

## Cognitive Schemas As Mediating Variables of the Relationship Between the Self-Defeating Personality and Depression

John V. Petrocelli,<sup>1,2</sup> Brian A. Glaser,<sup>1</sup> Georgia B. Calhoun,<sup>1</sup> and Linda F. Campbell<sup>1</sup>

---

The current investigation was designed to examine particular maladaptive cognitive schemas as mediating variables of the relationship between the self-defeating personality and depression. A total of 82 mildly to severely depressed adult outpatients, referred for counseling and psychotherapy services, were assessed in terms of self-defeating personality and maladaptive cognitive schema characteristics. Results indicated that 57% of the variance within depression, measured by the Beck Depression Inventory (Beck, Rush, Shaw, & Emery, 1979), was accounted for by the self-defeating personality and five maladaptive cognitive schemas: abandonment/instability; defectiveness/shame; failure; subjugation; and vulnerability to harm. Further, mediation analyses indicated that abandonment/instability and defectiveness/shame statistically mediated the relationship between the self-defeating personality and depression. Results are discussed in light of contemporary theories of depression.

---

**KEY WORDS:** cognitive schemas; self-defeating personality; depression.

### INTRODUCTION

Underlying maladaptive assumptions about the self and one's relationship to the world have recently received more empirical attention as factors important to the study of clinically significant depression. Also referred to as schemas (Beck, 1964; Beck, Rush, Shaw, & Emery, 1979), cognitive structures (Meichenbaum, 1977), and more recently, core beliefs (Beck, 1995), maladaptive cognitive schemas are unconditional beliefs about the self in relation to the external environment that are developed during childhood and carried throughout one's lifetime (Young, 1990). Researchers (Abramson et al., 1999; Dykman, 1998; Gable & Nezelek, 1998; Wenzlaff & Bates, 1998) have rigorously investigated the hypothesis that a vulnerability to depression operates, via maladaptive cognitive schemas, attribution styles, and personality traits. However, in regard to the empirical investigation of the vulnerability hypothesis, much attention has been given

to understanding the role that interpersonal dependency and self-criticism play in the development of depressive symptoms (Beck, 1983; Blatt & Zuroff, 1992; Mongrain, Vettese, Shuster, & Kendall, 1998). Little is known about how other "schema-like" constructs play a role in the development of depressive symptoms.

As Alloy et al. (1999) described, two of the most investigated theories of depression (Abramson, Metalsky, & Alloy, 1989; Beck, 1967, 1987) suggest that many individuals possess a cognitive vulnerability to depression. Abramson et al. (1989) argued that depressive symptoms are exacerbated by a tendency to generate negative explanations and hopeless attributes, whereas Beck (1967, 1987) contended that depression develops from a negative outlook and dysfunctional attitudes. Much of the evidence that supports both of these theories suggests that depression is strongly associated with pessimism and negative cognitions.

Most operational definitions of a vulnerability to depression hold that particular individuals develop attributes that directly contribute to experiencing depression (Widiger, Verheul, & Brink, 1999) or have a susceptibility to developing depressive symptoms as a result of negative cognitive styles, negative attributions directed toward the self, and negative life events (Alloy, Lipman, &

---

<sup>1</sup>Department of Counseling and Human Development Services, University of Georgia, Athens, Georgia.

<sup>2</sup>To whom correspondence should be addressed at University of Georgia, 402 Aderhold Hall, Athens, Georgia 30602; e-mail: jpetroce@coe.uga.edu.

Abramson, 1992). More broadly, a general vulnerability to psychopathology as a function of personality traits has gained investigative attention (Krueger, Caspi, Moffitt, Silva, & McGee, 1996; Trull & Sher, 1994; Widiger et al., 1999).

The vulnerability to depression hypothesis has met criticism. There is particular difficulty in attributing symptoms to a vulnerability in the absence of the disorder. Prospective investigations that adequately predict the development of the disorder, in the presence of the vulnerability, are lacking (Coyne & Gotlib, 1986; Miranda & Gross, 1997). A general response to such criticisms has been that the manifestation of vulnerability traits is contingent upon negative mood states and is otherwise dormant until congruent stressors are activated (Miranda, Persons, & Byers, 1990; Persons & Miranda, 1992).

Few investigations have considered the impact of specific personality antecedents, other than dependency and self-criticism, on the development of depressive symptomatology. Fewer studies, examining the vulnerability hypothesis, have statistically controlled for more than one cognitive variable, resulting in little knowledge about which variables play the greatest role in the relationship between maladaptive personality traits and psychopathology. Such investigations have been of interest to practicing psychologists because of their theoretical and clinical implications. Furthermore, appropriate treatment may be enhanced through a deeper understanding of how personality and schema characteristics contribute to psychopathology (Maher & Maher, 1994; Retzlaff, 1995, 1997; Sperry, 1999).

In addition to maladaptive cognitive schemas and depression, the self-defeating personality is also of relevance to the current investigation. The self-defeating personality is defined as a set of enduring patterns of inflexible and pervasive traits characterized primarily by a doleful mood, undeserving self-image, and a self-sacrificing interpersonal style (Millon, 1987).

The primary purpose of the current investigation was to identify the degree to which maladaptive cognitive schemas and the self-defeating personality contribute to clinically significant levels of depression. With respect to the definition of the self-defeating personality, it would not be surprising to find strong positive relationships between such a set of traits and a measure of depression. Thus, extending the research on the vulnerability or predisposition to depression may be accomplished by identifying particular maladaptive cognitive schemas that statistically mediate the relationship between the self-defeating personality and depression. In this way, maladaptive cognitive schemas may be thought of conceptually and statis-

tically as unique components of the self-defeating personality, and if active, serve as generative mechanisms through which the development of depression is influenced by self-defeating traits. Thus, a general mediation model of maladaptive cognitive schemas on the relationship between the self-defeating personality and depression, consistent with contemporary theories and findings of earlier investigations, was developed and tested. Such an approach may broaden the already established link between traits (dependency and self-criticism) and depression by examining the role of a larger construct of personality (self-defeating personality), yet specify the maladaptive beliefs that serve as the generative mechanisms.

It was hypothesized that particular early maladaptive cognitive schemas (abandonment/instability, defectiveness/shame, failure, subjugation, and vulnerability to harm or illness) and the self-defeating personality would account for a statistically significant degree of variance in depression as measured by the Beck Depression Inventory (BDI; Beck et al., 1979). Previous findings (Flett, Hewitt, Blankstein, & Gray, 1998; Petrocelli, Glaser, Campbell, Calhoun, & Bates, 2001) suggest that these maladaptive cognitive schemas contribute to the development of depression and negative affectivity.

*Abandonment/instability* involves the belief that others are generally unreliable or unstable. Relying too much on others is expected to lead to unmet emotional needs and ultimately to one's own abandonment. *Defectiveness/shame* involves feelings that one is inwardly defective, flawed, or invalid. Contained within this schema is a sense of shame regarding one's perceived internal inadequacies as well as the belief that one is fundamentally unlovable to significant others if exposed. The essential features of *failure* regard past, present, and future themes of inferiority. This belief about the self also serves as the primary attribution for inhibition of success. *Subjugation* is characterized by the belief that one should surrender control over one's own decisions and preferences, often as a means of avoiding anger, retaliation, or abandonment from another. Finally, *vulnerability to harm or illness* involves the belief that one will be unable to prevent medical, emotional, or environmental catastrophes, and that these catastrophes may strike at any time (Young, 1990).

Mongrain et al. (1998) have generated convincing evidence that supports the idea that self-criticism and dependency play important roles in the development of depression (Beck, 1967, 1987). The current investigation is unique in that it involves the study of the self-defeating personality as opposed to self-criticism. The self-defeating

personality is somewhat different from common conceptions of self-criticism in that it involves an individual's tendency to involve him or herself in victim-bound situations in addition to self-blame. Earlier definitions of self-criticism are distinct from definitions of dependency (Blatt D'Afflitti, & Quinlan, 1976), however, contemporary conceptualizations of self-criticism (Mongrain, 1998; Mongrain & Zuroff, 1995; Zuroff & de Lorimier, 1989; Zuroff & Fitzpatrick, 1995) appear to involve an interpersonal component remarkably similar to that of dependency. The self-defeating personality also appears to contain a clearer balance between behaviors, thoughts, motives, and emotions than does self-criticism.

An additional hypothesis was based on the general findings of Glaser, Campbell, Calhoun, Bates, and Petrocelli (2001) and Petrocelli et al. (2001). Because particular maladaptive cognitive schemas (abandonment/instability, defectiveness/shame, failure, subjugation, and vulnerability to harm or illness) have appeared to explain unique variance of depression, separate from that of the self-defeating personality, it was hypothesized that selected schemas would statistically mediate the relationship between a measure of the self-defeating personality and depression. Essentially, identifying mediating variables among the relationship between the self-defeating personality and depression is important because it specifically identifies the cognitive components of the self-defeating personality that are associated with depression severity. By examining the relationship between the self-defeating personality and depression, with respect to maladaptive cognitive schemas, it is possible to gain a deeper understanding of the clinical components that may leave one susceptible to developing depressive symptoms.

## METHOD

### Participants

Eighty-two (49 women and 33 men) outpatients, receiving psychotherapy treatments through a university-based clinical training center, participated in the current investigation. Participants were referred for counseling and psychotherapy services due largely to depressive symptomatology. The sample was extracted from a larger group of 150 outpatients, on the basis of standardized measures that indicated at least a mild degree of depression (see the Procedure section for how this was accomplished). The sample was 94.3% Caucasian, 4.3% African American, .7% Hispanic, and .7% American Indian, with a mean age of 28.95 years ( $SD = 7.80$ , range = 18–52).

## Measures

### Depression

Depression severity was assessed with the BDI (Beck et al., 1979), which is a 21-item standardized self-rating scale that measures the severity of depressive symptoms. Ranging from 0 (*normal*) to 3 (*most severe*), four statements comprise each item of depressive symptoms. Respondents are asked to select the statement that most closely reflects their mood over the past week. The BDI has a minimum score of 0 and a maximum score of 63. Scores ranging from 10 to 18 represent mild to moderate indications of depressive symptoms. Scores ranging from 19 to 29 represent moderate to severe and scores from 30 to 63 represent severe indications of depressive symptoms (Beck, Steer, & Garbin, 1988). High internal consistency (mean  $\alpha$  coefficient = .86) and validity has been documented (Beck et al., 1988).

The presence of depression was also indicated by employing the Symptoms Checklist-90 – Revised (SCL-90-R; Derogatis, 1983), which is a self-report questionnaire that assesses nine symptom areas. Respondents are asked to describe how much discomfort each of the 90-items have caused them during the past seven days on a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*extremely*). Raw scores of the SCL-90-R are converted to T-scores, derived from one of the eight normative samples. The men and women psychiatric outpatient norms were used to calculate scores. The SCL-90-R was designed for use in clinical settings, and has demonstrated considerable internal consistency ( $\alpha$  coefficients ranging from .77 to .90; Derogatis, 1983; Derogatis & Lewis, 1994). Only the depression scale of the SCL-90-R was examined in the current study.

### Self-Defeating Personality

The self-defeating personality was assessed using the Millon Clinical Multiaxial Inventory-II (MCMI-II; Millon, 1987), which is a standardized, self-report inventory consisting of 175 true-false statements that assess a wide range of personality, emotional adjustment, and attitude characteristics. The MCMI-II measures the self-defeating personality that is consistent with the criteria proposed in the *Diagnostic and Statistical Manual of Mental Disorders-II – Revised (DSM-II-R)* (American Psychiatric Association, 1987). The scale has been supported through factor analysis and has attained an internal consistency of .90 (Millon, 1987).

The MCMI-II was chosen for assessing the self-defeating personality largely because it was designed for use with clinical samples.<sup>3</sup> The MCMI-II has been recommended for research purposes because it is the only major clinical personality inventory with documented internal consistency above .80 for all scales (Dyer, 1997; Millon, 1987). Results of factor analytic studies have supported the self-defeating personality scale structure (Choca, Shanley, & Van Denburg, 1996; Hyer, Brandsma, & Boyd, 1997; McCann, 1991; Retzlaff, 1997; Retzlaff, Lorr, Hyer, & Ofman, 1991). The scale has also demonstrated impressive internal consistency of .90 (Millon, 1987). Raw scores of MCMI-II scales are converted to base rate (BR) scores to interpret the relative clinical meaning of profiles.<sup>4</sup>

### *Maladaptive Cognitive Schemas*

The Young Schema Questionnaire – Short-Form (YSQ-SF; Young, 1994) was employed to measure maladaptive cognitive schemas. This instrument is a 75-item shortened version of 205-item questionnaire that assesses the extent to which an individual retains fifteen particular early maladaptive cognitive schemas. Schemas are assessed by representative subscales, each consisting of 5-items. The factor structure has been supported and further developed by hierarchical factor analysis (Lee, Taylor, & Dunn, 1999; Schmidt, Joiner, Young, & Telch, 1995). The YSQ-SF asks respondents to rate items in terms of how they have felt throughout their lives on a 6-point Likert scale ranging from 1 (*completely untrue of me*) to 6 (*describes me perfectly*). According to the scoring procedure for this instrument, items are to be recoded where an item score of 5 or 6 translates to a score of 1, and an item score of 1 through 4 translates to a score of 0. Thus, each scale has a minimum score of 0, and a maximum score of 5. Higher scores indicate a greater presence of the schema. The subscales have also demonstrated adequate

<sup>3</sup>We chose not to employ the more commonly used Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976) to measure self-criticism. The MCMI-II clinical personality pattern scales are standardized and serve as more contemporary measures, whereas the DEQ is not standardized and is significantly outdated by the MCMI-II. Further, the self-defeating personality is qualitatively different than self-criticism as described above. The self-defeating scale of the MCMI-II also purports to measure an individual's tendency to experience little enthusiasm toward desirable situations, as well as pervasive shame, distrust, suffering, inferiority, and active involvement in approaching situations that are exploitative (Groth-Marnat, 1997).

<sup>4</sup>Clinically meaningful BR ranges have been identified, however, BR scores at or below 60 are rarely interpreted (Millon, 1987). BR scores of 85 and above signify *most prominent* disorder, 75–84 indicate *moderate* or the *presence of characteristics* of the disorder, and 60–74 reflect *mild* or *some of the traits* defined by the scale.

test-retest reliability, and convergent and discriminant validity (Welburn, Coristine, Dagg, & Pontefract, 2000). Adequate internal consistency has been found for each of the 15 schema scales (coefficient  $\alpha$ s ranging from .71 to .93; Glaser et al., 2001).

In the current investigation, only the maladaptive cognitive schemas of abandonment/instability, defectiveness/shame, failure, subjugation, and vulnerability to harm or illness scales were of concern. A number of other cognitive schemas have been correlated with depressive symptoms (Glaser et al., 2001), however, only the aforementioned maladaptive cognitive schemas were of interest because they have appeared to explain unique variance in depression severity in previous investigations (Glaser et al., 2001; Petrocelli et al., 2001).

### **Procedure**

The administration of the assessment measures was conducted during an individual intake session for each participant. Participants were informed that the information they provided in the assessment packet would be used for treatment planning and research purposes. Participants were able to decline participation without being denied services; however, all participants gave their informed consent and permitted the investigators to use their results for research purposes.

Each participant was asked to complete the BDI, MCMI-II, SCL-90-R, and YSQ-SF. The Positive Affectivity/Negative Affectivity Schedule (Watson, Clark, & Tellegen, 1988) was used as an additional assessment measure conducted during the intake session, but was not used in the current investigation. Only the data of those participants with a score of 10 or greater on the BDI and a score of 60 or greater on the SCL-90-R depression scale were used in the statistical analysis. Only BDI scores were used to examine depression as a dependent variable, whereas SCL-90-R scores were used exclusively for depression criterion purposes. Such a procedure may restrict the range of scores and possibly limit correlational findings. However, we were primarily concerned with a continuum of depression. Thus, examining only the mildly depressed to severely depressed subsample results produced a more conservative examination of the relationships between the self-defeating personality, cognitive schemas, and depression.

### **RESULTS**

Means, standard deviations, and intercorrelations for all study measures are displayed in Table I.

Table I. Intercorrelations, Means, and Standard Deviations for All Study Variables

Variable	1	2	3	4	5	6	7	8	<i>M</i>	<i>SD</i>
1. Abandonment/Instability	—								1.33	1.75
2. Defectiveness/Shame	.50**	—							.72	1.36
3. Failure	.33*	.55**	—						.56	1.34
4. Subjugation	.48**	.47**	.61**	—					.66	1.21
5. Vulnerability to harm	.37**	.54**	.37**	.35**	—				.78	1.38
6. Self-Defeating personality	.38**	.46**	.44**	.44**	.31*	—			75.28	22.52
7. Beck Depression Inventory	.55**	.59**	.49**	.48**	.45**	.55**	—		19.79	9.54
8. SCL-90-R: Depression	.47**	.47**	.48**	.51**	.44**	.54**	.68**	—	65.47	6.28

Note. SCL-90-R: Symptoms Checklist-90 – Revised. *N* = 82.

\* *p* < .01.

\*\* *p* < .001.

Because general studies of depression have produced inconsistent results between men and women (Mongrain et al., 1998), we first determined whether or not results should be considered with respect to gender. A multivariate analysis of variance (MANOVA) indicated that there was not a gender difference among the variables used, Wilks'  $\Lambda = .898$ ,  $F(6, 75) = 1.43$ ,  $p = .216$ . Further, analysis of variance (ANOVA) tests, conducted for each variable by gender, failed to reach significance. Such findings provided sufficient justification for not examining subsequent results with respect to gender.

Results of an enter method multiple regression analysis indicated that the amount of variance in depression, as measured by the BDI, accounted for by abandonment/instability, defectiveness/shame, failure, subjugation, vulnerability to harm or illness, and the self-defeating personality was 57%,  $F(6, 70) = 12.93$ ,  $p < .001$ . Such analysis allows for the examination of the weight of each construct while statistically controlling for each of the other five variables. Slopes, standard errors, and standardized beta weights are displayed in Table II. In general, the regression findings indicate that maladaptive cognitive schemas and the self-defeating personality are significantly and positively associated with depression.

Table II. Multiple Regression Analysis Summary for Early Maladaptive Schemas and the Self-Defeating Personality Predicting Depression

Variable	<i>B</i>	<i>SEB</i>	$\beta$
Abandonment/Instability	1.43	.55	.26*
Defectiveness/Shame	.12	.04	.27**
Failure	.64	.83	.09
Subjugation	.22	.95	.03
Vulnerability to harm	.77	.75	.10
Self-Defeating personality	1.44	.83	.21

Note. *N* = 82.

\* *p* < .05.

\*\* *p* < .01.

However, it is clear that the cognitive schemas of abandonment/instability and defectiveness/shame are among the strongest predictors of depression.

A series of regression analyses were conducted to test the hypothesis that the relationship between the self-defeating personality and depression is mediated by one or more of the maladaptive cognitive schemas used in the current investigation. Because of the pattern of correlations found in the current investigation and earlier findings that abandonment/instability and defectiveness/shame appeared to explain unique variance of depression, aside from that of the self-defeating personality (Glaser et al., 2001; Petrocelli et al., 2001), there was justification in exploring these two schemas as possible mediators of the relationship between the self-defeating personality and depression. A mediator, as defined by Baron and Kenny (1986, p. 1173), serves as a "generative mechanism through which the focal independent variable is able to influence the dependent variable of interest." Mediator effects are much like interaction effects in analysis of variance (ANOVA) procedures. However, one of the several limitations of the ANOVA approach, discussed by Fiske, Kenny, and Taylor (1982), is that it unnecessarily restricts variance in comparison to equivalent regression models.

Holmbeck (1997) reasoned that a variable considered as a mediator (abandonment/instability and defectiveness/shame) should at least bear a significant relationship to the outcome variable (depression). Consistent with this, abandonment/instability attained a significant positive relationship to depression,  $\beta = .52$ ,  $t(80) = 5.38$ ,  $p < .001$ ; defectiveness/shame also attained a significant positive relationship to depression,  $\beta = .58$ ,  $t(80) = 6.30$ ,  $p < .001$ .

A series of path analyses, to find whether abandonment/instability and defectiveness/shame statistically mediated the effect of the self-defeating personality on depression, was conducted. For abandonment/instability

and defectiveness/shame to qualify as mediators, three conditions must be met (Baron & Kenny, 1986). First, the self-defeating personality must have a significant relationship with abandonment/instability and defectiveness/shame. Consistent with this, the relationship between the self-defeating personality and abandonment/instability was significant,  $\beta = .38$ ,  $t(80) = 3.70$ ,  $p < .001$ ; the relationship between the self-defeating personality and defectiveness/shame was also significant,  $\beta = .46$ ,  $t(80) = 4.62$ ,  $p < .001$ . Second, the self-defeating personality must have a significant relationship with depression. Before controlling for abandonment/instability and defectiveness/shame, the effect of the self-defeating personality on depression was significant,  $\beta = .51$ ,  $t(80) = 5.33$ ,  $p < .001$ . Finally, abandonment/instability and defectiveness/shame must have significant relationships with depression. When abandonment/instability was included in the analysis, the effect of the self-defeating personality on depression became smaller and no longer significant,  $\beta = .12$ ,  $t(79) = 1.28$ ,  $p = .20$ . Similarly, when defectiveness/shame was included in the analysis the effect of the self-defeating personality on depression became smaller and no longer significant,  $\beta = .10$ ,  $t(79) = 1.01$ ,  $p = .31$ . By contrast, abandonment/instability remained significantly related to depression,  $\beta = .42$ ,  $t(79) = 3.85$ ,  $p < .001$  when controlling for the self-defeating personality. Defectiveness/shame also remained significantly related to depression,  $\beta = .49$ ,  $t(79) = 4.82$ ,  $p < .001$  when controlling for the self-defeating personality.

Baron and Kenny (1986) also argued that the effect of the independent variable (self-defeating personality) on the dependent variable (depression) should be eliminated or greatly reduced when the mediator (cognitive schemas abandonment/instability and defectiveness/shame) is controlled for. Using Baron and Kenny's (Baron & Kenny, 1986) modification of Sobel's (Sobel, 1982) test of the reduction in the effect of the self-defeating personality on depression (see Kenny, Kashner, & Bolger, 1998), the mediation effects were found to be statistically significant,  $z = 2.64$ ,  $p < .05$ , and  $z = 3.32$ ,  $p < .05$ , for abandonment/instability or defectiveness/shame respectively. Accordingly, variation in abandonment/instability and defectiveness/shame indeed appears to have mediated the effect of the self-defeating personality on depression.

## DISCUSSION

The primary purpose of the present study was to examine an individual's potential vulnerability to depression by examining the existence of particular stable charac-

teristics (personality and maladaptive cognitive schemas) associated with depression, among an outpatient sample. Specifically, multiple regression results and two mediation models suggest that the vulnerability to depression that may be accounted for by a self-defeating personality is mediated by the maladaptive cognitive schemas of abandonment/instability and defectiveness/shame.

Few studies have considered the relationship between cognitive variables, personality, and depression from a mediation perspective (Scott, Harrington, House, & Ferrier, 1996). Previous investigations (Abramson, Alloy, & Hogan, 1997; Franche & Dobson, 1992; Mongrain et al., 1998) have revealed moderate to strong positive relationships between dependency, self-criticism, and depression.

Evidence provided by the current study may indicate need for a modified conceptualization of the vulnerability to depression hypothesis. Results seem to suggest that the self-defeating personality is unlikely to serve as a vulnerability factor of depression unless particular maladaptive cognitive schemas are activated. The self-defeating personality in the current study had a strong positive relationship with depression when independent of early maladaptive cognitive schemas. However, when controlling for maladaptive cognitive schemas the beta weight associated with the self-defeating personality was not statistically significant. Further, follow-up analysis of the mediation results showed that abandonment/instability and defectiveness/shame played more important roles in explaining variance within depression. Unless a depressed individual holds the belief that others are generally unreliable and that their instability can lead to abandonment, or that he or she is somehow defective, flawed, or unlovable, the self-defeating personality is unlikely to play a significant role in depression. These findings add to the already established link between dependency, self-criticism, and depression by focusing on the broader personality construct, and suggest that specific maladaptive cognitive schemas play an essential role in the link between the self-defeating personality and depression.

Three of the cognitive schemas were not strongly associated with depression when controlling for the self-defeating personality. It is uncertain as to why failure, subjugation, and vulnerability to harm or illness did not serve as mediators.

Millon and Davis (1996) have identified the object representation (a cognitive schema-like domain) of the self-defeating personality as "discredited." They further describe this representation as marked by failed relationships, discredited personal achievements, and conflicts of an internal nature. Thus, failure and vulnerability to harm or illness may serve as beliefs common to the self-defeating personality, but do not contribute to

depression independently of the more static trait. Vulnerability to harm or illness contains three components (medical, emotional, and environmental); perhaps only one component is related to the development of depression as is suggested by the more emotionally loaded schemas that were strongly related to depression, independent of personality. Subjugation is also likely to be included in the self-defeating personality's thinking about him or herself, but it is improbable that it is an antecedent of depression in and of itself. Subsequent investigations of the vulnerability hypothesis may be promoted through a better understanding of the antecedents of both maladaptive cognitive schemas and personality factors associated with depression.

With respect to abandonment/instability and defectiveness/shame dimensions of depression, perhaps the belief that one will inevitably be abandoned is further distressing because the depressed individual feels responsible for it owing to the belief in self-defects. Feeling responsible for one's own abandonment appears less resistant to depression than abandonment alone. Speculations such as these may be better represented by subsequent investigations that examine more closely the potential interaction that these two variables may have for depression.

The present investigation has several limitations. Although the internal validity of the study is not a serious concern, the homogeneity of the sample serves as a limitation in regards to external validity. The homogeneity of the general clinical sample in terms of race minimized the potentiality of cultural differences in the analysis and interpretation of results. Subsequent investigations may provide more external validity if samples are more heterogeneous, in regard to race or ethnicity. Further, subsequent investigations may improve in design by accounting for variables such as educational level, intelligence, or socio-economic status.

Each of the variables studied in the current investigation was moderately to strongly correlated with one another. Participants endorsed several constructs consistent with the negativity of depression. Such findings may reflect the notion that the constructs studied here are not separate and distinct and that the results do not provide unique information about the relationship between the self-defeating personality, maladaptive cognitive schemas, and depression. However, the multiple regression and mediation analyses employed do not support such a notion. The ability to examine unique variance of depression attributable to more than one variable is an advantage of multiple regression analysis. Together, bivariate correlational and multiple regression results suggest that several constructs shared similar components, but vary in their relationship to depression when control-

ling for each simultaneously. Mediational analysis provides further evidence that maladaptive cognitive schemas are important in understanding depression by serving as a mechanism through which the broader self-defeating construct is able to influence depression severity.

Unlike the current study, future studies should control for measures of self-criticism and dependency to more stringently test our preliminary findings. The current study results are suggestive of unique influence, but perhaps the self-defeating personality is contingent upon particular stressors or past reinforcement histories (Miranda et al. 1990; Persons & Miranda, 1992). Practicing psychologists are typically interested in prevention, and may also be interested in particular stressors that serve to activate maladaptive cognitive schemas. Involvement of particular situational life stressors and their role in the prediction of depression would enhance subsequent mediation models. In addition to inclusion of stressors, subsequent models may improve on the predictability of depression with addition of the variables used in the current study as well as dysfunctional attitudes that have been assumed to contribute to vulnerability in psychopathology (Dyck & Agar-Wilson, 1997).

Subsequent theories of depression that endorse the notion of vulnerability may be more accurate if they are designed to account for conceptualizations of the self-defeating personality (Millon and Davis, 1996). Specifically, theoretical considerations should be expanded to account for the mediation of abandonment/instability and defectiveness/shame in the relationship between the self-defeating personality and depression.

## REFERENCES

- Abramson, L. Y., Alloy, L. B., & Hogan, M. E. (1997). Cognitive/personality subtypes of depression: Theories in search of disorders. *Cognitive Therapy and Research, 21*, 247-265.
- Abramson, L. Y., Alloy, L. B., Hogan, M. E., Whitehouse, W. G., Donovan, P., Rose, D. T., Panzarella, C., & Ranieri, D. (1999). Cognitive vulnerability to depression: Theory and evidence. *Journal of Cognitive Psychotherapy, 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.
- 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. *Behaviour Research and Therapy, 37*, 503-531.
- Alloy, L. B., Lipman, A. J., & Abramson, L. Y. (1992). Attributional style as a vulnerability factor for depression: Validation by past history of mood disorders. *Cognitive Therapy and Research, 16*, 391-407.
- American Psychiatric Association. (1987). *Diagnostic and statistical manual of mental disorders (3rd ed. rev.)*. Washington, DC: American Psychiatric Association.

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.
- Beck, A. T. (1964). Thinking and depression: II. Theory and therapy. *Archives of General Psychiatry, 10*, 561-571.
- Beck, A. T. (1967). *Depression: Clinical experimental and theoretical aspects*. New York: Harper and Row.
- Beck, A. T. (1983). Cognitive therapy of depression: New perspectives. In P. J. Clayton & J. E. Barrett (Eds.), *Treatment of depression: Old controversies and new approaches* (pp. 265-290). New York: Raven Press.
- Beck, A. T. (1987). Cognitive models of depression. *Journal of Cognitive Psychotherapy, 1*, 5-37.
- 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.
- Beck, J. S. (1995). *Cognitive therapy: Basics and beyond*. New York: Guilford.
- Blatt, S. J., D'Afflitti, J. P., & Quinlan, D. M. (1976). Experiences of depression in normal young adults. *Journal of Abnormal Psychology, 85*, 383-389.
- Blatt, S. J., & Zuroff, D. (1992). Interpersonal relatedness and self-definition: Two prototypes for depression. *Clinical Psychology Review, 12*, 527-562.
- Choca, J. P., Shanley, L. A., & Van Denburg, E. (1996). *Interpretive guide to the Millon Clinical Multiaxial Inventory* (2nd ed.). Washington, DC: American Psychological Association.
- Coyne, J. C., & Gotlib, I. H. (1986). Studying the role of cognition in depression: Well-trodden paths and cul-de-sacs. *Cognitive Therapy and Research, 10*, 695-705.
- Derogatis, L. (1983). *SCL-90-R administration, scoring and procedures manual-II for the revised version and other instruments of the psychopathology rating scale series*. Towson, MD: Clinical Psychometric Research.
- Derogatis, L., & Lewis, L. (1994). SCL-90-R, Brief Symptom Inventory, and matching clinical rating scales. In M. E. Maruish (Ed.), *The use of psychological testing for treatment planning and outcome assessment* (pp. 217-248). Hillsdale, NJ: Erlbaum.
- Dyck, M. J., & Agar-Wilson, J. (1997). Cognitive vulnerabilities predict medical outcome in a sample of pain patients. *Psychology, Health and Medicine, 2*, 41-50.
- Dyer, F. J. (1997). Application of the Millon inventories in forensic psychology. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 124-139). New York: Guilford.
- Dykman, B. M. (1998). Integrating cognitive and motivational factors in depression: Initial tests of a goal-orientation approach. *Journal of Personality and Social Psychology, 74*, 139-158.
- Fiske, S. T., Kenny, D. A., & Taylor, S. E. (1982). Structural models for the mediation of salience effects on attribution. *Journal of Experimental Social Psychology, 18*, 105-127.
- Flett, G. L., Hewitt, P. L., Blankstein, K. R., & Gray, L. (1998). Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology, 75*, 1363-1381.
- Franché, R. L., & Dobson, K. S. (1992). Self-criticism and interpersonal dependency as vulnerability to depression. *Cognitive Therapy and Research, 16*, 419-435.
- Gable, S. L., & Nezelek, J. B. (1998). Level and instability of day-to-day psychological well-being and risk for depression. *Journal of Personality and Social Psychology, 74*, 129-138.
- Glaser, B. A., Campbell, L. F., Calhoun, G. B., Bates, J. M., & Petrocelli, J. V. (2001). *Concurrent validity of the Early Maladaptive Schema Questionnaire - Short Form*. Manuscript submitted for publication.
- Groth-Marnat, G. (1997). *Handbook of psychological assessment* (3rd ed.). New York: John Wiley.
- Holmbeck, G. N. (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.
- Hyer, L., Brandsma, J., & Boyd, S. (1997). The MCMI and posttraumatic stress disorder. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 191-216). New York: Guilford.
- Kenny, D. A., Kashner, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., Vol. 1, pp. 233-265). New York: McGraw-Hill.
- Krueger, R. F., Caspi, A., Moffitt, T. E., Silva, P. A., & McGee, R. (1996). Personality traits are differentially linked to mental disorders: A multitrait-multidiagnosis study of an adolescent birth cohort. *Journal of Abnormal Psychology, 105*, 299-312.
- Lee, C. W., Taylor, G., & Dunn, J. (1999). Factor structure of the schema questionnaire in a large clinical sample. *Cognitive Therapy and Research, 23*, 441-451.
- Maher, B. A., & Maher, W. B. (1994). Personality and psychopathology: A historical perspective. *Journal of Abnormal Psychology, 103*, 72-77.
- McCann, J. T. (1991). Convergent and discriminant validity of the MCMI-II and MMPI personality disorder scales. *Psychological Assessment, 3*, 9-18.
- Meichenbaum, D. (1977). *Cognitive-behavior modification: An integrative approach*. New York: Plenum.
- Millon, T. (1987). *Manual for the MCMI-II* (2nd ed.). Minneapolis, MN: National Computer Systems.
- Millon, T., & Davis, R. D. (1996). *Disorders of personality: DSM-IV and beyond* (2nd ed.). New York: Wiley.
- Miranda, J., & Gross, J. J. (1997). Cognitive vulnerability, depression, and the mood-state dependent hypothesis: Is out of sight out of mind? *Cognition and Emotion, 11*, 585-605.
- Miranda, J., Persons, J., & Byers, C. (1990). Endorsement of dysfunctional beliefs depends on current mood state. *Journal of Abnormal Psychology, 99*, 237-241.
- Mongrain, M. (1998). Parental representations and support-seeking behaviors related to dependency and self-criticism. *Journal of Personality, 66*, 151-173.
- Mongrain, M., Vetteese, L. C., Shuster, B., & Kendal, N. (1998). Perceptual biases, affect, and behavior in the relationships of dependents and self-critics. *Journal of Personality and Social Psychology, 75*, 230-241.
- Mongrain, M., & Zuroff, D. C. (1995). Motivational and affective correlates of dependency and self-criticism. *Personality and Individual Differences, 18*, 347-354.
- Persons, J. B., & Miranda, J. (1992). Cognitive theories of vulnerability to depression: Reconciling negative evidence. *Cognitive Therapy & Research, 16*, 485-502.
- Petrocelli, J. V., Glaser, B. A., Campbell, L. F., Calhoun, G. B., & Bates, J. M. (2001). *Clinical syndromes, self-reported symptoms, cognitive schemas, and affectivity of empirically derived personality disorder subtypes*. Manuscript submitted for publication.
- Retzlaff, P. (Ed.). (1995). *Tactical psychotherapy of the personality disorders: An MCMI-III based approach*. Needham Heights, MA: Allyn and Bacon.
- Retzlaff, P. (1997). The MCMI as a treatment planning tool. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 217-244). New York: Guilford.
- Retzlaff, P. D., Lorr, M., Hyer, L., & Ofman, P. (1991). An MCMI-II item-level component analysis: Personality and clinical factors. *Journal of Personality Assessment, 57*, 323-334.
- Schmidt, N. B., Joiner, T. E., Young, J. E., & Telch, M. J. (1995). The Schema Questionnaire: Investigation of psychometric properties and the hierarchical structure of a measure of maladaptive schemas. *Cognitive Therapy & Research, 19*, 295-321.
- Scott, J., Harrington, J., House, R., & Ferrier, I. N. (1996). A preliminary study of the relationship among personality, cognitive



- vulnerability, symptom profile, and outcome in major depressive disorder. *Journal of Nervous and Mental Disease*, 184, 503-505.
- Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). San Francisco: Jossey-Bass.
- Sperry, L. (1999). *Cognitive behavior therapy of DSM-IV personality disorders: Highly effective interventions for the most common personality disorders*. Philadelphia: Brunner/Mazel.
- Trull, T. J., & Sher, K. J. (1994). Relationship between the five-factor model of personality and Axis I disorders in a nonclinical sample. *Journal of Abnormal Psychology*, 103, 350-360.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063-1070.
- Welburn, K. R., Cristine, M., Dagg, P., & Pontefract, A. (2000). Schematic change as a result of an intensive group-therapy day-treatment program. *Psychotherapy: Theory/Research/Practice/Training*, 37, 189-195.
- Wenzlaff, R. M., & Bates, D. E. (1998). Unmasking a cognitive vulnerability to depression: How lapses in mental control reveal depressive thinking. *Journal of Personality and Social Psychology*, 75, 1559-1571.
- Widiger, T. A., Verheul, R., & Brink, W. van den. (1999). Personality and psychopathology. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 347-366). New York: Guilford.
- Young, J. E. (1990). *Cognitive therapy for personality disorders: A schema-focused approach*. Sarasota, FL: Professional Resource Exchange.
- Young, J. E. (1994). *Cognitive therapy for personality disorders: A schema-focused approach* (2nd ed.). Sarasota, FL: Professional Resource Exchange.
- Zuroff, D. C., & de Lorimier, S. (1989). Ideal and actual romantic partners of women varying in dependency and self-criticism. *Journal of Personality*, 57, 825-846.
- Zuroff, D. C., & Fitzpatrick, D. K. (1995). Depressive personality styles: Implications for adult attachment. *Personality and Individual Differences*, 18, 253-265.