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Levels of Hopelessness in DSM-III Disorders: A Partial Test of Content Specificity in Depression[1]

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To determine the extent to which negativity about the future is specific to depression, the Hopelessness Scale (HS) scores of 199 patients diagnosed with major depressive disorder (MDD) were compared with those of 48 patients diagnosed with generalized anxiety disorder (GAD) and 76 psychiatric patients with mixed nonaffective, nonanxiety disorders. As predicted by the cognitive model, the MDD patients had higher mean HS scores than either the GAD or control patients. In addition, HS scores were more highly correlated with clinician-rated and self-report measures of depression than with measures of anxiety. Further, the positive relationships between the HS and measures of anxiety dropped to nonsignificant levels after the corresponding measures of depression were controlled for, while the HS remained correlated with depression after controlling for level of anxiety. The results were

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discussed as providing partial support for the content-specificity hypothesis (negative cognitive triad) of the cognitive model of depression.

KEY WORDS: hopelessness; depression; anxiety; diagnosis.

According to the cognitive model of depression (Beck, 1964, 1967; Beck, Rush, Shaw, & Emery, 1979), depressive states are characterized by a *negative cognitive triad* in which depressed persons have a negative view of themselves, their personal world, and their future. The last component, negative expectations or hopelessness, is an especially important aspect of the depressed person's cognitions. The nature of this hopeless outlook has been described by Stotland (1969), and empirical research (e.g., Beck, 1967) confirms that negative expectations are a major feature of the symptomatology of depression.

To measure the construct of hopelessness, Beck, Weissman, Lester, and Trexler (1974) developed the Hopelessness Scale (HS). Its validity has been supported in several studies that have found a positive relationship between HS score and depression (Beck, Kovacs, & Weissman, 1975; Beck, Weissman, & Kovacs, 1976; Dyer & Kreitman, 1984; Petrie & Chamberlain, 1983; Weissman, Beck, & Kovacs, 1979; Wetzel, 1976) and a decrease in HS score with the remission of depressive symptoms in response to both psychotherapy and pharmacotherapy (Rush, Beck, Kovacs, Weissenberger, & Hollon, 1982).

Hopelessness has also been shown to mediate the relationship between depression and suicidal ideation. For example, Beck et al. (1975) reported that hopelessness was a better predictor of suicidal intent than was depression. With respect to suicidal behavior, Beck, Steer, Kovacs, and Garrison (1985) found that the HS was a significant long-term predictor of eventual suicide in 207 patients hospitalized with suicidal ideation. A score of 9 or more on the HS correctly identified 91% of the eventual suicides.

Despite repeated findings of the centrality of hopelessness to depression, several authors have questioned the specificity of hopelessness to depression. For example, Stotland (1969) has suggested that hopelessness occurs in a wide variety of psychiatric disorders, such as juvenile delinquency, anxiety disorders, and schizophrenia. Similarly, Akiskal, Hirschfeld, and Yerevanian (1983) assert that hoplessness is represented in a number of psychiatric conditions: "This sense of defeat and demoralization is conceivably the final common pathway of many neurotic and psychotic disorders, and may not be specific to affective disorders" (p. 804).

Thus, although hopelessness has consistently been found to correlate highly with depression, its specificity to depression has yet to be established. This study sought to determine whether or not hopelessness was significantly higher in psychiatric outpatients who were clinically diagnosed as depressed

relative to a group of anxious, nondepressed patients and a group of patients who were not primarily depressed or anxious. From the cognitive model of depression (Beck, 1967), it was hypothesized that the depressed patients would report higher levels of hopelessness than the patients in the other two groups. Furthermore, it was expected that hopelessness would covary closely with the severity of depression symptomatology, but only moderately with the severity of anxiety symptomatology, and that the relationship between anxiety and hopelessness would disappear when level of depression was held constant.

METHOD

Subjects

The sample was drawn from 1,600 consecutive outpatients admitted for evaluation and/or treatment to the Center for Cognitive Therapy, University of Pennsylvania Medical School. Patients were either self-referred or referred by other professionals. All patients were diagnosed by a trained clinician according to the DSM-III (American Psychiatric Association, 1980). Each diagnosis was thoroughly reviewed by a senior staff member within the following week to confirm that all relevant criteria were met and that possible exclusionary criteria were considered. The final diagnosis reflected a consensus between the interviewing and consulting clinicians.

The depressed group was represented by the 199 patients out of the 1,600 who received a diagnosis of major depressive disorder and who did not meet the criteria for a concurrent anxiety disorder. Similarly, the anxious group comprised the 48 patients who received a diagnosis of generalized anxiety disorder with no concurrent depression disorder. Finally, a psychiatric control group was composed of 76 patients who received a diagnosis other than that of an affective disorder or an anxiety disorder. Approximately half of these patients were diagnosed with adjustment disorders, with the remainder distributed among personality disorders, sexual disorders, marital problems, life circumstance problems, and other DSM-III v-code diagnoses.

The total sample of 323 patients was represented by 132 men (40.9%) and 191 women (59.1%) with an average age of 35.69 (SD = 12.53 years). The groups did not differ on the basis of gender ($\chi^2(2, N = 323) = 3.82$, n.s.) or age ($F(2, 320) = 1.96$, n.s.).

Instruments

Hopelessness Scale. The Hopelessness Scale (Beck et al., 1974) is a self-report instrument containing 20 true–false items assessing the expectation

that one will not be able to overcome an unpleasant life situation or attain the things that one values. Nine of the items are keyed false and 11 true. The items are summed to obtain a total hopelessness score (range 0–20). In a sample of 294 hospitalized patients who had made suicide attempts, the HS Kuder-Richardson reliability coefficient was .93, and all of its item-total correlations, ranging from .39 to .76, were significant. Moderately high correlations ranging from .56 to .68 between the HS and the Beck Depression Inventory (Beck et al., 1979) have been reported in a number of studies with samples of inpatients (Beck, Vatz, & Winig, 1971), hospitalized suicide attempters (Minkoff, Bergman, Beck, & Beck, 1973), and depressed patients (Beck et al., 1975).

Beck Depression Inventory. The Beck Depression Inventory (Beck et al., 1979) consists of 21 items, each comprising four statements that reflect gradations in the intensity of a particular depressive symptom. Respondents choose the statement that best corresponds to the way that they have felt for the past week. The individual statements are scored from 0 to 3 and summed to obtain a total depression score (range 0–63). The psychometric properties of the BDI are reviewed by Beck, Steer, and Garbin (1988).

For the present study, item 2 of the BDI (Pessimism) was not included in the total score to avoid confounding depression and hopelessness.

Anxiety Checklist. The Anxiety Checklist (Beck & Steer, 1982) consists of 21 items assessing symptoms of anxiety states. Individual items are scored from 0 to 3 on the basis of the severity of a particular symptom. The individual item scores are summed to obtain a total anxiety severity score that can range from 0 to 63, paralleling the range of scores for the BDI.

ACL items were selected as somatic, affective, and cognitive symptoms of anxiety not represented in depression measures such as the BDI (Beck et al., 1979). The ACL exhibited good internal consistency (alpha = .92), test-retest reliability (.75 over 1 week), and an underlying structure that included factors assessing somatic anxiety, nervousness, and phobic anxiety (Beck & Steer, 1982).

In a sample of 186 outpatients, the ACL had significant correlations of .57 with the Hamilton Anxiety Rating Scale (Hamilton, 1959) and .82 with the Anxiety subscale of the Symptom Checklist-90 (Derogatis, 1977). In a combined factor analysis of the ACL and the BDI, the items of the two scales formed separate factors, with only one ACL item (Frightened) loading saliently on a BDI factor.

Hamilton Psychiatric Rating Scales for Depression and Anxiety. Each patient was rated by a clinician on the Hamilton Psychiatric Rating Scales for Anxiety (Hamilton, 1959) and Depression (Hamilton, 1960). Because the standard Hamilton scales overlap substantially in content, they were rescored as suggested by Riskind, Beck, Brown, and Steer (1987) to enhance discrimi-

nation of anxious and depressive disorders. The Cronbach coefficients alpha were .73 and .83 for the revised depression (HRSD-R) and anxiety (HARS-R) scales, respectively.

To avoid confounding depression and hopelessness, item 22 of the depression scale (Hopelessness) was not included in the total score.

RESULTS

To check on the accuracy of the diagnostic procedure, a one-way multivariate analysis of variance was performed to test for differences in the symptom profiles of the diagnostic groups as measured by the BDI, ACL, and Hamilton scales. The self-report and clinician-rated instruments were analyzed separately. Wilks's lambda was .76 for the BDI and ACL ($p < .001$, $F(4, 638) = 23.54$), and both univariate F tests were also significant ($F(2, 320) = 34.75$ and 7.74, for the BDI and ACL, respectively). Similarly, Wilks's lambda for the Hamilton Scales was .64 ($F(4, 594) = 36.89$), and the univariate F tests for the Hamilton depression and anxiety scales were significant ($F(2, 298) = 45.50$ and 21.15, respectively, all p's $< .001$).

As shown in Table I, planned contrasts revealed the hypothesized group differences for the self-report measures: The MDD group had a higher mean BDI score ($M = 21.49$, $SD = 8.35$) than the GAD group ($M = 17.00$, $SD = 7.05$), which in turn had a higher score than the control group ($M = 12.33$, $SD = 8.80$). The GAD group had the highest ACL score ($M = 21.04$, $SD = 11.71$), followed by the MDD group ($M = 17.91$, $SD = 10.13$) and the control group ($M = 13.65$, $SD = 11.32$). Since directionality had been hypothesized, one-tailed p values are reported in Table I.

Table II shows the equivalent results for the Hamilton scales. The MDD group had a higher mean HRSD-R score ($M = 15.67$, $SD = 5.59$) than the GAD group ($M = 11.98$, $SD = 4.09$), which in turn had a higher score than the control group ($M = 8.61$, $SD = 5.50$). The GAD group had the highest HARS-R score ($M = 22.15$, $SD = 7.83$), followed by the MDD group ($M = 16.80$, $SD = 7.63$) and the control group ($M = 12.54$, $SD = 7.12$). All contrasts were significant beyond the .001 level, one-tailed test (see Table II).

To determine whether the overall intensities of depressive and anxious symptomatology were comparable in the depressed and anxious samples, scores on the symptom measures were standardized. The differences between the mean BDI score in the MDD group and the mean ACL score in the GAD group ($z = .62$) and between the corresponding Hamilton scores ($z = -.34$) were not significantly different.

Table I. Mean Scores on Self-Report Instruments[a]

		HS[b]		BDI[c]		ACL	
Group	*N*	*M*	*SD*	*M*	*SD*	*M*	*SD*
MDD	199	11.3	5.2	21.5	8.4	17.9	10.1
GAD	48	7.9	4.9	17.0	7.1	21.0	11.7
Controls	76	6.6	5.0	12.3	8.8	13.7	11.3
Contrast		*F*	*p*	*F*	*p*	*F*	*p*
MDD vs. GAD		16.3	.001	11.5	.001	3.3	.05
MDD vs. Control		44.5	.001	67.1	.001	8.8	.01
GAD vs. Control		1.9	n.s.	9.2	.001	14.2	.001

[a]N = 323. All p's are for one-tailed tests.
[b]HS = Hopelessness Scale, BDI = Beck Depression Inventory, ACL = Anxiety Checklist, MDD = Major Depressive Disorder, GAD = Generalized Anxiety Disorder. Item 2 (Pessimism) is not reflected in the BDI total score.
[c]Wilks's lambda for BDI and ACL = .76, $F(4, 638) = 22.94$, $p < .001$.

Table II. Mean Scores on Clinician-Rated Instruments[a]

		HRSD-R[b,c]		HARS-R	
Group	*N*	*M*	*SD*	*M*	*SD*
MDD	191	15.7	5.6	16.8	7.6
GAD	41	12.0	4.1	22.2	7.8
Controls	69	8.6	5.5	12.5	7.1
Contrast		*F*	*p*	*F*	*p*
MDD vs. GAD		15.9	.0001	16.9	.0001
MDD vs. Control		87.0	.0001	16.2	.0001
GAD vs. Control		10.0	.001	41.7	.0001

[a]N = 302; 21 patients had missing information for one of the Hamilton Scales. All p's are for one-tailed tests.
[b]HRSD-R = revised Hamilton Rating Scale for Depression, HARS-R = revised Hamilton Anxiety Rating Scale, GAD = Generalized Anxiety Disorder. Item 23 (Hopelessness) is not reflected in the HRSD-R total score.
[c]Wilks's lambda for HRSD-R and HARS-R = .64, $F(4, 594) = 36.89$, $p < .001$.

In addition, information regarding the duration of the present episode was available for 181 (56.4%) patients. The mean duration of 58.3 months (SD = 43.03) for the 20 GADs for whom information was available was higher than the current episode duration for MDDs (M = 28.38, SD = 34.25, N = 117) using Tukey's HSD test. However, duration was not significantly correlated with any of the variables of interest (hopelessness, depression, and

Table III. Simple and Partial Correlations of HS with Symptom Measures[a]

	BDI	ACL
Simple correlation	.58[b]	.33[b]
Controlling for ACL	.51[b]	–
Controlling for BDI	–	–.04
	HRSD-R	**HARS-R**
Simple correlation	.54[b]	.23[b]
Controlling for HARS-R	.50[b]	–
Controlling for HRSD-R	–	–.08

[a]Overall $N = 323$. $N = 301$ for Hamilton scales due to missing data. Hopelessness items are not reflected in the BDI or HRSD-R total scores.
[b]$p < .0001$.

anxiety) either across or within groups and therefore was not employed as a covariate in any of the subsequent analyses.

To test the central hypothesis that the mean level of hopelessness was higher in the MDD patients than in the groups with GAD or other psychiatric disorders, a one-way analysis of variance was performed, and a significant main effect for diagnostic group ($F(2, 320) = 25.52$, $p < .001$) was found. Planned contrasts between the groups indicated that the mean HS score of the MDD group ($M = 11.25$, $SD = 5.23$) was significantly higher than either the mean HS score of the GAD group ($M = 7.92$, $SD = 4.85$) or the mean HS score of the psychiatric control group ($M = 6.63$, $SD = 5.03$) (see Table I). The mean HS differences among the MDD group and the other two groups were significant. The mean difference in HS score between the GAD and control groups was not significant.

To test the hypothesis that level of depression would mediate the relationship between anxiety and hopelessness, the HS was correlated with the BDI, ACL, HRSD-R, and HARS-R (Table III). As expected, there was a strong positive relationship between hopelessness and depression ($r = .58$ and .54 with the BDI and HRSD-R, respectively, $p < .001$) and a moderate relationship between hopelessness and anxiety ($r = .33$ and .23 with the ACL and HARS-R, respectively, $p < .001$). However, with ACL held constant, the relationship between the HS and the BDI remained strong (partial $r = .51$, $p < .001$), while the relationship between the HS and the ACL was no longer significant once BDI was held constant (partial $r = -.04$). Similarly, with HARS-R held constant, the relationship between the HS and HRSD-R remained strong (partial $r = .50$, $p < .001$), while the relationship between the HS and HARS-R was no longer significant when HRSD-R was held constant (partial $r = -.08$).

DISCUSSION

The findings of this study extend support for the cognitive model regarding the relationship between hopelessness and depression. While previous research has established a close association between hopelessness and depression (Beck et al., 1975, 1976; Dyer & Kreitman, 1984; Petrie & Chamberlain, 1983; Weissman et al., 1979; Wetzel, 1976), the present study suggests that hopelessness is a specific attribute of depression and has a negligible relationship to anxiety or to general psychopathology when the influence of concomitant depression is partialed out.

The patients clinically diagnosed as depressed scored higher on the HS than a group of patients diagnosed as anxious without significant secondary depression and a group of psychiatric controls. The ranking of the groups in terms of hopelessness paralleled their ranking in terms of depression, although the anxious group was not significantly more hopeless than the control group. Further, the relationship between anxiety and hopelessness disappeared when level of depression was held constant; therefore, it is likely that whatever hopelessness was present in the anxiety and control groups was associated with the moderate levels of depression found in those groups.

The criterion groups for this study were chosen to reflect the central hypothesis that hopelessness would be elevated in a group characterized by depression (MDD) relative to a group expected to be moderately depressed (GAD) and to a group with minimal depression (the control group). The level of hopelessness found in other pathological groups, such as schizophrenics and substance abusers, still needs to be assessed. In addition, the outpatients in the present study were of relatively high SES; therefore, further studies will need to be conducted that eliminate this possible confound with hopelessness.

It should also be noted that although the groups differed on the appropriate symptom measures, their mean scores were relatively similar. In terms of the cognitive model, individuals experiencing only threat would be expected to be anxious but not depressed, whereas individuals experiencing only loss would be expected to suffer only from depression (Beck, 1976). However, in reality they often experience both (Beck, 1967). Thus, Finlay-Jones and Brown (1981) found that depressed persons reported recent loss events and anxious persons reported recent threat events, whereas those who reported both loss and threat events had mixed depression and anxiety. Still, within the framework of the cognitive model, we would expect that cognitive patterns such as hopelessness would show relative specificity to the primary depression diagnostic groups because the depression in such groups is more severe and predominant than it is in depressions that are secondary to anxiety.

The levels of hopelessness measured by the HS in the present study fall between those found by Greene (1981) in a random sample of 400 adults in the general population of Dublin, Ireland (M = 4.45, SD = 3.09) and by Beck et al. (1985) in a sample of 14 hospitalized patients who eventually committed suicide (M = 13.27, SD = 4.43). Greene (1981) found that older respondents, divorced, separated, or widowed persons, and those of lower socioeconomic status had *higher* HS scores than younger, married, or single, and higher socioeconomic respondents. Greene, O'Mahoney, and Rungawamy (1982) found that the HS scores of 60 medically ill inpatients were not significantly different from those found in the general population. There were no differences between chronically ill and acutely ill patients, or between those with cancer and those with milder illnesses. These findings suggest that hopelessness is not merely a response to adverse circumstances.

The present findings bear on the general supposition of the cognitive model that each neurotic disorder is characterized by a cognitive content specific to that disorder (Beck, 1976). As such, they converge with other recent findings of distinct cognitive contents that are characteristic of depression and anxiety. Thus, in an undergraduate sample, Clark (1986) found a stronger association of loss cognitions with depression than with anxiety and a stronger association of threat cognitions with anxiety than with depression. Similarly, a scale of automatic thoughts, the Cognition Checklist, devised by Beck, Brown, Steer, Eidelson, and Riskind (1987), differentiated clinically depressed and anxious individuals on the basis of loss versus threat cognitions.

The present study also provided evidence that hopelessness and depression are related but separable, since measures of the two constructs remained highly correlated after content overlap was removed. However, we did not address the question of whether hopelessness is an antecedent, concomitant, or consequence of depression (Lewinsohn, Steinmetz, Larson, & Franklin, 1981). According to the cognitive model of depression (Beck, 1967), hopelessness and the other components of the negative cognitive triad (e.g., negative view of self) instigate and maintain the other symptoms (e.g., loss of interest, apathy, suicidal behavior) that are a part of the syndrome of depression. Brown and Harris (1978) have similarly suggested that hopelessness is "the key factor in the genesis of clinical depression." However, Lewinsohn et al. (1981) and others have suggested that cognitive factors such as hopelessness should be regarded as "epiphenomenal" (Akiskal et al., 1983, p. 804) until shown prospectively to antedate clinical depression.

Thus, the question of whether or not the activation of the negative triad is a precursor of clinical depression still needs to be addressed. Longitudinal studies of depression-prone individuals, for example, will be necessary to determine whether an increase in descriptions of hopelessness, low self-esteem, and negative interpretations of experience precede the onset of the

other symptoms of depression. One such study was conducted by Rholes, Riskind, and Neville (1985), who found that, holding present level of depression constant, HS scores predicted level of depression 5 weeks later.

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