnoses were assessed using the semi-structured Composite International Diagnostic Interview (CIDI) (World Health Organization, 1990) conducted by highly trained and closely supervised interviewers. The reliability and validity of the CIDI has been established in prior work (Wittchen, 1994).

For purposes of this study, we examined diagnostic information relevant to the internalizing syndromes (including symptoms of depression, generalized anxiety, phobia, social phobia, PTSD, and panic). We also used the externalizing symptoms (including symptoms of antisocial personality disorder—only the adult symptoms, not conduct disorder, alcohol dependence and drug dependence) as a control variable. We used symptom count variables (number of symptoms endorsed for each disorder). Because the symptom count variables were positively skewed and there were different numbers of symptoms within each diagnosis, we employed a *z*-score transformation in forming the symptom count variables.

### 2.3. Childhood experiences of abuse

The sexual abuse items were embedded in PTSD module of the CIDI, which has been shown to have good validity and reliability (Kessler, 2000). Furthermore, whereas some indices of abuse were dichotomous (e.g., were you ever raped), verbal and physical abuse were assessed with a Likert-type scale (e.g., 1 to 4 anchored by never and often). To be consistent, as described below, each abuse measure in the current study was defined by a dichotomous variable.

#### 2.3.1. Parental or relative sexual abuse

A list of negative life events included the following sexual abuse items: (1) You were raped? (Someone had sexual intercourse with you when you did not want to by threatening you or using some degree of force); (2) You were sexually molested? (Someone touched or felt your genitals when you did not want them to). Respondents who reported that they had been raped or molested by a *relative* or *step-relative* were coded "Yes" for parental/relative sexual abuse.

#### 2.3.2. Parental physical abuse

Participants were asked if, in their family of origin, they had experienced physical abuse, either mild abuse (pushed, grabbed, or shoved) or more severe abuse (kicked, bit, hit with a fist, hit with something, beat up,

choked, or burned). Participants were coded “Yes” for physical abuse if they indicated that a parent (or step-parent) “often” perpetrated *mild* physical abuse, or “sometimes” or “often” perpetrated *severe* physical abuse towards them.

### 2.3.3. Parental verbal abuse

The participants were handed a list of specific behaviors related to verbal abuse, and asked how often during childhood a parent or step-parent did any of the things on the list to them. The list included: insulted, swore at, did or said something to spite, threatened to hit. Participants were coded “Yes” if they indicated that a parent (or step-parent) “sometimes” or “often” perpetrated verbal abuse towards them.

## 2.4. Potential mediators

### 2.4.1. Self-criticism

Self-criticism was assessed by four items, with each item rated on a scale ranging from 1 (very true) to 4 (not true at all). The items were from the Depressive Experiences Questionnaire (Blatt et al., 1976). Participants responded to such items as, “I dwell on my mistakes more than I should”, and “There is a considerable difference between how I am now and how I would like to be”. The scale was reverse-coded such that higher scores indicated more self-criticism. Cronbach’s alpha was .80.

### 2.4.2. Dependency

Dependency was assessed using the “Dependency and Emotional Reliance on Others” scale (Hirschfeld et al., 1977). The five items measured concerns and fears related to loss or abandonment by others, with each item rated on a scale ranging from 1 (very true) to 4 (not true at all). The scale was reverse-coded such that higher scores indicated more dependency. Cronbach’s alpha was .80.

## 2.5. Covariates in analyses

### 2.5.1. Demographic variables

A comprehensive psychosocial section obtained participants’ demographic information, including participants’ age and gender.

### 2.5.2. Parental history of psychiatric symptoms

Participants were asked about psychiatric symptoms of each of their biological parents, including symptoms of depression, anxiety, drug and alcohol use, and antisocial personality disorder, using the Family History

Research Diagnostic Criteria, (Andreasen et al., 1977). A symptom count score, representing the number of symptoms endorsed for each parent was computed.

### 2.5.3. Parental absence

Participants were asked to indicate, if before the age of 15, they had experienced separation from at least one parent as a result of divorce, death or abandonment of a parent. “Early Parental Absence” was then coded, No or Yes.

### 2.5.4. Family of origin financial status

Participants were asked to compare their family’s financial status to the average family in their community when growing up, on a scale from 5 (better off) to 1 (a lot worse off).

## 2.6. Data analyses

A series of hierarchical linear regression analyses was performed on internalizing symptoms, wherein verbal, sexual, and physical abuse were inserted into the model as predictors, following the inclusion of the covariates, demographic variables (gender, age), family of origin variables (parents’ psychiatric symptoms, parental absence, financial status), and externalizing symptoms. Next, self-criticism was entered to examine whether the contribution of each abuse variable was reduced when self-criticism was included and to test for mediation. These analyses were then repeated to determine whether dependency was a mediator of the relationship between each abuse type and internalizing symptoms. Mediation was formally tested using Sobel tests (Sobel, 1982) to determine whether any observed reduction in the relationship between the predictor and outcome variable with the inclusion of the mediator was statistically significant.

## 3. Results

### 3.1. Prevalence of abuse

Among the participants, 6.6% reported childhood parental physical abuse, and 4.5% reported childhood sexual abuse in which a relative or step-relative was the perpetrator. Parental verbal abuse was decidedly more frequent. Specifically, 29.7% reported that they were sometimes or often verbally abused. There were no gender differences for verbal abuse or physical abuse. However, more women than men reported sexual abuse (8.3% versus .7%;  $\chi^2$  ( $df=1$ ,  $N=5613$ )=195.15,  $p<.001$ ). There was some overlap in the experience of

Table 1  
Hierarchical regression analysis: prediction of internalizing symptoms ( $N=5614$ )

	Unstandardized		Standardized	$F$	Sig.	95% C.I.		Par.
	$B$	Std. error	Beta		$p$ -value	Lower	Upper	Cor.
Step 1								
Age	.011	.004	.030	6.45	$p < .05$	.002	.019	.029
Sex	1.391	.093	.179	225.86	$p < .001$	1.210	1.573	.171
Externalizing	.485	.019	.303	628.83	$p < .001$	.447	.523	.285
Parent absent	.223	.101	.026	4.85	$p < .05$	.025	.422	.025
Family income	-.026	.055	-.005	.22	.642	-.134	.083	-.005
Father's symptoms	.090	.009	.119	95.62	$p < .001$	.072	.107	.111
Mother's symptoms	.115	.008	.172	185.22	$p < .001$	.099	.132	.155
Sexual abuse	1.857	.221	.099	70.81	$p < .001$	1.424	2.290	.096
Physical abuse	.991	.191	.064	26.99	$p < .001$	.617	1.365	.059
Verbal abuse	.242	.107	.028	5.12	$p < .05$	.032	.452	.026
Step 2								
Sexual abuse	1.678	.205	.090	67.19	$p < .001$	1.277	2.079	.122
Physical abuse	.826	.177	.053	21.80	$p < .001$	.479	1.173	.086
Verbal abuse	.112	.099	.013	1.27	.261	-.083	.307	.049
Criticism	.452	.015	-.340	937.99	$p < .001$	.423	.481	.012

different types of abuse. Specifically, 4.5% reported both verbal and physical abuse, 1.2% reported both sexual and verbal abuse, and 1.0% reported experiencing all three types of abuse.

### 3.2. Effects of verbal, physical, and sexual abuse and self-criticism on internalizing symptoms

A hierarchical linear regression analysis was performed to examine the relationship between abuse and internalizing symptoms. In addition to verbal, sexual, and physical abuse, the covariates were entered in the first step. As can be seen in Table 1, each type of abuse including sexual, ( $B=1.9$ , 95% CI: 1.4, 2.3), physical, ( $B=1.0$ , 95% CI: .62, 1.4), and verbal, ( $B=.242$ , 95% CI: .03, .45), was associated with internalizing symptoms. In the second step, self-criticism was entered and found to be a significant predictor of internalizing symptoms ( $B=.45$ , 95% CI: .42, .48).<sup>1</sup> Importantly, while sexual and physical abuse remained significant predictors of internalizing symptoms, with the inclusion of self-criticism, verbal abuse no longer predicted internalizing ( $B=.112$ , 95% CI: -.08, .31). We conducted mediation analyses to determine if self-criticism *fully* mediated this relationship and to determine if self-criticism *partially*

<sup>1</sup> We considered that self-criticism may just be one aspect of a broader personality attribute such as neuroticism. Thus we conducted an analysis predicting internalizing symptoms and included a measure of neuroticism (Goldberg, 1992). After accounting for the significant effect of neuroticism, ( $B=-.148$ , 95% CI: -.167, -.130), self-criticism remained a significant predictor of internalizing symptoms ( $B=.302$ , 95% CI: .268, .336).

mediated the relationship between physical and sexual abuse and internalizing symptoms.

### 3.3. Self-criticism fully mediates the relationship between verbal abuse and internalizing

To establish the conditions necessary for mediation we first determined that verbal abuse (partialling out the other abuse variables and covariates) predicted self-criticism ( $B=.301$ , 95% CI: .126, .475). The other conditions required for mediation were already established. That is the mediator (self-criticism) should predict the outcome variable (internalizing symptoms); and the independent variable (verbal abuse) should no longer predict the outcome variable when the mediator (self-criticism) is included in the equation. A Sobel test showed that the inclusion of self-criticism significantly decreased the influence of verbal abuse (Sobel  $z=3.2$ ,  $p < .01$ ) on internalizing symptoms, thus self-criticism fully mediated the relationship.<sup>2</sup>

### 3.4. Self-criticism partially mediates the relationship of physical and sexual abuse on internalizing

#### 3.4.1. Sexual abuse

We wished to determine if self-criticism partially mediated the relationship between sexual abuse and internalizing symptoms. First, we already established

<sup>2</sup> We wished to clarify if the effects were relevant for both anxiety and depressive symptoms. Analyses were repeated, and the results were similar for depressive and anxiety symptoms alone.

there was a significant effect of sexual abuse on internalizing. Next, we determined that sexual abuse predicted the mediator, self-criticism ( $B = .414$ , 95% CI: .055, .773). We had already established that self-criticism predicted internalizing symptoms. Finally, a Sobel test (Sobel, 1982) showed that the decrease in the relationship between sexual abuse and internalizing symptoms was significant (Sobel  $z = 2.1$ ,  $p < .05$ ). Thus self-criticism partially mediated the relationship.

### 3.4.2. Physical abuse

We wished to determine if self-criticism partially mediated the relationship between physical abuse and internalizing symptoms. First, we determined that the independent variable (physical abuse) predicted the potential mediator, self-criticism, ( $B = .363$ , 95% CI: .053, .674). The second condition was already established, self-criticism was associated with internalizing symptoms. A Sobel test showed that the inclusion of self-criticism significantly decreased the influence of physical abuse (Sobel  $z = 2.3$ ,  $p < .05$ ) on internalizing symptoms, thus self-criticism partially mediated the relationship.

### 3.5. Contrasting the mediating roles of self-criticism

It was of further interest to determine whether any two indirect effects significantly differed from one another. Using a method similar to that proposed by MacKinnon (2000) for testing pairwise contrasts of indirect effects in multiple mediator models, we derived a standard error for conducting asymptotic  $z$ -tests contrasting pairs of indirect effects involving multiple independent variables.<sup>3</sup> Findings revealed no significant differences for the influence of self-criticism as a mediator of verbal abuse compared to sexual abuse on internalizing symptoms ( $z = -.054$ ,  $p = .59$ ), for verbal abuse compared to physical abuse ( $z = -.38$ ,  $p = .71$ ), or for sexual abuse compared to physical abuse, ( $z = .13$ ,  $p = .9$ ).

### 3.6. The mediating role of dependency

To determine the specificity of self-criticism as a mediator, we examined the effects of a competing

mediator, dependency, on the relationship between the abuse and internalizing. Regression analyses were performed on internalizing symptoms, in which we entered sexual, physical and verbal abuse as well as the covariates, into the first step of the analysis. In the second step, we entered dependency and found that it predicted internalizing symptoms ( $B = .198$ , 95% CI: .176, .219), however, each type of abuse was still significantly related to internalizing symptoms: verbal abuse ( $B = .273$ , 95% CI: .067, .478), sexual abuse ( $B = 1.78$ , 95% CI: 1.36, 2.2), and physical abuse ( $B = .957$ , 95% CI: .592, 1.322). Thus, dependency did not fully mediate the relationship between the abuse variables and internalizing symptoms.

### 3.7. Dependency did not partially mediate the relationship between any abuse and internalizing

We examined whether dependency partially mediated the relationship between each abuse variable and internalizing symptoms. In each case, however, we found that the criteria for mediation were not met. We found that the independent variables (each type of abuse) did not predict the potential mediator (dependency). Specifically, verbal abuse (while partialling out the other abuse variables and covariates) did not predict dependency ( $B = .010$ , 95% CI:  $-.255$ , .501). Neither sexual abuse ( $B = .118$ , 95% CI:  $-.383$ , .619) nor physical abuse ( $B = -.037$ , 95% CI:  $-.472$ , .398) were predictors of dependency. Therefore, dependency was not a mediator of the relationship between any of the abuse measures and internalizing symptoms.<sup>4</sup>

## 4. Discussion

The results of this study provide important data on the mediating role of self-criticism in the relationship between childhood abuse and adult internalizing symptoms. We demonstrated that childhood parental abuse (sexual, physical, and verbal) was associated with adult internalizing symptoms. Furthermore, self-criticism was found to fully mediate the relationship between parental verbal abuse and internalizing symptoms. Thus, once self-criticism was accounted

<sup>3</sup> The fourth author (Preacher) used the multivariate delta method (MacKinnon, 2000) to derive a SE for the pairwise contrast of any two indirect effects which differ only in the independent variable. Denoting the contrast by  $a_1b - a_2b$ , the SE is  $\sqrt{b^2(\sigma_{a_1}^2 - 2\sigma_{a_1a_2} + \sigma_{a_2}^2) + (a_1 - a_2)^2\sigma_b^2}$ , where  $\sigma^2$  and  $\sigma$  terms represent variances and covariances of the subscripted parameters. The ratio of the contrast to its SE is compared to a critical value drawn from the normal distribution.

<sup>4</sup> To further examine the specificity of self-criticism; we repeated the analyses with externalizing symptoms as the dependent variable. We found verbal abuse, but not physical or sexual abuse, to predict externalizing symptoms. We found self-criticism (but not dependency) to predict externalizing symptoms. We found self-criticism to partially mediate the relationship between verbal abuse (but not physical or sexual abuse) and externalizing symptoms.

for in the analyses, verbal abuse was no longer associated with internalizing symptoms, whereas sexual and physical abuse remained associated with internalizing symptoms. However, formal mediation analyses showed that self-criticism did *partially* mediate the relationship between the other abuse variables (sexual and physical) and internalizing symptoms. Thus, the role of self-criticism as a mediator of the relationship between abuse and psychopathology was not completely unique to verbal abuse. Nonetheless, we did find evidence of the specificity of self-criticism as a mediator. Our results showed an effect of self-criticism, but not dependency, on the relationship between abuse and internalizing.

Childhood abuse experiences have been found to be associated with an array of negative psychological outcomes in adulthood. One mechanism by which abusive experiences may contribute to such outcomes is through the development of negative self-schemas, which may develop in the child's attempt to understand why such abusive experiences are happening to them (Gibb, 2002). Researchers (Rose and Abramson, 1992) have proposed that when the childhood abuse is verbal (rather than sexual or physical), the child may be even more likely to develop a negative self-schema because the negative self-cognitions are directly supplied to the child by the abuser. Consistent with these theories, we found self-criticism to fully mediate the relationship between childhood verbal abuse and adult internalizing symptoms, whereas self-criticism was found to be a partial mediator of the relationship of the other abuse types (e.g., sexual and physical) and internalizing symptoms. Other studies have also shown a mediational role of negative cognitive style in the relationship of childhood verbal abuse and symptoms within the internalizing spectrum (Gibb, 2002; Gibb et al., 2004).

However, our results were not entirely consistent with the prediction of a unique relationship between verbal abuse and self-criticism. Analyses contrasting the mediating effects of self-criticism on the relationship of each abuse variable (e.g., verbal, sexual, physical) on internalizing symptoms did not show that self-criticism had more of an influence on the relationship between specific abuse experiences and internalization symptoms. Rather it appears that each abuse experience contributes, to some degree, to self-criticism, which in turn may contribute to internalizing symptoms. In this respect, our results are consistent with others who did not find a unique relationship for verbal abuse (Gibb, 2002; Toth et al., 2002). The overall pattern of findings suggests that childhood abuse of any type has the

potential to influence self-critical tendencies; although sexual and physical abuse may not directly supply self-critical messages (e.g., "you are worthless"), the meta-message of such abuse clearly does.

#### 4.1. Limitations and future directions

Although this investigation has a number of strengths, several limitations should be considered. First, our measures of abuse relied upon retrospective self-reports. Secondly, participants who are self-critical may have a selective bias toward recalling abuse experiences. Relatedly, self-criticism may be a symptom of internalizing disorders rather than a cause. However, in a study by Franche and Dobson (1992), currently depressed and remitted patients had equally high levels of self-criticism as well as dependency, which were significantly higher than those of normal controls. Nonetheless, a clear limitation is that the NCS data were cross-sectional, which limits any firm conclusions regarding causality.

In conclusion, studies have implicated childhood abuse in the development of negative self-schemas that may in turn influence the development of internalizing symptoms. Further, childhood abuse, and in particular verbal abuse, may lead to a self-critical style that is a risk factor for psychopathology. Targeting self-critical ideation in adult patients, especially those who experienced childhood abuse, may help reduce internalizing symptoms in this population.

#### References

- Alloy, L.B., Abramson, L.Y., Whitehouse, W.G., Hogan, M.E., Tashman, N.A., Steinberg, D.L., et al., 1999. Depressogenic cognitive styles: predictive validity, information processing and personality characteristics, and developmental origins. *Behaviour Research and Therapy* 37 (6), 503–531.
- Alloy, L.B., Abramson, L.Y., Gibb, B.E., Crossfield, A.G., Pieracci, A.M., Spasojevic, J., et al., 2004. Developmental antecedents of cognitive vulnerability to depression: review of findings from the cognitive vulnerability to depression project. *Journal of Cognitive Psychotherapy* 18 (2), 115–133.
- Andreasen, N.C., Endicott, J., Spitzer, R.L., Winokur, G., 1977. The family history method using diagnostic criteria. Reliability and validity. *Archives of General Psychiatry* 34 (10), 1229–1235.
- Bagby, R.M., Cox, B.J., Schuller, D.R., Levitt, A.J., Swinson, R.P., Joffe, R.T., 1992. Diagnostic specificity of the dependent and self-critical personality dimensions in major depression. *Journal of Affective Disorders* 26, 59–64.
- Beck, A., 1987. Cognitive model of depression. *Journal of Cognitive Psychotherapy* 1, 2–27.
- Bergen, H., Martin, G., Richardson, A., Allison, S., Roeger, L., 2004. Sexual abuse, antisocial behaviour and substance use: gender differences in young community adolescents. *Australian and New Zealand Journal of Psychiatry* 38 (1–2), 34–41.

- Blaney, P., Kutcher, G., 1991. Measures of depressive dimensions: are they interchangeable? *Journal of Personality Assessment* 56 (3), 502–512.
- Blatt, S.J., 1974. Levels of object representation in anaclitic and introjective depression. *The Psychoanalytic Study of the Child* 29, 107–157.
- Blatt, S.J., Homann, E., 1992. Parent–child interaction in the etiology of dependent and self-critical depression. *Clinical Psychology Review* 12 (1), 47–91.
- Blatt, S.J., D'Afflitti, J.P., Quinlan, D.M., 1976. *Depressive Experiences Questionnaire*. Yale University Press, New Haven.
- Cox, B., Fleet, C., Stein, M., 2004a. Self-criticism and social phobia in the US national comorbidity survey. *Journal of Affective Disorders* 82 (2), 227–234.
- Cox, B.J., MacPherson, P.S.R., Enns, M.W., McWilliams, L.A., 2004b. Neuroticism and self-criticism associated with posttraumatic stress disorder in a nationally representative sample. *Behaviour Research and Therapy* 42 (1), 105–114.
- Cox, B.J., McWilliams, L.A., Enns, M.W., Clara, I.P., 2004c. Broad and specific personality dimensions associated with major depression in a nationally representative sample. *Comprehensive Psychiatry* 45 (4), 246–253.
- Franche, R.L., Dobson, K., 1992. Self-criticism and Interpersonal Dependency as vulnerability factors to depression. *Cognitive Therapy and Research (Historical Archive)* 16 (4), 419–435.
- Gibb, B.E., 2002. Childhood maltreatment and negative cognitive styles. A quantitative and qualitative review. *Clinical Psychology Review* 22 (2), 223–246.
- Gibb, B., Alloy, L., Abramson, L., Marx, B., 2003. Childhood maltreatment and maltreatment-specific inferences: a test of Rose and Abramson's (1992) extension of the hopelessness theory. *Cognition and Emotion* 17 (6), 917–931.
- Gibb, B.E., Abramson, L.Y., Alloy, L.B., 2004. Emotional maltreatment from parents, verbal peer victimization, and cognitive vulnerability to depression. *Cognitive Therapy and Research* 28 (1), 1–21.
- Goldberg, L.R., 1992. The development of markers for the big-five factor structure. *Psychological Assessment* 4 (26–42).
- Hirschfeld, R., Klerman, G., Gough, H., Barrett, J., Korchin, S., Chodoff, P., 1977. A measure of interpersonal dependency. *Journal of Personality Assessment* 41 (6), 610–618.
- Kessler, R., 1994. The national comorbidity survey of the United States. *International Review of Psychiatry* 6, 365–376.
- Kessler, R.C., 2000. Posttraumatic stress disorder: the burden to the individual and society. *Journal of Clinical Psychiatry* 61 (Suppl. 5), 4–12.
- Kessler, R.C., Stang, P.E., Wittchen, H., et al., 1998. Lifetime panic-depression comorbidity in the national comorbidity survey. *Archives of General Psychiatry* 55, 801–808.
- Krueger, R., 1999. The structure of common mental disorders. *Archives of General Psychiatry* 56, 921–926.
- Krueger, R.F., Hicks, B.M., Patrick, C.J., Carlson, S.R., et al., 2002. Etiologic connections among substance dependence, antisocial behavior, and personality: modeling the externalizing spectrum. *Journal of Abnormal Psychology* 111, 411–424.
- MacKinnon, D.P., 2000. Contrasts in multiple mediator models. In: Rose, J., Chassin, L., Presson, C.C., Sherman, S.J. (Eds.), *Multivariate Applications in Substance Use Research: New Methods For New Questions*. Erlbaum, Mahwah, pp. 141–160.
- Mongrain, M., Lubbers, R., Struthers, W., 2004. The power of love: mediation of rejection in roommate relationships of dependents and self-critics. *Personality and Social Psychology Bulletin* 30 (1), 94–105.
- Rose, D.T., Abramson, L.Y., 1992. Developmental predictors of depressive cognitive styles: developmental perspectives on depression. In: Cicchetti, D., Toth, S.L. (Eds.), *Developmental Perspectives on Depression*. Rochester Symposium on Developmental Psychopathology, vol. 4, pp. 323–349.
- Sobel, M.E., 1982. Asymptotic intervals for indirect effects in structural equations models. In: Leinhardt, S. (Ed.), *Sociological Methodology*. Jossey-Bass, San Francisco, pp. 290–312.
- Toth, S.L., Cicchetti, D., Kim, J., 2002. Relations among children's perceptions of maternal behavior, attributional styles, and behavioral symptomatology in maltreated children. *Journal of Abnormal Child Psychology* 30 (5), 487–500.
- Wittchen, H., 1994. Reliability and validity studies of the WHO-Composite International Diagnostic Interview (CIDI): a critical review. *Journal of Psychiatric Research* 28 (1), 57–84.
- World Health Organization, 1990. *Composite International Diagnostic Interview Version 1.0*. World Health Organization, Geneva, Switzerland.
- Zuroff, D., Blatt, S., Sanislow, C., Bondi, C., Pilkonis, P., 1999. Vulnerability to depression: reexamining state dependence and relative stability. *Journal of Abnormal Psychology* 108 (1), 76–89.