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Exploring the Sociotropy-Autonomy Dimensions in a Sample of Turkish Psychiatric Inpatients



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The present study explored the constructs of sociotropy and autonomy with a group of Turkish depressed inpatients, who were administered the Beck Depression Inventory, the Dysfunctional Attitudes Scale, the Automatic Thoughts Questionnaire, and the Sociotropy-Autonomy Scale. A comparison group of students from three SES levels also were included in the study. Comparisons were made on the scale scores among the non-dysphoric students, the dysphoric students, and the depressed patients. The results seem to support the relationship of sociotropy with other depression measures in both samples. However, several problems were encountered with the construct autonomy as it is conceptualized in the Sociotropy-Autonomy Scale. © 2003 Wiley Periodicals, Inc. *J Clin Psychol* 59: 1055–1068, 2003.

Depression has been one of the most intriguing research topics in psychology and psychiatry. The line of inquiry ranges from attempts to differentiate the subtypes of depression, to the psychological phenomena associated with the disorder, to the means of treatment. Three categories of variables—antecedents, concomitants, and consequences

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of depression—that distinguish depressed from nondepressed adults were identified. The psychosocial constructs studied in terms of these categories were: “attributional style,” “dysfunctional attitudes,” “personality types,” “social support,” “marital adjustment,” and “coping style” (Barnett & Gotlib, 1988).

Etiological studies on the personality factors that underlie depression have identified several dimensions associated with this disorder, such as dependency and self-criticism (Birtchnell, 1984; Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; McCraine & Bass, 1984; Zuroff, Igeja, & Mongrain, 1990; Zuroff & Mongrain, 1987), introversion (Akiskal, Hirschfeld, & Yerevanian, 1983; Hirschfeld et al., 1983), lack of personal control (Burger, 1984), and sociotropy and autonomy (Clark, Beck, & Stewart, 1989; Hanimen, Ellicott, Gitlin, & Jamison, 1989; Nietzel & Harris, 1990; Robins, 1990; Robins, Block, & Peselow, 1989; Robins & Luten, 1989, 1991; Schlenker & Weigold, 1990).

Among these developmentally acquired traits, those in the interpersonal domain, like dependency and sociotropy, are considered to be among the ones that hold the most promise to explain the etiology of depression. Beck’s model states that these personality dimensions may play an important part in the precipitation, clinical presentation, and treatment of depression (Beck, Epstein, Harrison, & Emery, 1983). Sociotropic individuals are conceptualized as having an intense need to be loved, approved, esteemed, and prized by significant others in order to maintain their positive self-image. They are precariously sensitive to real or perceived slights and abandonments and are vulnerable to depression when these needs are not met. Autonomous individuals, on the other hand, are conceptualized as individuals who have excessive personal demands for accomplishment and control. When they fail to satisfy their personal standards, they experience relentless self-criticism, guilt, inferiority, and depression (Nietzel & Harris, 1990). Cross-sectional research in this field generally has supported the relationship of dependency, but not autonomy with depression (Robins, 1990; Robins & Block, 1988; Robins et al. 1989). It was pointed out that, compared to never-depressed controls, remitted depressives report higher levels of emotional dependency and lower social self-confidence (Barnett & Gotlib, 1988). One exception to this conclusion is a study carried out by Hammen’s research team that supports the predictive power of the interaction of autonomy and autonomy-related life events in predicting depressive symptoms (Hammen et al., 1989).

The reviews mentioned above share the conclusion that, so far, the construct of “sociotropy,” as it is stated in Beck’s model, has received considerable support as a vulnerability factor, whereas the same conclusion cannot be drawn for the construct of “autonomy.” The intriguing question here is whether there is a problem with the model and/or with the scales used to test the model or whether it is a consequence of the heterogeneity of the samples. Several scales were used in various studies to test these constructs: the Depressive Experiences Questionnaire (DEQ), the Sociotropy Autonomy Scale (SAS), the Interpersonal Dependency Inventory (IDI), and the Dysfunctional Attitude Scale (DAS). The findings point to the sensitivity of the “sociotropy” or “interpersonal dependency” measures, but the “autonomy” measures do not receive uniform confirmation (Barnett & Gotlib, 1988; Nietzel & Harris, 1990; Şahin & Şahin, 1992a). Attempts to revise or develop new measures of autonomy are reported to have been fruitful (Robins, 1990).

The present authors are engaged in a comprehensive research project in this area, which is designed to investigate the cross-cultural applicability of the differential vulnerability theory of Beck et al. (1983) and the constructs of “autonomy” and “sociotropy” in relation to depression. Because testing any theory is a function of the reliability and adequacy of the measurement devices, the first phase of this project was to obtain information on the psychometric properties of the SAS with different samples. Specifically,

answers are sought to questions such as: Will the Sociotropy and Autonomy Scales yield a pattern of relations comparable to those reported in the West? Provided that they do, is it possible to construct alternative measures of autonomy to ameliorate the weaknesses reported in the literature? The present study is a part of this endeavor, which attempts to answer the above-mentioned questions with a clinically depressed sample, including a student sample for purposes of comparison. The more detailed analyses of the psychometric properties of the SAS, applied to larger nonclinical samples, are discussed elsewhere (Şahin & Şahin, 1992d).

Method

Subjects

The subjects were 70 psychiatric inpatients, who were living in Istanbul, and 189 university students, who were living in Ankara. Among the psychiatric patients, 48 (68.6%) were diagnosed as "major depression," and 22 (30.0%) were diagnosed as dysthymic disorder according to DSM-III-R criteria. The age range in the patient group was 16 to 58 years ($M = 28.23$). There were 44 (62.9%) female and 26 (37.1%) male patients, 27.1% of whom had elementary, 34.3% secondary, and 38.6% university-level education; 51.4% were married, 44.3% never had been married, and 4.3% were divorced or widowed. After their initial interview with the clinic psychiatrist, the patients were administered the Beck Depression Inventory (BDI), the Automatic Thoughts Questionnaire (ATQ), the Sociotropy-Autonomy Scale (SAS), and the Dysfunctional Attitude Scale (DAS). The students were drawn from four universities, which represented two different university types (two modern universities, where the language of instruction is English, and two classical universities, where the language of instruction is Turkish) in Ankara, Turkey. Their ages ranged between 17 and 29 years ($M = 21.07$); 95% were unmarried. The students can be categorized into three SES levels (in terms of their fathers' education) as: 41.8% from the lower SES, 26% from the middle SES, and 32.2% from the higher SES. As for their status in the university, 37.5% were freshmen, 11.6% were juniors, 20.6% were sophomores, and 30.3% were seniors. The students were administered the BDI, the SAS, and the DAS during class meetings. Due to time considerations, the ATQ was not administered to the sample of students. None of the students refused to comply. In both applications, the order effect for the scales was controlled by mixing the order in which they were presented to the subjects.

Measures

Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961). This is a 21-item self-report inventory that measures the presence and severity of affective, cognitive, motivational, psychomotor, and vegetative manifestations of depression. Scores range between 0 and 63. The BDI is probably the most widely used instrument in studies related to depression (Beck, Steer, & Garbin, 1988). The psychometric properties of the instrument (1978 version) have been studied in the Turkish culture, and it has been found to have good reliability. (Split-half reliability over the odd- and even-numbered items was $r = .80$, and the Cronbach's alpha was $.74$.) Its concurrent validity with the adapted Turkish version of the MMPI-D ranged between $.63$ and $.50$ on student and psychiatric samples, respectively (Hisli, 1988).

Sociotropy-Autonomy Scale (SAS; Beck et al., 1983). This is a 5-point Likert-type self-report questionnaire composed of 30 sociotropy and 30 autonomy items. The scale

was designed to measure the two relatively stable personality dimensions that can dominate an individual's psychological functioning and can predispose him/her to depression, provided that there is a match between that dimension and the life event. Scores can range between 0 and 120 for each 30-item scale. The SAS is reported to have high levels of internal consistency (alphas range between .89 and .94 for Sociotropy and between .83 and .95 for Autonomy) and test-retest reliability (r_s range between .65 and .88 for Sociotropy and between .66 and .75 for Autonomy) (Beck et al., 1983; Clark et al., 1989; Hammen et al., 1989; Robins & Block 1988).

Factor analysis of the individual scales revealed three factors for each scale. The subscales Concern about Disapproval, Concern over Separation, and Pleasing Others constitute the Sociotropy Scale. The subscales Individual Achievement, Freedom from Control, and Preference for Solitude constitute the Autonomy scale. Studies that employed the SAS have yielded contradictory findings on the relationship between the two dimensions as measured by the items of this scale. While some studies support the theoretical basis of the instrument by reporting negative correlations between sociotropy and autonomy (r_s that range between $-.31$ and $-.11$) (Beck et al., 1983), others question its construct validity by reporting positive correlations that range in magnitudes of .05, .25, and .46 (Gilbert, 1989; Pilon, 1989; Robins et al., 1989). Significant differences were observed between the BDI scores of the high-sociotropic and high-autonomous psychiatric patients; the high-sociotropic group scored higher (Clark, Beck, & Stewart, 1989). However, when a group of patients and students were compared on their autonomy and sociotropy scores, no differences were observed between the autonomy scores, while sociotropy scores were significantly higher for the patient group (Gilbert & Trent, 1991). The correlations with the BDI ranged between .01 and .60 for sociotropy and between $-.10$ and .28 for autonomy (Gilbert & Reynolds, 1990; Gilbert & Trent, 1991; Pilon, 1989; Robins et al., 1989).

Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980). This is a 30-item Likert-type questionnaire developed to measure the frequency of negative automatic thoughts related to depression. The instrument has been used with clinical and student populations. The split-half reliabilities and Cronbach's alphas indicate that it is a reliable instrument. Its correlations with criterion measures, such as the BDI, the MMPI-D scale, the DAS, the STAI, the HDS, and the IS, produced evidence of its validity (Hollon & Kendall, 1980; Hollon, Kendall, & Lumry, 1986).

The psychometric properties of the ATQ were studied previously by the present authors within the Turkish cultural context and were found to be remarkably similar to the results obtained in the literature. The split-half reliability was .91; the Cronbach's alpha was .93. Its correlations with the BDI and the DAS were .75 and .29, respectively. The factor analysis resulted in five factors, namely, Negative Self-concept, Confusion and Escape Fantasies, Personal Maladjustment and Desire for Change, Loneliness/Isolation, and Giving-up/Helplessness (Şahin & Şahin, 1992b). The ATQ was used in the present study as another independent measure of depression, i.e., depressive thoughts.

Dysfunctional Attitude Scale (DAS; Weissman & Beck, 1978): This scale consists of a pair of parallel-form 40-item scales (DAS-A and DAS-B) designed to measure the more stable depressogenic assumptions or beliefs that underlie depression. High internal reliability and high correlations with other cognitive assessment measures, as well as sensitivity to depression, were reported for this scale. The factor analytic studies of the DAS-A revealed four factors in a patient population (Parker, Bradshaw, & Blignault, 1984).

The psychometric properties of the DAS-A also were investigated with Turkish student samples by the authors in a previous study; the scale was found to have satisfactory reliability. The factor analysis revealed four factors: Performance evaluation/social

comparison, Need for approval, Autonomous attitude, and Tentativeness (Şahin & Şahin, 1992a). In the present study, the DAS-A was used as a concurrent vulnerability measure for the SAS.

Results

The findings of the present study will be presented under three separate headings: findings that concern the comparison of the patient and student groups and findings on the patient and student groups separately.

Comparison of the Patient and Student Groups

Table 1 summarizes the comparison of the patient and student groups in terms of the dependent measures. As seen in this table, the two groups differ on all of the dependent measures except the Autonomy scale (SAS-Autonomy) and its two subscales (Freedom from Control/Mobility and Preference for Solitude).

Exactly the same pattern was observed in the one-way comparison among the non-dysphoric students, the dysphoric students, and the depressed patients; the latter scored significantly higher on all measures except the Individual Achievement subscale of the Autonomy measure. On this dimension, the non-dysphoric students scored significantly higher. The Autonomy scale as a total (SAS-Autonomy) and its two subscales, Freedom from Control/Mobility and Preference for Solitude, again failed to discriminate among the three groups (Table 2).

Findings that Concern the Patient Group

The Cronbach's alphas for the sociotropy and autonomy scales in this group were found to be .70 and .81, respectively. The BDI mean ($M = 26.79$, $SD = 10.47$) was similar to

Table 1
Comparison of Depressed Patients and Students over the Dependent Measures

Scales	Patients ($n = 70$)		Students ($n = 189$)		t
	M	SD	M	SD	
BDI	26.79	10.47	10.79	8.63	11.42**
DAS-Total	176.10	28.76	140.48	26.71	9.02**
SAS-Sociotropy	78.97	11.08	67.66	13.16	6.82**
SAS-Autonomy	78.48	13.68	79.19	11.79	.38
Disapproval	24.39	5.97	19.28	6.62	6.20**
Separation	35.34	5.79	31.23	6.78	4.77**
Pleasing	19.15	3.48	17.15	3.45	4.05**
Ind. Achievement	32.04	7.29	33.92	5.38	1.98*
Freedom	29.94	5.56	28.68	4.81	1.65
Solitude	14.18	4.52	14.87	3.87	.31
DAS-Social Comparison	73.40	19.33	54.37	14.32	7.51**
DAS-Approval	55.34	9.14	46.23	10.60	6.81**
DAS-Autonomy	22.30	4.46	17.71	5.06	7.08**
DAS-Tentative	19.44	4.77	17.37	3.84	3.27*

* $p < .05$. ** $p < .01$

Table 2

Comparison of the Non-dysphoric, Dysphoric, and Depressed Groups in Terms of the Dependent Measures

Scales	Non-Dysphoric (<i>n</i> = 103)		Dysphoric (<i>n</i> = 44)		Depressed (<i>n</i> = 70)		<i>F</i> ratio
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
BDI	4.48	2.82	23.75	5.62	26.79	10.47	267.59**
DAS	137.71	27.07	148.25	23.02	176.10	28.26	43.10**
DAS-Social Comparison	53.19	13.82	59.59	14.23	73.40	19.33	33.96**
DAS-Approval	45.33	10.88	47.02	8.94	55.34	9.14	22.00**
DAS-Autonomy	17.56	5.11	18.09	4.30	22.30	4.46	22.23**
SAS-Sociotropy	66.05	12.74	68.70	14.76	78.97	11.08	21.66**
Disapproval	18.48	5.48	20.20	6.02	24.38	5.97	22.17**
Separation	30.57	6.57	31.39	7.48	35.34	5.79	11.27**
Pleasing others	16.99	3.63	17.11	3.38	19.15	3.48	8.32**
SAS-Autonomy	79.50	11.69	80.00	11.57	78.48	13.68	(<i>ns</i>)
Indv. Achievement	34.35	5.65	33.27	5.10	32.04	7.29	2.89*
Freedom	28.73	4.56	29.32	4.82	29.94	5.56	(<i>ns</i>)
Solitude	14.23	3.76	15.07	3.77	14.31	4.61	(<i>ns</i>)

(*df* = 2,537)

p* < .05. *p* < .01.

those found in other studies with patients with major depression (Robins et al., 1989). The means for the Sociotropy ($M = 78.54$, $SD = 11.22$) and Autonomy ($M = 77.60$, $SD = 14.18$) scales were also comparable to those reported in the literature (Beck et al., 1983; Gilbert & Reynolds, 1990; Gilbert & Trent, 1991; Hammen et al., 1989; Robins, 1990). The means for the other scales and the intercorrelations are shown in Table 3.

Table 3

Intercorrelations between Dependent Measures in the Patient Group (*n* = 10)

	DAS	Soc.	Aut.	ATQ	Disapp.	Sepa.	Pleas.
BDI	.30**	.05	-.05	.74**	.20	-.08	-.03
DAS		.24	.16	.35*	.32*	.10	.07
SAS-Sociotropy			.26	.10	.77**	.82**	.53**
SAS-Autonomy				-.12	.29*	.05	.27
ATQ					.31*	-.05	-.15
Disapproval						.40**	.11
Separation							.31*
Pleasing Others							
Indv. Achievement							
Freedom							
Solitude							
DAS-Social Comparison							
DAS-Approval							
DAS-Autonomy							
DAS-Tentative							

p* < .01. *p* < .001.

As seen in Table 3, the intercorrelations between the major scales and their subscales are high and significant; this result replicates those of other studies. However, the correlation between Sociotropy and Autonomy ($r = .26$) is discrepant with the findings of Beck et al. (1983), Pilon (1989), and Robins et al. (1989). These researchers found negative correlations between the two scales, with both student and patient samples. If Beck's differential vulnerability theory holds and "sociotropy" and "autonomy" are two distinct pathways to depression experienced by people with two distinct personality types, then these negative correlations are to be expected. Consequently, the correlations between these major dimensions and the subscales of the opposing dimension also should be negative. Beck et al.'s results have confirmed this hypothesis. However, it was not confirmed by the findings of the present study. The autonomy score was correlated positively with the subscales of the Sociotropy Scale. Similarly, the total sociotropy scores were correlated positively with the subscales of the Autonomy Scale. There are other studies cited in the literature that mention similar positive correlations (Gilbert & Trent, 1991; Robins & Luten, 1989). (See Table 3.)

No gender differences were observed on the dependent measures except on the Concern over Separation subscale of Sociotropy. On this subscale, females scored significantly higher ($M = 36.30$, $SD = 5.27$) compared to males ($M = 30.08$; $SD = 6.21$; $t = 2.21$; $p \leq .05$). A similar gender difference was reported previously on the same scale with university students (Pilon, 1989). The one-way ANOVA revealed that, while the adolescent group scored significantly higher compared to the older patients on the Individual Achievement subscale ($M = 35.95$; $SD = 6.53$; $F[2,69] = 5.59$; $p \leq .01$), the older patients scored significantly higher on the Performance Evaluation/Social Comparison subscale of DAS-A ($M = 80.48$; $SD = 21.54$; $F[2,69] = 3.00$; $p \leq .05$). The one-way ANOVA in terms of education yielded similar differences. The patients with only elementary school education had significantly higher scores on the Concern over Disapproval subscale ($M = 27.00$; $SD = 5.73$; $F[2,69] = 3.17$; $p \leq .05$), whereas the patients with university education scored significantly higher on the Individual Achievement subscale ($M = 34.52$; $SD = 6.62$; $F[2,69] = 3.51$; $p \leq .05$).

Table 3
(continued)

Ach.	Mobil.	Soli.	Per. Eve.	Approval	DAS-Aut.	Tenta.	<i>M</i>	<i>SD</i>
-.08	-.06	.08	.22	.28*	.14	.18	26.79	10.47
.03	.25	.16	.93**	.82**	.24	.35*	176.10	28.76
.04	.46**	.13	.19	.27	-.04	.13	78.54	11.22
.81**	.80**	.72**	.22	.09	-.17	-.04	77.60	14.18
-.18	-.04	-.02	.30*	.27	.16	.17	81.06	25.39
-.02	.50**	.23	.29*	.28*	-.05	.21	24.39	5.97
-.04	.17	-.02	.07	.16	-.08	.09	35.10	5.81
.22	.34*	.07	.02	.12	.06	-.08	19.06	3.45
	.43**	.36*	.06	.08	-.20	-.10	31.70	7.41
		.45**	.34*	.11	-.06	-.09	29.57	5.86
			.19	.06	-.13	.10	14.14	4.58
				.65**	.07	.15	73.40	19.33
					.09	.23	55.34	9.14
						.12	22.30	4.46
							19.44	4.77

Table 4

Intercorrelations between the Dependent Measures for the Student Group ($n = 189$)

	DAS	Soc.	Aut.	Disapp.	Sepa.	Pleas.	Ach.
BDI	.21*	.16	.03	.18*	.12	.07	-.07
DAS		.37**	-.03	.41**	.23**	.30**	-.14
SAS-Sociotropy			-.15	.84**	.89**	.70**	-.24**
SAS-Autonomy				-.15	-.15	-.02	.86**
Disapproval					.57**	.45**	-.27**
Separation						.48**	-.18*
Pleasing others							-.13
Ind. Achievement							
Mobility							
Solitude							
DAS-Social Comparison							
DAS-Approval							
DAS-Autonomy							
DAS-Tentative							

* $p \leq .01$. ** $p \leq .001$.

Findings that Concern the Student Group

Cronbach's alphas for the Sociotropy-Autonomy Scale for this group were found to be .83 and .82, respectively. Significant gender differences appeared on the sociotropy-total (females $M = 69.52$; $SD = 12.28$; males $M = 65.29$; $SD = 13.92$; $t = 2.18$; $p \leq .05$) and its two subscales, Concern over Separation (females' $M = 32.73$; $SD = 6.08$; males' $M = 29.33$; $SD = 7.16$; $t = 3.46$; $p \leq .001$) and Pleasing Others (females' $M = 17.58$; $SD = 3.22$; males' $M = 16.59$; $SD = 3.67$; $t = 1.95$; $p \leq .05$). Females scored significantly higher. No differences were observed between the scores of the students from the modern and classical universities on any of the measures, including the subscales. The one-way ANOVA revealed no significant differences among the scores of the three SES groups except on the Need for Approval subscale of the DAS-A. On this scale, the middle SES group scored significantly higher ($M = 49.69$) compared to the lower SES group ($M = 44.71$, $F = 3.71$, $p \leq .03$).

The students were divided into two extreme groups in terms of their BDI scores. Those who scored 9 and lower on the BDI composed the non-dysphoric group ($n = 103$, $M = 4.48$, $SD = 2.87$), and those who scored 17 and higher ($n = 44$, $M = 23.75$, $SD = 5.62$; $t = 21.57$, $p \leq .0001$) composed the dysphoric group. The extreme group comparisons over the dependent measures revealed significant differences on the Social Comparison/Performance Evaluation subscale and the DAS-A total score: The dysphoric group scored significantly higher. No differences were observed on any of the other measures.

The intercorrelations among the dependent measures are given in Table 4. The correlations between the BDI and the Sociotropy, Autonomy Scales are nonsignificant. A similar pattern was observed with the patient group. However, while the correlation between Autonomy and Sociotropy appeared in the expected direction for the student group ($r = -.15$, ns), which shows the effect of educational level on the sensitivity of the SAS (see Table 4), it was in the unexpected direction for the patient group ($r = .26$, ns). The correlations with BDI in the student group also were insignificant for both the Sociotropy and Autonomy measures, faring better for the Sociotropy Scale. Among the sociotropy measures, the only subscale that correlated significantly with the BDI was Concern over Disapproval.

Table 4
(continued)

Mobil.	Soil.	Per. Eva.	Appr.	DAS-Aut.	Tenta.	<i>M</i>	<i>SD</i>
.07	.06	.23**	.10	.07	.19*	10.83	8.64
.12	-.04	.87**	.79**	.62**	.51**	140.59	26.73
.06	-.16	.22*	.47**	.16	.16	67.77	13.11
.83**	.72**	.10	-.14	-.21*	.01	79.19	11.79
.05	-.14	.32**	.40**	.22*	.19*	29.34	5.58
.02	-.22*	.06	.40**	.07	.09	31.26	6.78
.09	.02	.19*	.36**	.14	.13	17.16	3.45
.57**	.45**	-.05	-.18*	-.27**	-.02	33.97	5.38
	.42**	.21*	-.00	-.08	.03	28.71	4.80
		.07	-.15	-.13	-.01	14.36	3.82
			.48**	.42**	.35**	54.44	14.33
				.42**	.28**	46.28	10.61
					.33**	17.70	5.06
						17.38	3.84

For the sake of replication, both the student and the patient groups were divided into “high sociotropy” and “high autonomy” categories according to Clark et al.’s (1989) cutting scores and were compared in terms of the dependent measures. Subjects with a Sociotropy score greater than 75 and with an Autonomy score less than 72, simultaneously, were labeled as predominantly sociotropic. Conversely, those who scored less than 75 on the Sociotropy Scale and greater than 73 on the Autonomy Scale were labeled as predominantly autonomous. According to these criteria, in the patient group there were 15 sociotropic and 18 autonomous individuals. Within the student group these figures were 12 for sociotropy and 96 for autonomy. No differences between these “preponderance” groups were observed on the dependent measures in the patient sample. Three items of the BDI that came close to differentiating the two groups were: item 9 on suicide (the high autonomous group scored higher), item 18 on sleep problems, and item 20 on physical health (the high sociotropic group scored higher). However, significant differences were observed on the guilt/self-criticism items (items 5, 6, and 8) of the BDI and item 12 on withdrawal; the sociotropic group scored higher on all except the withdrawal item, on which the autonomous group scored higher. The two groups also differed on a different vulnerability measure, the DAS and its two subscales, Need for Approval and DAS-Autonomy: The sociotropic group scored higher on the DAS-total and Need for Approval, and the autonomous group scored higher on the DAS-Autonomy. (Note that the scoring is in the reverse order for the DAS-Autonomy items.)

Regression Analyses

To remove the potential confounding associated with demographic variables (effect of age and education, for example, which appeared significant in several univariate comparisons), we used a hierarchical regression analysis, with the BDI score as the dependent variable. The demographic variables, the Sociotropy subscales, the Autonomy subscales, and the DAS subscales were the predictor blocks entered at successive steps. The order of entry of the predictor blocks was changed systematically. At each step,

increases in the prediction accuracy, as well as the status of individual predictors, were inspected. In this way, the confounding variance could be partialled out from the variables, and they could be evaluated in terms of their relatively unique association with depression. Moreover, by varying the order of entry into the prediction equation, information about the shared variance between the predictor blocks or among the individual predictors could be obtained.

The three demographic variables (age, gender, and education) yielded a multiple correlation $R = .27$ at the first step ($F[3, 249] = 6.41; p \leq .0003$). The three Sociotropy subscales (Concern over Separation, Pleasing Others, Concern over Disapproval) increased this value to $R = .44$ at the second step ($F[6, 246] = 9.90; p \leq .00001$). The incremental R square was significant. At the third step, the three subscales of Autonomy (Achievement, Freedom from Control and Preference for Solitude) were entered into the equation, which raised the cumulative multiple correlation to $R = .46$ ($F[6, 246] = 7.19; p \leq .00001$). The R square change was *not* significant. At the fourth step, the entry of the DAS subscales into the equation raised the cumulative multiple correlation to $R = .54$; the change was significant for this step. After the inclusion of the demographic variables, the change in the order of entry for the predictor blocks resulted in only minor changes in the predictive power associated with each block. In other words, when the demographic variables or the Sociotropy subscales preceded the Autonomy subscales in their order of entry into the equation, the variance in the Autonomy cluster was almost completely partialled out.

Inspection of standard beta weights and the T values associated with individual predictors in different clusters (and in different orders of entry) indicated that among the demographic variables, age and education remained significant in the prediction of depression. Among the Sociotropy cluster, only Concern over Disapproval retained its predictor status in different permutations, while *none* of the variables in the Autonomy cluster appeared significant in any order. Among the DAS subscales, the Performance Evaluation subscale (which is a social comparison factor) stands as a reliable predictor.

Discriminant Analyses

Discriminant analysis reveals regularities in the data that are not entirely captured by other techniques. In discriminant solutions, attention is focused upon unique associations of predictors with the groups defined on the basis of a grouping variable (here, the BDI score). Algorithms in the discriminant functions analysis are set up to maximize these unique associations.

In a direct discriminant solution, which employed 11 variables as predictors of membership in the non-dysphoric, dysphoric, and patient groups, ($N = 211$), the canonical correlation for the retained function was $r = .69$ ($\chi^2(22) = 139.89; p \leq .00001$). Significant univariate F -ratios (based upon Wilk's lambda with $df = 2,208$) were obtained for six of the predictors (Age, DAS-Approval, DAS-Autonomy, DAS-Tentativeness, SAS-Disapproval and SAS-Separation). Overall classification accuracy in the student group (with prior probabilities supplied) was 65% and was higher in the patient group (79%). Classification errors were in the direction of assigning the dysphoric to the patient group.

It should be noted that the SAS-Autonomy measures did not appear among the significant predictors in either the three-group discrimination or in the two-group (nondysphoric and dysphoric) classification. In the case of the discrimination of the dysphoric/non-dysphoric student groups, the Autonomy subscales did not add anything beyond the subject's age and the SES (father's education).

Discussion

The purpose of the present study was stated in the introduction as an attempt to investigate whether the concepts of "sociotropy" and "autonomy" as measured by the SAS were applicable in the Turkish cultural context with depressed patients and students. Our findings, in terms of correlations and independent group comparisons between the patient and student samples, seem to converge with those reported in the literature: Depression is related to sociotropy, but not to autonomy. In this study, the Autonomy scale as a total and its two subscales, Freedom from Control and Preference for Solitude, failed to discriminate between the patient and student groups. The Individual Achievement scale, on the other hand, behaved in the expected direction. This may be due to the characteristics of the student sample. These results are in parallel with the findings mentioned in the literature (Barnett & Gotlib, 1988; Gilbert & Reynolds, 1990; Gilbert & Trent, 1991; Pehl & Gilbert, 1992; Robins, 1990; Robins & Block, 1988; Robins et al., 1989). The Cronbach's alphas and means in both the patient and student groups were comparable to those reported in the literature (Beck et al., 1983; Gilbert, 1989; Gilbert & Trent, 1991; Pilon, 1989; Robins et al., 1989). The tendency of females to receive significantly higher scores on the sociotropy measures also was observed previously in Pilon's (1989) study with 767 university students.

In the present study, the demographic variables that significantly biased the results for both groups were SES and age. This bias on the part of the demographic variables also was found in another study with a different group of 540 students (Şahin & Şahin, 1992c), which suggests that SAS as an instrument that purports to measure the constructs of sociotropy and autonomy is sensitive to demographic changes, especially for the measure of autonomy. Comparisons conducted on the highly sociotropic and highly autonomous groups have revealed different results on the patient and student groups, as well. Part of this discrepancy may be due to small sample sizes in the "preponderance" samples. However, comparisons in terms of the independent measures of vulnerability as measured by the DAS-total score and its subscales testify to the concurrent validity of the SAS among students with higher education. (See Table 5.)

The findings described above are intriguing when taken into consideration in connection with Beck et al.'s (1983) statements on the development of the original SAS. These researchers have pointed out that the normative sample consulted during the scale construction was a mixed diagnostic group of well-educated middle- and upper-middle-class patients. Subsequent research has demonstrated convincingly that the expected pattern of relationships of SAS, particularly those related to Autonomy, could not be replicated in samples that differed in level of education, diagnostic category, social class, and gender. Further investigation into the conceptualization of autonomy through the items presented with the SAS seems necessary (Nietzel & Harris, 1990).

In our efforts to go beyond the simple correlations (which unavoidably are confounded by demographic characteristics) we have engaged in testing the SAS subscales in different multivariate procedures (including the multivariate covariance analyses not reported in this paper). These analyses illuminated slightly different aspects of the pattern of relations among the variables. Multiple regression analyses indicated that, when the variance associated with demographic variables was partialled out from the predictors, none of the SAS-autonomy measures appeared to share a unique variance with depression. This pattern has been replicated consistently in our research with different samples. SAS-Autonomy measures do not stand firm in different statistical controls. However, some Sociotropy measures (especially the Concern over Disapproval) fare better. It is our impression that autonomy as it is conceptualized in the SAS has a strong commonality

Table 5

Comparison of High-sociotropic and High-autonomous Groups on the Dependent Measures and BDI Items

	High sociotropic (<i>n</i> = 15)		High autonomous (<i>n</i> = 18)		<i>t</i> (<i>p</i>)
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Patients					
B9 (suicide)	.60	.63	1.11	1.02	1.76 (.09)
B18 (insomnia)	1.33	1.05	.72	.89	1.78 (.08)
B20 (health)	1.47	1.12	.78	.94	1.88 (.07)
Students	<i>n</i> = 12		<i>n</i> = 96		
BS (guilt)	1.17	.39	.76	.69	3.06**
B6 (punishment)	.92	.67	.51	.75	1.96 (.07)
B8 (self-criticism)	1.00	.60	.57	.66	2.29*
B12 (withdrawal)	.17	.39	.55	.75	2.83**
DAS	156.50	18.81	134.34	28.39	3.60**
DAS-Need for approval	55.33	8.39	42.74	10.45	4.76***
DAS-Autonomy	21.42	4.68	16.82	5.18	3.17**

p* ≤ .05. *p* ≤ .01. ****p* ≤ .001.

with the subject's educational level and the SES. In future studies it would be better to replace the Autonomy Scale with measures more clearly associated with (vulnerability to) depression. The Sociotropy Scale also needs improvement; attempts should be made to improve its sensitivity to depressive experiences. Our efforts in this direction are summarized elsewhere (Şahin & Şahin, 1992d).

This does not rule out the possibility that autonomy is not experienced the same way in real life and/or universally as it is conceptualized in our minds. It is quite conceivable that there is no absolute experience of autonomy, as distinct from sociotropy, but that there are degrees of sociotropy and that these two are nonorthogonal dimensions (Robins & Luten, 1991). In dealing with the conceptualization of autonomy, it might be worthwhile to differentiate the three forms of autonomy as subjective self-reliance, instrumental autonomy (i.e., ability to act upon the world, carry on activities, cope with problems, and take action to meet one's needs on one's own) and emotional autonomy (i.e., freedom from pressing needs for approval and reassurance) and see which one is related to depression. It is our opinion that the first form of autonomy is probably more realistic and may be related negatively to depression. On the other hand, given the assumptions of the social rank theory (Gilbert, in press), it would not be possible to imagine a pure, "emotionally autonomous" individual in real life, who would be immune to the signs of "need for approval and acceptance" coming from the significant people in his/her life. We propose that instrumental autonomy can be represented by the items of the Preference for Solitude subscale of SAS, and, as expected, this subscale emerged as a significant predictor in our regression analyses when the effects of other demographic variables had been partialled out (Şahin & Şahin, 1992d). These alternative conceptualizations remain to be verified by future research.

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