Motivation and Emotion, Vol. 20, No. 4, 1996

Enhancing Attributional Style and Positive Life Events Predict Increased Hopefulness Among Depressed Psychiatric Inpatients

Jeffrey G. Johnson[1]
Columbia University, and New York State Psychiatric Institute

Anthony Crofton
Yeshiva University

Suzanne B. Feinstein
Loyola College of Maryland

A prospective study was conducted to investigate whether enhancing attributional style and positive life events are associated with recovery from depression through the mediation of increased hopefulness, as predicted by the Needles and Abramson (1990) model of recovery from depression. The Attributional Style Questionnaire, Beck Depression Inventory, Beck Hopelessness Scale, Dysfunctional Attitudes Scale, Uplifts Scale, and Revised Hassles Scale were administered to 32 depressed psychiatric inpatients shortly after admission and readministered a mean of 10 days later. The results indicated that the combined effects of enhancing attributional style and positive life events predicted decreases in hopelessness, which were in turn associated with decreases in depression symptom levels. By contrast, neither the combined effects of depressotypic attributional style and life events nor the combined effects of dysfunctional attitudes and life events was associated with decreases in hopelessness or depression symptom levels.

[1]Address all correspondence regarding this article to Jeffrey G. Johnson, Ph.D., Unit 74, New York State Psychiatric Institute, Columbia University, 722 West 168 Street, New York, New York 10032.

0146-7239/96/1200-0285$09.50/0

Needles and Abramson (1990) have proposed a model of recovery from depression, compatible with the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989), which hypothesizes that ". . . depressives who exhibit a tendency to attribute positive life events to global, stable causes should be particularly likely to become hopeful and, thereby, less depressed when confronted with a positive event (p. 157)." Needles and Abramson reported the results of a study conducted to test this model, in which they assessed attributional style, life events, hopelessness, and depressive symptomatology several times over a 6-week interval in a nonclinical sample of depressed undergraduate students. The results of their study provided support for the model, indicating that the interaction of "enhancing" attributional style (i.e., the tendency to attribute positive life events to global, stable causes) and positive events predicted reductions in hopelessness, and that in turn, reduced hopelessness predicted reductions in depressive symptomatology.

To date, no other direct tests of the Needles and Abramson (1990) model of recovery from depression have been reported in the literature. While investigators have reported that attributional style for positive events (e.g., Silverman & Peterson, 1993) and positive life events (e.g., Willner, Wilkes, & Orwin, 1990) were each associated with low levels of depression symptomatology, and that decreases in hopelessness predicted subsequent decreases in depressive symptoms (e.g., DeRubeis et al., 1990), only two studies have yielded indirect evidence regarding the predictions of the Needles and Abramson model. Priester and Clum (1992) reported that the interaction of internal attributional style for positive life events with good examination grades predicted decreases in both hopelessness and depression symptomatology in a nonclinical sample of undergraduate students. However, Priester and Clum reported that the Attributional Style × Positive Life Events interaction predicted decreased depression symptomatology directly, and did not assess whether hopelessness mediated this relationship. Further, Priester and Clum did not report whether the interaction of global and stable attributional style for positive events with good grades predicted either decreased hopelessness or depression. Alloy, Kayne, Romer, and Crocker (1993) reported, similarly, that the interaction of enhancing attributional style and good examination grades predicted decreased depression symptomatology in a nonclinical sample of undergraduate students. However, Alloy et al. reported that the Attributional Style × Positive Life Events interaction predicted decreased depression symptomatology through the mediation of the specific attributions that students made about their examination grades, and like Priester and Clum, did not assess whether hopelessness mediated this relationship.

Because the findings of Needles and Abramson (1990) have not yet been replicated, and because no research findings have as yet been published regarding whether the predictions of the Needles and Abramson model apply to recovery from depression among patients with clinical depression, a prospective study was designed to investigate the following research questions in a sample of depressed psychiatric inpatients: (1) Does the interaction, or the combined main effects, of enhancing attributional style and positive life events predict decreases in hopelessness between hospital admission and discharge? (2) In turn, do decreases in hopelessness predict decreases in depression symptom levels among depressed psychiatric patients? A third question was also investigated: (3) Do either depressotypic attributional style (i.e., the tendency to attribute negative life events to global, stable causes) or dysfunctional attitudes combine with the effects of life events to predict decreases in hopelessness and/or depression symptom levels among depressed psychiatric patients?

METHOD

Participants

An initial sample of 38 adult psychiatric inpatients (19 females and 19 males) hospitalized at the Union Memorial Hospital in Baltimore, Maryland, voluntarily agreed to participate in the present study. Participants were required to be at least 18 years old and were excluded on the basis of psychosis, organic impairment, illiteracy, and previous participation in or refusal to take part in the study. Thirty-eight participants who met these exclusion criteria agreed to participate in the study and signed an informed consent form. Participants were permitted to participate in the study only if they met both of the following inclusion criteria: (1) Diagnosis with major depressive disorder and/or a baseline score of 16 or higher on the Beck Depression Inventory (BDI; Beck & Beamesdorfer, 1974); and (2) a nonzero baseline response to BDI Item 2, indicating the presence of hopelessness, and/or a baseline score of 2 or higher on the Beck Hopelessness Scale (BHS; Beck, Weissman, Lester, & Trexler, 1974). Two participants failed to meet these inclusion criteria and were thus eliminated from the study. Four additional participants were later eliminated from the study, because they were discharged before any postbaseline data could be collected or because they declined to continue participation in the study following baseline assessment.

The final sample, constituted of 32 (16 female and 16 male) participants who met all of the inclusion and exclusion criteria described above,

ranged in age from 20 to 63 years (mean = 34.1; *SD* = 11.30), with a mean of 12.06 years (*SD* = 2.88) of education. The sample included 20 (62.5%) Caucasians and 12 (37.5%) African Americans. Participants reported a mean of 9.38 (*SD* = 10.26) prior episodes of depression, 2.44 (*SD* = 2.49) previous suicide attempts and 6.09 (*SD* = 9.27) previous hospitalizations for depression, with an average length of stay of 12.88 days (*SD* = 7.36). Twenty-nine (90.6%) participants reported that they had received treatment with antidepressant medication prior to and during their current hospitalization.

Measures

The Attributional Style Questionnaire (ASQ; Peterson et al., 1982) instructs participants to provide causal explanations for six positive and six negative hypothetical events. Participants rate the importance of each event and the degree to which they would attribute the causes of the events to internal (7) versus external (1); stable (7) versus unstable (1); and global (7) versus specific (1) factors. Because the recovery model of depression postulates that stable and global attributions contribute to recovery from depression, the composite score of stable and global attributions for positive (ASQSGP) and negative (ASQSGN) events were used in prediction of depressive symptom change. Eaves and Rush (1984) have reported that the ASQ is a reliable and valid instrument.

The Beck Depression Inventory (Beck & Beamesdorfer, 1974) has been established as a reliable and valid instrument for the assessment of depression symptomatology (Beck, Steer, & Garbin, 1988). On each of 21 items, participants select the most appropriate of four statements to describe their affect and behavior during the past 5 days. Responses on each item range from 0 (e.g., "I do not feel like a failure") to 3 (e.g., "I feel I am a complete failure as a person"), with the sum of the 21 responses indicating the extent of current depression symptomatology.

The Beck Hopelessness Scale (Beck et al., 1974), a 20-item true/false self-report scale, assesses hopelessness by indicating participants' negative expectancies about future events. An example of an item is: "I look forward to the future with hope and enthusiasm." Its coefficient alpha of .93 and its strong correlation with clinical hopelessness ratings of .74 indicate high reliability and validity (Beck et al., 1974).

The Dysfunctional Attitudes Scale (DAS; Weissman, 1979; Weissman & Beck, 1978) is a 40-item questionnaire that assesses dysfunctional thoughts, such as perfectionistic performance standards, rigid ideas about the world, and concern about the judgments of others. On the DAS, indi-

viduals respond to each of 40 statements (e.g., "If I fail at my work, then I'm a failure as a person") on a 7-point scale, ranging from *totally agree* to *totally disagree*. Findings supporting the reliability, validity, and psychometric characteristics of the DAS have been reported by a number of researchers (e.g., Barnett & Gotlib, 1990; Nelson, Stern, & Cicchetti, 1992; Weissman & Beck, 1978).

The Revised Hassles Scale (HS-R; DeLongis, Folkman, & Lazarus, 1988) measures negative daily life events, or "hassles." Participants indicate how much of a hassle each of the 53 items was in the past 5 days by ranking them on a 4-point scale, ranging from *none* or *not applicable* (0) to *a great deal* (3). DeLongis et al. (1988) have reported that the HS-R is a reliable and valid instrument.

The Uplifts Scale (US; Kanner, Coyne, Schaefer, & Lazarus, 1981), is a 136-item self-report scale. On the US, participants identify those events that made them feel "good" within the past 5 days, and indicate how frequently these positive events happened by circling 1 (*somewhat often*), 2 (*moderately often*), or 3 (*extremely often*) for each item. Although some US items assess uplifts that would not be likely to occur during a psychiatric hospitalization (e.g., "eating out"), many US items assess uplifts that could occur during a psychiatric hospitalization (e.g., "giving a compliment," "reading," "making a friend"). Kanner et al. (1981) reported that the mean frequency of uplifts reported on the US was 49.5 (SD = 27.8) in a community sample of adults. The US has been reported to be a reliable and valid measure of positive daily life events or uplifts by Kanner et al. (1981). Other researchers have also reported findings supporting the validity of the US, indicating that uplifts were associated with somatic symptoms, energy level, and overall health status among adults in the community (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982) and that depressed patients reported a lower frequency of uplifts than did nondepressed controls (Willner et al., 1990).

Procedure

Those participants who agreed to participate in the study and who met all exclusion and inclusion criteria signed an informed consent form. At baseline assessment, which took place within 48 hours of hospital admission, participants were administered a questionnaire packet consisting of the ASQ, BDI, BHS, DAS, HS-R, and US, as well as a form used to collect data regarding age, education, ethnicity, gender, and psychiatric history. Participants who were unable to complete the questionnaires independently were assisted by having questionnaire items read to them.

Questionnaire packets including the BDI, BHS, HS-R, and US were then readministered at first, second, and third follow-up assessments, which took place, 5, 10, and 15 days after baseline assessment, respectively, to all of the participants who remained in the hospital. This was done to maximize the probability that follow-up measures would be obtained from all of the participants no more than 4 days before discharge. Ten, ten, and twelve study participants were discharged after the first, second, and third follow-up assessments, respectively. Thus, the mean interval between baseline and final follow-up assessments was 10.31 days (SD = 4.20). After completing the final questionnaire packet, participants were provided with a debriefing information form that explained the purpose of the study.

RESULTS

Descriptive Statistics

Baseline and follow-up means and standard deviations for the instruments administered in the present study are presented in Table I. BDI scores ranged from 15 to 53 at baseline and from 4 to 55 at follow-up, and BHS scores ranged from 2 to 20 at baseline and from 0 to 18 at follow-up. Cronbach's alpha α) coefficients of .84, .85, .84, .91, .60, .87, and .99 were obtained for the ASQSGN, ASQSGP, BDI, BHS, DAS, HS-R, and US, respectively. In interpreting declines in HS-R and US means and standard

Table I. Descriptive Statistics

	Baseline mean (*SD*)	Follow-up mean (*SD*)
Attributional Style Questionnaire (ASQ)		
ASQSGP[a]	28.8 (7.3)	—
ASQSGN[a]	30.9 (7.0)	—
Beck Depression Inventory	31.4 (9.7)	14.6 (11.1)
Beck Hopelessness Scale	12.4 (5.6)	6.8 (4.4)
Dysfunctional Attitudes Scale	154.6 (49.2)	—
Revised Hassles Scale	22.1 (9.2)	11.0 (5.6)
Uplifts Scale	44.7 (45.5)	38.9 (26.7)

aASQSGP = global + stable attributions for positive life events; ASQSGN = global + stable attributions for negative life events.

deviations between baseline and follow-up assessments, it should be noted that, whereas hassles and uplifts assessed at baseline occurred during the period preceding hospital admission, some hassles and uplifts assessed at follow-up assessment (e.g., yardwork, eating out) could not have occurred due to hospitalization.

Zero-Order Correlations

Results of zero-order Pearson correlations between the ASQ, DAS, HS-R, US and the BDI and BHS are presented in Table II. The findings indicated that baseline enhancing attributional style was negatively correlated with subsequent BHS ($r = .38$; $p < .025$) and BDI ($r = .43$; $p < .01$) scores, and that follow-up US scores were negatively correlated with follow-up BHS scores ($r = -39$; $p < .025$), but not with follow-up BDI scores ($r = -.07$; $p > .05$).

Test of Recovery Model of Depression

Following Needles and Abramson (1990), we conducted a series of hierarchical multiple-regression analyses—analyses of partial variance

Table II. Zero-Order Correlations Between Independent and Dependent Variables

	Beck Depression Inventory		Beck Hopelessness Scale	
	Baseline	Follow-up	Baseline	Follow-up
ASQSGP[a]				
Baseline	-.3021[b]	-.4309[c]	-.2440	-.3828[b]
ASQSGN[a]				
Baseline	.0764	.0791	.4246[c]	.1888
Dysfunctional Attitudes Scale				
Baseline	.3775[b]	.2884	.6494[e]	.4886[d]
Uplifts Scale				
Baseline	.1324	.2463	-.3475[b]	-.1658
Follow-up	.0750	-.0746	-.3220[b]	-.3940[b]
Revised Hassles Scale				
Baseline	.4725[d]	.3741[b]	-.1336	.0177
Follow-up	.4163[d]	.3058[b]	-.0517	-.0103

[a]ASQSGP = Global + stable attributions for positive life events, Attributional Style Questionnaire (ASQ); ASQSGN = global + stable attributions for negative life events, ASQ.
[b]$p < .05$.
[c]$p < .01$.
[d]$p < .005$.
[e]$p < .0001$.

(APVs)—to test the hypotheses of the recovery model of depression. The first component of the model hypothesizes that the occurrence of positive events, together with a global and stable attributional style for positive events, will tend to result in a decrease in hopelessness. In testing this hypothesis, we investigated whether the interaction of enhancing attributional style with the frequency of positive life events would predict residual change in BHS scores between baseline and first follow-up assessments. To avoid the potential artifact posed by the fact that baseline assessment of life events referred to the prehospitalization period while follow-up assessment of life events referred to the hospitalization period, we entered the reported frequency of life events, rather than change in the frequency of life events, into the APVs. The second part of the model hypothesizes that decreases in hopelessness will, in turn, promote recovery from depressive symptomatology. In testing this hypothesis, we investigated whether residual change in BHS scores would predict residual change in BDI scores.

As Table III indicates, the interaction of enhancing attributional style and positive life events failed to predict decreases in hopelessness ($F = 2.49$; $p = .13$). However, the pooled main effects of enhancing attributional style and positive life events (entered simultaneously) did predict decreases in hopelessness ($F = 3.47$; $p < .05$). The results of t-tests of the within-set

Table III. Hopelessness Analysis: Prediction of Residual Change in Hopelessness

Step	Predictors	Multiple R^2	R^2 change	F	df	T-tests of within-set predictors	Partial r
1	Hopelessness prescore	.369	.369	17.54[d]	1, 30		.607
2	Negative life events	.369	.000	0.02	1, 29		.027
3	Positive life events and enhancing attributional style main effects	.498	.129	3.47[c]	2, 27	−1.88[b] −1.93[b]	−.348 −.340
4	Positive life events × attributional style interaction	.542	.044	2.49[a]	1, 26		−.295

[a] $p = .13$.
[b] $p \leq .07$.
[c] $p < .05$.
[d] $p < .001$.

predictors indicated that neither enhancing attributional style ($t = -1.88$; $p = .07$) nor positive life events ($t = -1.93$; $p = .06$) independently predicted decreases in hopelessness, although both t-tests approached statistical significance. As Table IV indicates, in support of the second hypothesis, decreases in hopelessness predicted decreases in depressive symptomatology ($F = 19.52$; $p < .001$), while neither the pooled main effects nor the statistical interaction of enhancing attributional style and positive life events predicted decreases in depressive symptomatology.

Additional APVs were conducted to determine whether the combined effects of depressotypic attributional style (i.e., the tendency to make global, stable attributions for negative life events) and life events, and/or the combined effects of dysfunctional attitudes and life events would predict increases in hopefulness and decreases in depression symptom levels. The results of these analyses indicated that neither the pooled main effects nor the interactions of depressotypic attributional style with life events predicted either increases in hopefulness or decreases in depression symptom levels. Similarly, neither the pooled main effects nor the interactions of dysfunctional attitudes with life events predicted either increases in hopefulness or decreases in depression symptom levels.

Table IV. Causal Mediation Analysis: Prediction of Residual Change in Depression

Step	Predictors	Multiple R^2	R^2 change	F	df	Partial r
1	Depression prescore	.485	.485	28.27[c]	1, 30	.697
2	Hopelessness prescore	.486	.001	0.06	1, 29	−.044
3	Hopelessness prescore	.697	.211	19.52[b]	1, 28	.641
4	Negative life events	.699	.002	0.18	1, 27	.081
5	Positive life events and enhancing attributional style main effects	.711	.012	0.53	2, 25	−.062 −.200
6	Positive life events × attributional style interaction	.742	.030	2.80[a]	1, 24	.323

[a] $p = .11$.
[b] $p < .001$.
[c] $p < .0001$.

DISCUSSION

Although differing slightly from the findings of Needles and Abramson (1990), the present findings are generally consistent with the predictions of their model of recovery from depression. Like the findings of Needles and Abramson, our findings indicate that those depressed persons who have an enhancing attributional style and who experience a large number of positive life events are more likely than others to become more hopeful, and thereby less depressed. If further research should confirm that, under certain circumstances, the combined main effects of enhancing attributional style and positive life events, as opposed to their statistical interaction, is associated with increased levels of hopefulness, the recovery model might be appropriately modified to account for these findings.

It is of substantial interest that the combined effects of enhancing attributional style and positive life events predicted decreases in hopelessness and depression among psychiatric patients, 90% of whom were receiving antidepressant treatment, because they are consistent with previous findings indicating that causal attributions and hopefulness may play an important role in the process of recovery from depression among patients receiving antidepressant treatment (e.g., DeRubeis et al., 1990; Whisman, Miller, Normal, & Keitner, 1991). If further research should confirm these findings, it may become important for researchers to conduct additional research to determine whether patients who are being treated with antidepressant drugs might benefit substantially from therapeutic interventions directed specifically toward the development of enhancing attributional style and increased hopefulness.

Our findings are of particular importance precisely because they are consistent with the findings of some previous researchers who have reported that *depressotypic* cognitions did not predict recovery from depression among psychiatric patients receiving antidepressant medication (e.g., Fava, Bless, Otto, Pava, & Rosenbaum, 1994; Silverman, Silverman, & Eardley, 1984). Such findings have led some researchers to conclude that depressotypic cognitions are best regarded as symptoms of depression that do not contribute to the recovery process (e.g., Silverman et al., 1984). Considered in this context, both our findings and those of Needles and Abramson (1990) suggest that further research should be conducted to investigate the relative contributions of enhancing and depressotypic cognitions in the process of recovery from depression. However, it is important to note that only two types of depressotypic cognitions (i.e., depressotypic attributional style and dysfunctional attitudes) were assessed in the present study. Thus, it may be important for future research investigating whether depressotypic cognitions contribute to recovery from depression to assess other types of depressotypic

cognitions (e.g., automatic thoughts, poor self-esteem), as well as depressotypic attributional style and dysfunctional attitudes.

The present findings also provide strong support for the hypothesis that decreases in hopelessness predict decreases in depression symptomatology. Taken together with similar findings by a number of other researchers (e.g., DeRubeis et al., 1990; Needles & Abramson, 1990), considerable evidence now suggests that change along the dimension between hopelessness and hopefulness tends to be associated with and may precede corresponding change in depression symptomatology.

Interpretation of the present findings should take several issues into consideration. First, while the present findings are consistent with the hypothesis that enhancing attributional style and positive life events contribute to decreases in depressive symptomatology through the mediation of decreases in hopelessness, they are not necessarily inconsistent with the interpretation that patients reported relatively high levels of positive events, decreases in hopelessness, and decreases in depressive symptom levels because of the effects of antidepressant medication. That is to say, our findings do not permit a strong inference of directionality to be drawn. Nonetheless, it is important to note that our findings are consistent with the findings of Needles and Abramson (1990), which were obtained in a nonpatient sample of depressed undergraduate students enrolled in introductory psychology courses, few of whom were likely to have been receiving antidepressant medication. Thus, although it is possible that our findings may have been due in part to the effects of antidepressant treatment, this explanation is not likely to account for the similar findings of Needles and Abramson. Furthermore, even if the present findings were to some extent "driven" by the effects of antidepressant medication, it is important to note that the association between enhancing attributional style and follow-up BHS scores can not be explained by the effects of antidepressant medication, insofar as attributional style was assessed before antidepressant treatment could have begun to take effect.

Second, it is important to note that, because of the small sample size, the statistical power of the present study may have been too low to detect statistical effects that would have been statistically significant had a larger sample been available. In considering the possible impact of low power on our findings, it is particularly important to note that the interaction of enhancing attributional style and positive life events may have predicted decreases in hopelessness, as hypothesized by Needles and Abramson (1990) had a larger sample been studied (see Table III). Nonetheless, because our sample size was comparable to the size of the sample in the Needles and Abramson study ($N = 39$), we believe that our findings merit consideration by the scientific community.

Third, it appears that, because the present study represents the first attempt to replicate the findings of Needles and Abramson (1990), and is the first to investigate the predictions of their model of recovery from depression in a clinical sample, further research should be conducted to examine the role of enhancing attributional style and positive life events in the recovery process among depressed psychiatric patients. Finally, it should be noted that the minor differences between the present findings and those of Needles and Abramson are likely due in part to differences in age, initial symptom severity, intertest intervals, settings, the use of different life event measures, and the fact that, while 90% of the participants in the present study were being treated with antidepressant medication, none of the participants in the Needles and Abramson study were reported to be receiving such treatment.

REFERENCES

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., Kayne, N. T., Romer, D., & Crocker, J. (1993). *Predicting increases and decreases in depressive symptoms: A test of the attributional diathesis-stress and causal mediation hypotheses of the reformulated helplessness theory.* Unpublished manuscript.

Barnett, P. A., & Gotlib, I. H. (1988). Dysfunctional attitudes and psychosocial stress: The differential prediction of subsequent depression and general psychological distress. *Motivation and Emotion, 12*, 251-270.

Beck, A. T., & Beamesdorfer, A. (1974). Assessment of depression: The Beck Depression Inventory. In P. Pichot (Ed.), *Psychological measurements in psychopharmacology, modern problems in pharmacopsychiatry* (Vol. 7). Basel, Switzerland: Karger.

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, A. T., Weissman, A., Lester, D., & Trexler, L. (1974). The measurement of pessimism: The Hopelessness Scale. *Journal of Consulting and Clinical Psychology, 42*, 861-865.

DeLongis, A., Coyne, J. C., Dakof, G., Folkman, S., & Lazarus, R. S. (1982). Relationship of daily hassles, uplifts, and major life events to health status. *Health Psychology, 1*, 119-136.

DeLongis, A., Folkman, S., & Lazarus, R. S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology, 54*, 486-495.

DeRubeis, R. J., Evans, M. D., Hollon, S. D., Garvey, M. J., Grove, W. M., & Tuason, V. B. (1990). How does cognitive therapy work? Cognitive change and symptom change in cognitive therapy and pharmacotherapy for depression. *Journal of Consulting and Clinical Psychology, 58*, 862-869.

Eaves, G., & Rush, A. J. (1984). Cognitive patterns in symptomatic and remitted major depression. *Journal of Abnormal Psychology, 93*, 31-40.

Fava, M., Bless, E., Otto, M. W., Pava, J., & Rosenbaum, J. F. (1994). Dysfunctional attitudes in major depression: Changes with pharmacotherapy. *The Journal of Nervous and Mental Disease, 182*, 45-49.

Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress management: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4*, 1-39.

Needles, D. J., & Abramson, L. Y. (1990). Positive life events, attributional style, and hopefulness: Testing a model of recovery from depression. *Journal of Abnormal Psychology, 99*, 156-165.

Nelson, L. D., Stern, S. L., & Cicchetti, D. V. (1992). The Dysfunctional Attitudes Scale: How well can it measure depressive thinking? *Journal of Psychopathology and Behavioral Assessment, 14*, 217-223.

Peterson, C., Semmel, A., von Baeyer, C., Abramson, L. Y., Metalsky, G. I., & Seligman, M. E. P. (1982). The Attributional Style Questionnaire. *Cognitive Therapy and Research, 6*, 287-300.

Priester, M. J., & Clum, G. A. (1992). Attributional style as a diathesis in predicting depression, hopelessness, and suicide ideation in college students. *Journal of Psychopathology and Behavioral Assessment, 14*, 111-122.

Silverman, R. J., & Peterson, C. (1993). Explanatory style of schizophrenic and depressed outpatients. *Cognitive Therapy and Research, 17*, 457-470.

Silverman, J. S., Silverman, J. A., & Eardley, D. A. (1984). Do maladaptive attitudes cause depression? *Archives of General Psychiatry, 41*, 28-30.

Weissman, A. (1979). The Dysfunctional Attitudes Scale: A validation study. *Dissertation Abstracts International, 40*, 1389B-1390B. (University Microfilm No. 79-19, 533).

Weissman, A., & Beck, A. T. (November, 1978). *Development and validation of the Dysfunctional Attitudes Scale.* Paper presented at the annual meeting of the Association for the Advancement of Behavior Therapy, Chicago.

Whisman, M. A., Miller, I. W., Norman, W. H., & Keitner, G. I. (1991). Cognitive therapy with depressed inpatients: Specific effects on dysfunctional cognitions. *Journal of Consulting and Clinical Psychology, 59*, 282-288.

Willner, P., Wilkes, M., & Orwin, A. (1990). Attributional style and perceived stress in endogenous and reactive depression. *Journal of Affective Disorders, 18*, 218-287.