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Experience of Depression in College Students: A Concept Map

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This article discusses previous depression-related research, which has emphasized conceptual and measurement issues; consequent lack of understanding of the experience of depression is suggested. Concept mapping, an alternative methodological approach combining qualitative and quantitative strategies, was used to clarify the scope and interrelations among elements of the experience of depression in 78 college students. Whereas participants' experience of depression included affective and somatic symptoms consistent with generally accepted diagnostic criteria, the experience of depression was not limited to these domains. Findings are discussed as they relate to depression research and counseling practice.

Considerable research has focused on depression in college students (e.g., Hamilton & Fagot, 1988; Hammen & Cochran, 1981; Hammen & Padesky, 1977; Lester, 1990; Vredenburg, O'Brien, & Krames, 1988). Results of these studies suggest that self-reported depression is prevalent among college students at a level somewhat higher than in the general population, with up to 20% of college students thought to experience depression at some time during their education.

As in depression research with other populations, however, investigations among college students have yielded varying and occasionally conflicting results in some fundamental areas. For example, sex differences in depression, which have long been of interest to researchers in clinical settings, do not appear to be reliable among college students (Hoeksema, 1987). The distinction between feelings of sadness and despair (i.e., dysphoria) and clinically defined depression, noted to be blurred across the developmental spectrum (Spitzer, Edicott, & Robbins, 1978), is particularly vague in college students, for whom episodes of sadness, feelings of hopelessness and helplessness, and concentration difficulties may be common (cf. McDaniel & Richards, 1990; Vredenburg et al., 1988).

The lack of consensus in depression research appears to result largely from the various and often discordant ways in which depression is construed and measured (Lambert, Hatch, Kingston, & Edwards, 1986). Medical perspectives, for example, define depression in terms of demonstrable physical symptomatology, such as changes in sleep, appetite, energy, and enjoyment level (American Psychiatric Association, 1987). In contrast, formulations of depression from cognitive perspectives typically have emphasized the influences of mental processes in predisposing individuals to depression in the presence of precipitating events (Beck, 1967; Hammen & Cochran, 1981) or to depressive behavior as a response consistent with learned helplessness (Hiroto & Seligman, 1975). In related work in depression and information processing, researchers (e.g., Ingram, 1984) have posited the existence of a "depression-emotion node" (p. 443), activated by awareness of depressive cognitions. Psychoanalytic formulations of depression, such as those advanced by Bibring (1953), center around the dynamic processes whereby anger is directed toward the self. Some researchers have even conceived of depression as a relatively normal affective state that does not lend itself to formal definition. Blatt and his colleagues (Blatt, D'Afflitti, & Quinlan, 1976; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982), for example, have argued that depressive experience occurs along a continuum influenced by dependency and self-criticism.

Related to this diversity in conceptualizing depression is the diversity in measurement devices used to quantify the presence and magnitude of depression (Kendall, Hollon, Beck, Hammen, & Ingram, 1987). In comprehensive reviews of depression assessment, Lambert and others (Lambert et al., 1986; Moran & Lambert, 1983) have discussed the relative adequacy of commonly used measures of depression. These measures seem to differ along two dimensions: (a) the breadth and depth of depressive symptoms that are included and (b) the primacy of internal versus external perspectives. In the former domain, Moran and Lambert (1983) performed a content analysis of several depression measures, including the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the Hamilton Rating Scale for Depression (HRS-D; Hamilton, 1960), and the Zung Self-Rating Scale (Zung, 1965), to determine their correspondence to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd. ed; *DSM-III*; American Psychiatric Association, 1980). The *DSM-III* diagnostic description was first reduced to nine criteria (i.e., dysphoric mood, feelings of worthlessness or guilt, thoughts of death or suicide,

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inability to think or concentrate, increase or decrease in appetite, psychomotor agitation or retardation, increase or decrease in sleeping, decrease in energy, and decrease in sexual drive), and each instrument was evaluated for inclusion of items relevant to these criteria. The BDI was found to correspond closely to *DSM–III* criteria, with inclusion of six of the nine identified symptoms. The HRS–D covered seven criterion symptoms completely and two partially, and Zung's measure incorporated five of the criterion symptoms. Lambert et al. (1986) summarized assessment of depression in stating that "none of the scales covers all depression symptoms fully" (p. 58); he consequently advised the use of multiple measures. Moran and Lambert (1983) further questioned whether *DSM–III* criteria are adequate for assessing depression, yet appeared to suggest that the advantages of this diagnostic system—that is, "comprehensive, atheoretical and relatively concrete presentation of inclusive and exclusive criteria" (p. 265)—outweigh its potential shortcomings.

The locus of evaluation, that is, whether depression is best assessed from an internal or an external perspective, has also received some research attention. Carroll, Fielding, and Blashki (1973) found that self-ratings of patients thought to be depressed differed from psychiatrist ratings in relative emphasis on "subjective feelings on the one hand . . . [and] behavioral and somatic features on the other" (p. 361). Carroll et al. (1973) noted that self-report measures, although efficient, are inherently limited in the scope of their inquiry and suggested a "compromise between comprehensiveness and utility" (p. 364) in which researchers must "decide which features of depression . . . to emphasize in preference to others" (p. 365).

The study of depression has been influenced by the tendency in previous research to focus on depression as a reliable clinical construct, the experience of which is reducible to questionnaire responses or external ratings. In many ways research on depression appears to exemplify Patton and Jackson's (1991) distinction between investigations of constructs as defined by researchers and a focus on constructs as experienced by participants. To our knowledge, no previous investigation has allowed research participants to reflect their experience of depression in a way that was unconstrained by the researchers' previous conceptions.

This article describes the application of an alternative methodological approach, concept mapping, to understanding the nature and latent organization of elements of the *experience* of depression in college students. Rather than adhere to conceptually or diagnostically based a priori formulations, the intent of this investigation was to obtain a relatively unconstrained description of the ways in which depression is construed and experienced within a sample of college students and to allow participants' collaboration in clarifying the organization and salience of the various elements of depressive experience. Such an unrestricted perspective on the domain of participants' experience of depression and information about the latent organization of depressive constructs seems essential before one can meaningfully relate the subjective experience of depression to other variables of interest.

Although detailed information about concept mapping is provided in the Method section of this article, we briefly summarize the rationale and procedure here. *Concept mapping* is an alternative methodological approach that is particularly appropriate for applications in which researchers are seeking to clarify the domain, constituent elements, and underlying structure of a phenomenon as experienced within the population of interest (Kunkel, 1991; Trochim, 1989). In using concept mapping, researchers first directly seek participants' perspectives on the ways in which they experience the phenomenon of interest through asking an open-ended question or conducting a phenomenological probe (Giorgi, 1985). These probes are designed to be sufficiently focused to elicit participants' perspective on the phenomenon, yet ambiguous enough not to unduly influence their response. Participants' written responses to the phenomenological probe are reduced qualitatively to a set of representative meaning units, which constitute items for further analysis. After items are compiled into a rating form, participants indicate how well each item reflects their individual experience of the phenomenon; this provides information about endorsement patterns among individuals and subgroups of interest. Finally, participants perform unstructured card sorts (cf. Rosenberg & Kim, 1975) on the items to mirror the ways in which these constructs may be interrelated in their experience. The statistical technique of multidimensional scaling is performed on the card-sort data to suggest statistically and visually the organizational principles implicit in participants' sorting (Davison, Richards, & Rounds, 1986). Cluster analysis is used to identify conceptually similar groups of sorted items (cf. Borgen & Barnett, 1987).

Concept mapping is in some respects similar to the cognitive mapping task used by Martin and his colleagues (e.g., Martin, Slemon, Hiebert, Hallberg, & Cummings, 1989) in that it combines phenomenological and quantitative research strategies and actively involves research participants in item generation and data gathering. The two procedures are different, however, in that concept mapping uses more thorough qualitative analysis, uses open sorting rather than spatial arrangement to clarify relations among concepts, is applicable to larger participant groups, and uses different statistical analyses than does cognitive mapping. Concept mapping is also similar in some ways to recent methods of analysis involving thought listing and guided inquiry (e.g., Heppner, Rosenberg, & Hedgespeth, 1992), multidimensional scaling (e.g., DeHeer, Wampold, & Freund, 1992), and cluster analysis (e.g., Gati, 1991). Concept mapping represents a triangulated combination of these procedures (Hoshmand, 1989), in which qualitative and quantitative analyses are used dialectically.

Method

Participants

Participants in this study ($N = 78$) were undergraduate students in their first month of an introductory psychology class. Students voluntarily participated in the study, prior to any classroom discussion of depression, with the understanding that its intent was to

investigate "their experience of their feelings." Median age of participants was 20 years (SD = 5.9 years), with a range of 18 to 57 years. Sufficient numbers of women (n = 45) and men (n = 32) participants were sought to clarify the relation between gender and the experience of depression. Ethnic distribution was representative of the campus population and was as follows: 83.3% White; 14.1% Hispanic; and 2.6% African American. Most students (60.3%) were in their 1st year of university study, 26.9% were in their 2nd year, 6.4% were in their 3rd year, and 2.6% were in their 4th year. Eighty-one percent of the students were single, with 12.8% married and 1.3% divorced; the remaining 5.6% reflect missing data. Nine percent of the participants reported having received previous treatment for depression.

Instrument

In addition to their participation in the concept mapping task, participants completed the Center for Epidemiological Studies of Depression Scale (CES–D; Orme, 1986). The CES–D is a 20-item questionnaire that has been widely used to clarify the presence of depressive symptomatology in nonpsychiatric samples, in contrast to the depression measures discussed previously, which have been predominantly used to quantify treatment response among those already diagnosed as depressed. The CES–D possesses reasonably good psychometric properties, with test–retest reliability (r = .54 over 6 months), internal consistency (coefficient alpha = .85), and concurrent validity (correct identification of 71% of individuals diagnosed as depressed) within acceptable limits (Devins & Orme, 1985). The CES–D seemed especially suitable for clarifying the presence of depressive symptomatology in this sample and evaluating the proportion of participants who may have met criteria for depression according to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev.; *DSM–III–R*; American Psychiatric Association, 1987).

Procedure

There were two experimental sessions. During the first, participants were asked to recall vividly the last time they felt "depressed." The term *depression*, rather than perhaps more technically accurate terms such as *dysphoria* or *sadness*, was used throughout the investigation because the focus was on how depression was understood and experienced by the research participants. As other researchers (e.g., McDaniel & Richards, 1990) have pointed out, the diagnosis of *DSM–III–R* major depression requires that clinical data be supplemented with a psychiatric interview; however, this was not the intent of the present study.

Participants then responded in writing to three open-ended probes: (a) "What is it like to be depressed?"; (b) "How did you come to realize you were depressed?"; and (c) "How did you attempt to cope with your depression?" Only the first probe was elaborated in this investigation; the other two inquiries were exploratory and intended to inform future studies. Each probe was designed to elicit participants' perspectives on the phenomenon without overly constraining their response. In the first probe, for example, care was taken not to limit response to any specific domain (i.e., affective, cognitive, or behavioral) of depressive experience. Demographic information was also collected during this first experimental session.

Participants' written responses were transcribed and then analyzed independently by five members of a research team who, at the time of the investigation, had been meeting weekly for approximately 2 years with primary focus on alternative research methods. The intent of this analysis was to distill from participants' written responses an inclusive subset of "meaning units," or items that captured the essence of the phenomena while retaining participants' language. Giorgi's (1985) four-level scheme for qualitative analysis of text was used as a procedural guideline. First, intensive scrutiny of the whole (in this case each participant response) was undertaken, followed by identification of remarkable or salient elements of the whole. The task of the research team at this juncture was to separate contextual or irrelevant material (e.g., "I used to get real depressed but now I don't") from material potentially relevant to the experience of depression (e.g., "I felt like there was a black cloud over me"). This potentially relevant material was highlighted and next evaluated within the context of the whole (through comparison with other highlighted descriptions) to identify overlap, uniqueness, and redundancy. Following independent identification of material potentially relevant to the experience of depression, the researchers met, and through compilation of their meaning unit lists, identified 190 statements that retained participants' language and completely reflected the domain of the experience of depression. Athen's (1984) criteria for evaluation of qualitative analysis (i.e., theoretical import, empirical grounding, and scientific credibility) were used in item selection to identify statements that were potentially important, clearly grounded in the material from which they were reduced, and credible to the research team. These statements were next analyzed by the research group for redundancy, and a final list of 81 qualitative descriptions of depression was compiled. There were two departures from verbatim retention of participants' language in the final statement list. First, each statement was equated for verb tense (e.g., "I was feeling bored" and "I found myself feeling bored" were both reduced to "Felt bored"). Second, each statement was prefaced with "Felt . . .," as in for example, "Felt in control" or "Felt like I had a battle to fight." These slight modifications were intended to maximize interpretability of the concept map through equating the level of abstraction and providing parallel grammatical structure for each item.

In the second experimental session, held 2 weeks after the first, participants returned for the sorting and rating tasks. For the sorting task, each of the 81 items derived from the qualitative analysis was printed on a 3 in. (7.6 cm) × 5 in. (12.7 cm) card; each card therefore represented a different qualitative description of depression. Participants were asked to place the 81 cards in piles according to "how they seemed to go together." No restrictions were placed on participants' sorting strategies other than that they not place each item card alone in a pile or place all cards in one pile. As Rosenberg and Kim (1975) pointed out, this method has

> the advantage of making it unnecessary for either the respondents or the investigator to specify any of the psychological dimensions or attributes that can provide a basis for judgments of similarity. The identification of underlying dimensions or attributes can take place from the structures obtained by scaling and clustering, leaving the respondents' judgments uncontaminated by an investigator's preconceptions. (p. 490)

The 81 items from the qualitative analysis were also compiled into a questionnaire, in which participants rated each on an equidistant Likert scale ranging from *not at all* (1) to *extremely well* (4) according to how well it described their experience of depression (Dobson & Mothersill, 1979). The intent of this procedure was to enable identification of the most common elements of depression within the participant group. Participants then completed the CES–D as a final research task.

Analysis

A nonmetric multidimensional scaling (MDS) procedure was performed on the similarity matrix of participants' sorted items.

MDS arranges points representing items along orthogonal axes such that the distance between any two points reflects the frequency with which the items were sorted together. Discussions of this statistical technique (e.g., Fitzgerald & Hubert, 1987; Kruskal & Wish, 1978) have emphasized the suitability of MDS for representing spatially the latent relations among variables, particularly when these relations are unknown.

Hierarchical cluster analysis of the MDS similarity matrix was then used to group sorted items into internally consistent clusters, this cluster solution being superimposed on the MDS point plot. Whereas cluster analysis is especially suited for selection of subgroups of participants with similar responses to a given variable, its use is also appropriate for direct measures of proximity (cf. Borgen & Barnett, 1987), such as MDS matrices. Ward's (1963) minimum variance method was used to optimize distinctiveness across clusters. Members of the research team next individually assigned names to the clusters of MDS items on the basis of inspection of the constituent items, and once again met as a group to reach consensus about a descriptive and justifiable name for each.

Descriptive statistics (means and standard deviations) of participants' representativeness ratings were compiled for each experience of depression and each CES–D item, and means were ranked to illustrate relative patterns of endorsement. A series of chi-square analyses was performed to assess distribution of CES–D scores across gender, marital status, employment, and previous treatment categories. Finally, the internal consistency of participants' ratings within each cluster was evaluated, with Cronbach's alpha as the test statistic, to investigate the possibility of collapsing items within clusters into a single construct. Patterns of experience of depression endorsement were then examined for significant variation across demographic categories and CES–D response level with multivariate analysis of variance (MANOVA).

Results

The MDS procedure resulted in a final stress value of .27 for a two-dimensional solution. The stress value is an index of the stability of an MDS solution and ranges from zero (perfectly stable) to one (perfectly unstable). Although .27 is not optimal, it represents a reasonably stable solution; moreover, additional dimensions reduced the stress by less than .02, the value suggested as a guideline for stability by Kruskal and Wish (1978). The selection of a two-dimensional solution was also consistent with the concept mapping approach in which "the MDS configuration is desired primarily as a foundation on which to display clustering results" (Kruskal & Wish, 1978, p. 58); the two-dimensional solution is therefore "far more useful than one involving three or more dimensions" (Kruskal & Wish, 1978, p. 58).

The concept map of the 81 experience-of-depression items is presented in Figure 1. In that this way of presenting data may be unusual, we give a detailed explanation of the map, as follows. The 81 items reduced from participants' phenomenological response are represented as points on the map. The placement of points is derived from the MDS solution; the distance between the points reflects the frequency with which the items were sorted together by participants. That is, points that are relatively close together represent items placed together in participants' sorts more frequently than items represented by points more distant from one another. Clusters of items from the cluster analysis are identified by boundaries

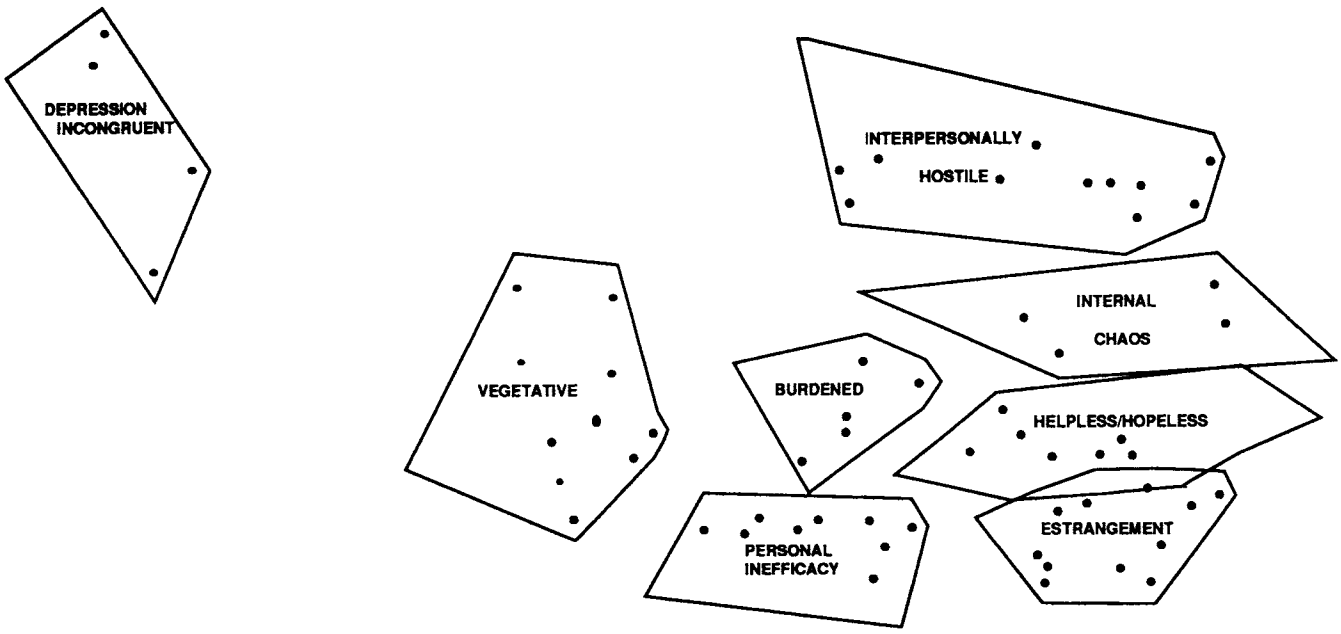

Figure 1. Concept map of 81 elements of the experience of depression, based on multidimensional scaling and cluster analysis of 78 college students' open-card sorts of these elements, derived from qualitative analysis of their written response to the probe, "What is it like to be depressed?"

around groups of points, which represent items that were frequently sorted together in the same pile and less often sorted with items in other piles. The names of each cluster were assigned by the research team in consideration of items making up the clusters and inspection of those items contributing most to the uniqueness of each cluster. As with other procedures, such as factor analysis, naming of clusters is both statistically and conceptually influenced. Items within each cluster, together with descriptive statistics for each, are presented in Table 1.

Interpretation of the concept map involves informed conjecture about the possible structure participants imposed on the items in their sorting. Initial examination of the map involves attempts to identify implicit dimensional axes around which points may be configured (see Buser, 1989). Inspection of the placement and adjacency of items and clusters can also be helpful in this process, to identify apparent regions of the map and potentially related constructs.

Inspection of the map suggests that elements of the experience of depression are organized along the two dimensions, anomalous versus prototypical and expression versus isolation. The map is divided vertically along the anomalous versus prototypical dimension, in which the left section is dominated by items that appear to be incongruent with the experience of depression. These items were mentioned by a few participants and therefore were included in the qualitative reduction. However, they were apparently perceived as somewhat unintegrated from the more prototypical elements

Table 1
Clusters and Items From Students' Concept Map of Their Experience of Depression

	Cluster/ items	*M*	*SD*		Cluster/ items	*M*	*SD*
1.	Helpless/Hopeless	2.55	0.72	5.	Personal Inefficacy	2.34	0.72
	Felt sad	3.15	0.82		Felt like I wanted someone to take care of me	2.55	1.19
	Felt like crying	2.73	1.10				
	Felt empty	2.67	1.00		Felt sorry for myself	2.54	1.07
	Felt withdrawn	2.62	1.12		Felt I couldn't interact with others	2.47	1.05
	Felt incomplete	2.60	1.06		Felt self-pitying	2.41	1.09
	Felt helpless	2.51	1.06		Felt unable to handle my problems	2.37	1.06
	Felt I couldn't snap out of it	2.45	1.09		Felt shut down	2.27	1.10
	Felt hopeless	2.45	1.15		Felt unable to compete	2.22	0.99
	Felt afraid	2.32	1.11		Felt unable to make friends	2.19	1.03
	Felt paranoid	2.05	1.06		Felt small	2.19	1.13
2.	Burdened	2.52	0.69		Felt ugly	2.17	1.13
	Felt a loss of motivation	2.83	0.96	6.	Vegetative	2.36	0.53
	Felt like I didn't understand	2.67	1.00		Felt like something was wrong	3.01	0.92
	Felt scared about the future	2.63	1.15		Felt it was difficult to concentrate	2.97	0.96
	Felt like there was a huge weight	2.56	1.00		Felt tired	2.72	0.99
					Felt time went by slower	2.65	1.00
	Felt like I didn't care	2.50	1.09		Felt bored	2.40	1.10
	Felt numb	1.97	1.09		Felt like sleeping all the time	2.37	1.19
3.	Internal Chaos	2.41	0.67		Felt stupid	2.18	0.99
	Felt confused	2.72	0.98		Felt careless about my appearance	2.17	0.95
	Felt negative	2.65	0.99		Felt like I couldn't sleep	2.09	1.10
	Felt angry at myself	2.64	1.16		Felt sick	2.00	1.10
	Felt unlucky	2.49	1.13		Felt I had lost my appetite	1.97	1.04
	Felt betrayed	2.15	1.09		Felt like a child	1.82	0.99
	Felt out of control	2.13	1.07	7.	Depression Incongruent	1.66	0.51
	Felt guilty	2.10	1.13		Felt mellow	1.90	1.01
4.	Estrangement	2.31	0.79		Felt observant of everything	1.88	1.88
	Felt alone	2.92	1.09		Felt in control	1.72	0.92
	Felt like no one understood	2.74	1.01		Felt good	1.41	0.76
	Felt like nobody cared	2.55	1.11		Felt secure	1.39	0.70
	Felt like I didn't belong	2.54	1.04	8.	Interpersonally Hostile	2.42	0.69
	Felt a sense of loss	2.45	1.03		Felt frustrated	2.94	0.89
	Felt like a failure	2.44	1.22		Felt irritable	2.77	1.03
	Felt like a nobody	2.38	1.18		Felt cheated	2.64	1.16
	Felt like fading away	2.36	1.15		Felt tense	2.63	1.09
	Felt like an outcast	2.24	1.13		Felt restless	2.51	1.03
	Felt worthless	2.23	1.16		Felt like I could explode	2.46	1.18
	Felt like people were against me	2.15	1.05		Felt like I had a battle to fight	2.28	1.15
	Felt like it was the end	2.04	1.12		Felt bitter	2.26	1.04
	Felt life was not worth living	1.95	1.23		Felt like blaming others	2.09	1.03
	Felt like I wanted to die	1.88	1.21		Felt aggressive	2.08	1.18
	Felt like suicide	1.78	1.14		Felt selfish	1.95	1.07

Note. Participants rated each item according to how well it described their experience of depression, using a 4-point equidistant Likert scale ranging from *doesn't apply at all to me* (1) to *applies extremely well to me* (4).

of depressive experience contained in the center and the right half of the map. Horizontally, the map is interpretable in terms of upper items having to do with hostile expression and items placed in the lower half of the map reflecting despair and isolation.

Inspection of the clusters suggests several distinct regions of experience of depression. The center portion of the map is dominated by somatic elements of depressive experience. This cluster reflects a tendency for participants to sort together items such as "Felt like I lost my appetite"; "Felt sick"; and "Felt like sleeping all the time." The right portion of the map appears to reflect more affective experiences of depression, including a sense of internal disorganization, absence of worth and engagement with others, and feelings of being overwhelmed and powerless.

The cluster structure can also be understood in terms of adjacency of constructs. The close placement of items representative of the external expression of anger and those reflecting dysfunctional social relationships suggests that these categories were perceived as similar by participants. For example, participants sorted items pertaining to interpersonal experiences (e.g., "Felt frustrated"; "Felt irritable"; "Felt like blaming others") close to affective responses to social frustrations such as "Feeling cheated"; "Feeling angry"; and "Feeling bitter." Items within this region were adjacent to items reflecting internal chaos and intrapunitiveness in a manner that suggests some degree of perceived similarity of these states to those in the interpersonal region. For example, adjacent to the interpersonal and anger inward items were items such as "Felt angry at myself"; "Felt betrayed"; and "Felt confused."

The lower right section of the map contains items sorted together that suggest a sense of helplessness and hopelessness and perhaps related feelings of estrangement. For example, in the former category, items such as "Felt incomplete"; "Felt withdrawn"; "Felt helpless"; and "Felt hopeless" were sorted frequently with items suggesting isolation from others (e.g., "Felt like an outcast"). Items in the Estrangement cluster, such as "Felt like no one understood" were especially poignant in their relation to depression. In summary, it appears that items in the right region of the map reflected depressive patterns of interpersonal and internal frustration related to hopelessness, helplessness, and some aspects of negative affect.

The items contained within the Burdened and Personal Inefficacy clusters appear to bridge somatic and internal affective elements of depression. Items such as "Felt like there was a huge weight"; and "Felt weak" appear to be related to more somatic elements such as "Felt tired"; or "Felt like something was wrong." In a similar fashion, items sorted within the Personal Inefficacy cluster appear to reflect concepts such as "Felt unable to handle problems"; and "Felt unable to compete." These items were sorted adjacently to those within the Estrangement and Vegetative clusters.

Prototypical elements of the experience of depression are suggested by the magnitude and consistency of participants' ratings of how well each item reflected their experience (see Table 1). Items reflecting personal distress (e.g., "Felt like something was wrong" and "Felt like crying") were rated as considerably more typical of the participants' experience of depression than were items such as "Felt selfish" or items within the Depression Incongruent cluster, which included feeling "good," "in control," and "mellow."

Participants' responses to the CES–D yielded a distribution comparable to that in other university populations ($M = 16.70$, $SD = 11.63$), with approximately 38% of participants meeting or exceeding the value of 16 (Devins & Orme, 1985) for the presence of significant depressive symptomatology. Separate chi-square analyses suggested that distribution of responses to the CES–D did not vary significantly with gender, marital status, employment, or previous treatment for depression.

Analysis of rating patterns within clusters yielded good to excellent internal consistency, with Cronbach's alpha for each as follows: .90 for Helpless/Hopeless, .79 for Burdened, .76 for Internal Chaos, .93 for Estrangement, .89 for Personal Inefficacy, .72 for Vegetative, and .88 for Interpersonally Hostile. Internal consistency of the items within the Depression Incongruent cluster was significantly lower (.48), and consequently this cluster was not used in subsequent analyses.

The design for the initial MANOVA was a 2 (gender) × 2 (marital status: married vs. not married) × 2 (CES–D category: <16 vs. >16), through which we evaluated the relation between (a) participants' mean cluster scores and (b) gender, marital status (collapsed to married and unmarried categories), and CES–D category (below or above the 16-point clinical cutoff). Depression treatment was omitted from the overall design because of the relatively small number of cases across cells. The three-way interaction was not significant, $F(1, 58) = 0.78$, $p > .62$; likewise, there were no two-way interactions. Within the overall design, only the CES–D category reached significance, with this relation significantly contributed to by each cluster, $F(1, 71) = 3.03$, $p < .01$. Ratings of items within each cluster for participants meeting or exceeding the CES–D cutoff in each case exceeded those for participants below this value. The MANOVA for previous depression treatment did not reach significance, $F(1, 73) = 0.47$, $p > 0.87$.

Discussion

The breadth of experiences of depression reported by participants in this study argues against the reduction of these elements to a few categories. Instead, these results indicate that depression is a multifaceted experience that may be composed of various phenomenological constructs consistent with diverse theoretical formulations.

The scope and structure of this concept map are consistent with formulations of depression as resulting from and involving internal affective states, aversive cognitions, and dysfunctional relationships. For example, the adjacency between the Helpless/Hopeless items and the items in the Estrangement cluster supports the role of learned helplessness and cognitive distortions postulated by the cognitive models of depression. It is also interesting to note that each of the normal depressive elements (i.e., dependency, self-criticism,

and inefficacy) postulated by Blatt et al. (1976) among college students was mirrored in these findings.

It seems rather remarkable that 78 relatively naive college students could portray depression in a fashion so consistent with *DSM–III–R* diagnostic criteria. All but one (i.e., "decrease in sexual drive") of Moran and Lambert's (1983) *DSM–III* dimensions were reflected in participants' response. Within the Vegetative cluster, for example, participants provided a virtually all-inclusive list of somatic-related symptoms, including loss of appetite, sleep difficulties, and difficulties in concentrating. Considerable overlap was also noted between the 81 items generated from participants' responses and the 20 CES–D items, including almost verbatim inclusion of these CES–D items: "My appetite was poor"; "Had trouble keeping my mind on what I was doing"; "Felt lonely"; and "Felt that people disliked me."

It is also clear, however, that the experience of depression reflected in this concept map is not reducible to specific diagnostic or theoretical formulations. Particularly interesting in this context is participants' emphasis on hostility, internal chaos, and inefficacy in contributing to their depressive experience. To the extent possible, researchers should attempt to broaden their definition of depression to include a similar diversity of experience. As others (cf. Kendall et al., 1987) have suggested, measures of depression are influenced by prior theoretical assumptions and are consequently limited in the breadth and depth of depressive experience that they are capable of measuring. Additional research is needed that focuses on the nature of depressive experience and nomothetic themes in this experience that may not be reflected in present diagnostic description or measurement devices. Investigations of the experience of depression with larger sample sizes could contribute to development of a less theory-dependent and a more multidimensional measure.

Counseling practitioners might also benefit from more inclusive formulations of depression. For example, prospective clients whose primary experience of depression is typified by the sort of interpersonal aversion and social ineptness reflected in the Interpersonally Hostile cluster would be expected to respond quite differently to counseling interventions than those for whom the primary experience of depression was predominantly vegetative (Stewart, McGrath, Liebowitz, Harrison, & Quitkin, 1985). It also may be helpful to consider the conceptual adjacency of some elements of depression. Clients prone to feelings of estrangement, for example, also may be plagued by a sense of personal inefficacy and hopelessness. Similarly, the adjacency of interpersonal hostility and internal chaos is consistent with formulations of aggression as a defense against internal disorganization and resultant anxiety. Should these participants' experience of depression be typical, counselors could benefit from familiarizing themselves with this and other constructs that may be related for clients experiencing depression.

These findings are preliminary and have some important limitations. First, concept mapping, like other alternative research approaches, involves troublesome compromises between breadth and depth of understanding. Although we are reasonably confident about having captured and organized the experience of depression for these participants, it is not known how well these results would apply elsewhere. Despite the apparent demographic similarity of these participants to normative groups (for example, in the CES–D distribution), replications with larger student samples might clarify further abiding themes in their experience of depression. Second, we chose to use retrospective recall of depressive experience rather than seeking, for example, a group of research participants meeting *DSM–III–R* criteria for depression. Our participant selection decision was highly influenced by our desire to examine depressive experience broadly. Participants meeting presently accepted diagnostic criteria for depression may experience their situation differently than those asked to recall such a situation retrospectively. The relation between participants' item ratings and CES–D scores suggests, however, that differences in depressive experience may be quantitative rather than qualitative; clinical depression may differ from other depressive experiences in degree rather than in kind. As an extension of the present investigation, concept maps of students presently exceeding the CES–D diagnostic criterion could be compared with concept maps of others through pattern matching (Trochim, 1985) or through more quantitative comparison strategies. Such comparison was not possible in this study, given the small size of the present sample.

There are also some statistical limitations in our presentation of these data. The procedures chosen were intended to elaborate the structure of the qualitatively derived perspectives rather than overshadow them. We chose, for example, not to apply alternative procedures, such as Hubert and Schultz's (1976) quadratic assignment paradigm, which other researchers have used to investigate intergroup differences for sorting data. Nor were three- and four-dimensional MDS solutions presented, despite their potential merit and fit. The present study is intended as a beginning template, suggesting the variety and internal organization of elements of the experience of depression. Future investigations could more fully analyze statistically these and other data, maintaining a focus on depression as a phenomenological experience.

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