

Personality and Affect Characteristics of Outpatients With Depression

John V. Petrocelli, Brian A. Glaser, Georgia B. Calhoun,
and Linda F. Campbell

*Department of Counseling and Human Development Services
University of Georgia*

This investigation was designed to examine the relationship between depression severity and personality disorders measured by the Millon Clinical Multiaxial Inventory–II (Millon, 1987) and affectivity measured by the Positive Affectivity/Negative Affectivity Schedule (Watson, Clark, & Tellegen, 1988). Discriminant analyses were employed to identify the personality and affective dimensions that maximally discriminate between 4 different levels of depressive severity. Differences between the 4 levels of depressive severity are suggestive of unique patterns of personality characteristics. Discriminant analysis showed that 74.8% of the cases were correctly classified by a single linear discriminant function, and that 61% of the variance in depression severity was accounted for by selected personality and affect variables. Results extend current conceptualizations of comorbidity and are discussed with respect to depression severity.

The comorbidity of depression and personality disorders has long been of interest to researchers (Akiskal, Hirschfeld, & Yerevanian, 1983; Charney, Nelson, & Quinlan, 1981; Shea, Glass, Pilkonis, Watkins, & Docherty, 1987; Zimmerman, Prohl, Coryell, Stangl, & Corenthal, 1988). Before investigations that considered such comorbidity, Weissman, Prusoff, and Klerman (1978) drew attention to how potential personality disorders may be an important component to any plan for treating depression.

Libb, Stankovic, Freeman, et al. (1990) were the first to investigate the use of the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1983) to exclusively examine personality disorders among patients with depression. In particular, Libb, Stankovic, Freeman, et al. (1990) found passive–aggressive, dependent, borderline, and avoidant personalities to be most prevalent among 73 patients with depression.

Typically, depression has been associated with borderline, histrionic, avoidant, dependent, and self-defeating personality disorders (Garyfallos et al., 1999).

However, the relationship between depression and personality disorders has not been entirely clear with respect to Axis I disorders other than depression (Alnæs & Torgersen, 1990). Somatoform, anxiety, or adjustment disorders that coexist with depression tend to produce varying results in regards to the prevalence of personality disorders. Early in this area of investigation, Nystrøm and Lindeård (1975) found that anxiety is more often associated with dependent personality traits than depression. Alnæs and Torgersen (1990) found that among 55 patients with depression, 35% appeared to have borderline traits, whereas 44% appeared to have passive-aggressive traits. However, among 36 patients with mixed depression and anxiety, borderline and passive-aggressive personality traits increased in prevalence to 61% and 69%, respectively. Further personality differences have been found when comparing unipolar and bipolar inpatients with depression (Wetzler, Khadivi, & Oppenheim, 1995). Longer sustained depressive symptomatology has produced varying results in comparison to general depressive episodes (Garyfallos et al., 1999). When considering gender as an independent variable in the examination of personality disorders among individuals with depression, researchers (Carter et al., 1999) have found the frequency of men diagnosed with schizotypal, paranoid, narcissistic, borderline, antisocial, and obsessive-compulsive personality disorders to be almost double that of women.

Although much of the research on personality disorders and depression has been limited to the frequency of diagnoses or symptoms of personality disorders among individuals with depression, little is known about the dimensions shared between depression and particular personality disorders with respect to depression severity. Kool et al. (2000) conducted one of the few studies that focused specifically on the relationship between Axis II disorders and depression among outpatients. Kool et al. employed the Hamilton Depression Rating Scale (Hamilton, 1967) and the Depression Symptoms subscale of the Symptom Check List-90-Revised (Derogatis, 1983) to assess depression severity and found weak correlations between depression and almost each of the 13 personality disorders they studied.

The primary purpose of this investigation was twofold. We wished to identify the personality characteristics and affectivity unique to individuals with respect to four different levels of depression severity. We also wanted to indicate the degree of accuracy to which individuals with depression could be classified into their respective severity group as a function of their unique characteristics. Thus, we first examined the relationship between depression severity and personality disorders, and the essential differences between outpatients with no depression, mild depression, moderate depression, and severe depression among MCMI-II personality dimensions and measures of both positive and negative affectivity. Second, we

employed a descriptive and predictive discriminant analysis (Huberty, 1984, 1994) to examine the degree to which an emerged function of essential dimensions correctly identified the four levels of depressive severity.

Using the Beck Depression Inventory (BDI; Beck, Rush, Shaw, & Emery, 1979) to assess the severity of depression in our outpatient sample, we hypothesized that particular personality disorders (such as borderline, histrionic, avoidant, dependent, and self-defeating) would be moderately to strongly correlated with depression severity. Second, we hypothesized that each level of depression severity would have its own unique pattern of personality characteristics according to the MCMI-II. Last, we expected such unique patterns of personality characteristics to emerge as a linear discriminant function, which could be used to classify depressive severity groups at a rate greater than expected by chance.

In line with Weissman et al. (1978) and others' (Everly, 1995; Retzlaff, 1995, 1997) contention that personality disorders are important to consider, even for the planning of treatment for Axis I disorders, this investigation provides specific information for patients with depression with respect to their degree of depression severity.

METHOD

Participants

One-hundred thirty-nine (97 women and 42 men) outpatients receiving psychotherapy treatments through a university-based training center participated in the this study. The sample was 94.3% White, 4.3 % African American, 0.7% Hispanic, and 0.7% American Indian, with a mean age of 28.95 years ($SD = 7.80$, range = 18 to 52). All participants gave informed consent.

Instruments

MCMI-II. The MCMI-II is a standardized, self-report inventory consisting of 175 true-false statements that assess a wide range of information in regards to an individual's personality, emotional adjustment, and attitude. The entire inventory consists of four modifying indexes that serve as validity measures, 10 clinical personality pattern scales, 3 severe personality pathology scales, 6 clinical syndrome scales, and 3 severe syndrome scales. The inventory is unique in that it focuses on personality disorders and the symptoms associated with them. The MCMI-II was chosen to identify personality patterns across four levels of depression severity, not only to test hypotheses but because it remains perhaps the most reliable of all major personality disorder inventories (Dyer, 1997). It is the only major personality disorder inventory with documented internal consistency

above .80 for all scales (Millon, 1987). Results of factor analytic studies have supported the scale structure and suggested particular subtypes (Choca, Shanley, & Van Denburg, 1996; Hyer, Brandsma, & Boyd, 1997; McCann, 1991; Retzlaff, 1997; Retzlaff, Lorr, Hyer, & Ofman, 1991). Raw scores are converted to base rate (BR) scores to interpret the relative clinical meaning of profiles. Clinically meaningful BR ranges have been identified; however, BR scores at or below 60 are rarely interpreted (Millon, 1987). BR scores of 85 and above signify the "most prominent" disorder, 75 to 84 indicate "moderate" or the "presence of characteristics" of the disorder, and 60 to 74 reflect "mild" or "some of the traits" defined by the scale. We utilized only the clinical personality pattern and severe personality pathology scales.

PANAS. The Positive Affectivity/Negative Affectivity Schedule (PANAS; Watson, Clark, & Tellegen, 1988) consists of 20 words that describe different feelings and emotions. Respondents are asked to describe to what extent they have felt a certain way during the past week by rating each word on a 5-point Likert scale ranging from 1 (*very slightly or not at all*) to 5 (*extremely*). The scale produces two subscale scores: one for positive affect (PA) and the other for negative affect (NA). Positive affectivity represents an individual's tendency to feel enthusiastic, active, and alert; negative affectivity refers to a dimension reflecting subjective distress and unpleasant engagement. Tellegen (1985) reported that PA and NA are factors that represent affective trait dimensions of positive and negative emotionality (individual differences in positive and negative reactivity). A number of research studies have reported a relationship between PA, social activity, and satisfaction (Clark & Watson, 1988; Watson et al., 1988), whereas NA has been associated with self-reported stress and poor coping (Clark & Watson, 1988; Kanner, Coyne, Schaefer, & Lazarus, 1981). The PANAS scales have demonstrated high internal consistency and stability at appropriate levels over a 2-month time period; PA coefficient alphas have ranged from .86 to .90, and NA coefficient alphas have ranged from .84 to .87 (Watson et al., 1988).

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

Procedure

The administration of the assessment measures was conducted during an outpatient intake session for each participant. Each participant was asked to complete an informed consent, the MCMI–II, PANAS, and BDI.

Before data was examined, participants were categorized into one of four groups (no depression, mild depression, moderate depression, and severe depression) by their respective results on the BDI.

RESULTS

Preliminary Analyses

To test our first hypothesis, we computed Pearson product–moment correlations between depression severity and MCMI–II personality disorders. This hypothesis was only partially confirmed. Borderline, avoidant, and self-defeating personality disorders did have strong relationships with depression severity, but histrionic and dependent personality disorders did not. We also found moderate relationships between depression severity and passive–aggressive and schizotypal personality disorders as well as a strong negative relationship with positive affectivity and a strong positive relationship with negative affectivity. Correlations are displayed in Table 1.

To examine whether unique patterns of personality disorders exist among the four levels of depression severity, we employed an analysis of variance (ANOVA) test for each of the 13 personality disorders measured by the MCMI–II and the two subscales of the PANAS. Although correlation results represent the relationship between depression and personality and affect, analyzing the four groups separately also allows for the examination of group means that did or did not reach BR scores within a clinically significant range. Statistically significant results were found among 8 of the 13 personality disorders and both positive and negative affectivity. BR means, standard deviations, and results of ANOVAs are displayed in Table 2.

The majority of planned comparison tests revealed mean BR differences between patients with no depression/mild depression and moderate depression/severe depression. With respect to recommended BR interpretations, our second hypothesis was only partially confirmed. The group with no depression as well as the group with mild depression, did not appear to have any personality disorders in the moderate or presence of characteristics range. Thus, there is little evidence to suggest that the groups with no depression and mild depression obtained unique patterns of personality disorders. As was expected, the group with no depression

TABLE 1
Correlations Between MCMI-II Clinical Personality Scales, PANAS Scales
and the BDI

<i>Scale</i>	<i>BDI</i>
1 (Schizoid)	.31*
2 (Avoidant)	.59*
3 (Dependent)	.25*
4 (Histrionic)	-.10
5 (Narcissistic)	-.12
6 (Antisocial)	.09
6A (Aggressive)	.11
7 (Compulsive)	.09
8A (Passive-Aggressive)	.42*
8B (Self-Defeating)	.62*
S (Schizotypal)	.48*
C (Borderline)	.57*
P (Paranoid)	.24*
Positive Affect	-.52*
Negative Affect	.63*

Note. $N = 139$. MCMI-II = Millon Clinical Multiaxial Inventory-II; PANAS = Positive Affectivity/Negative Affectivity Schedule; BDI = Beck Depression Inventory.

* $p < .01$.

had a significantly greater score on the positive affect scale and lower score on the negative affect scale. However, the group with moderate depression appeared to have moderate levels of avoidant and self-defeating personality disorders. The group with severe depression also appeared to have avoidant and self-defeating personality disorder components, yet their levels fell in the most prominent range; they also appeared to have prominent levels of passive-aggressive and borderline personality disorders and a moderate level of schizotypal personality disorder. Also as expected, the group with severe depression had a significantly lower score on the positive affect scale and a greater score on the negative affect scale.

In addition, the findings of Carter et al. (1999) were not ignored. Thus, we also employed a 2 (gender: male and female) \times 4 (depressive severity: nondepressed, mildly depressed, moderately depressed, and severely depressed) two-way ANOVA for each of the 13 MCMI-II personality disorders. Main effects were found for gender among schizoid, antisocial, aggressive, and histrionic personality disorders. For the schizoid scale, men ($M = 60.76$, $SD = 23.88$) scored significantly greater than women ($M = 49.70$, $SD = 28.10$), $F(1, 131) = 5.31$, $p < .03$. The same was true for antisocial and aggressive-sadistic: men ($M = 65.45$, $SD = 17.24$; $M = 65.57$, $SD = 19.49$), and women ($M = 52.94$, $SD = 23.62$; $M = 51.05$, $SD = 26.91$), $F(1, 131) = 4.76$, $p < .05$; $F(1, 131) = 6.18$, $p < .05$, respectively. Women ($M = 69.53$, $SD = 22.97$) scored significantly greater than men ($M = 57.38$, $SD = 23.67$)

on the histrionic scale $F(1, 131) = 7.72, p < .01$. None of these findings were qualified by an interaction between gender and the group with severe depression. Thus, the relationship between personality disorders and gender were similar for each level of depressive severity. However, because the 2×4 ANOVAs were not provided with ideal sample sizes for each cell, point biserial correlations involving gender of participant were also examined. These correlations revealed that gender was only weakly related to personality and affect characteristics of outpatients with depression. Specifically, at the .05 level of significance, gender was related to schizoid personality, $r = -.19$; histrionic personality, $r = .24$; antisocial personality, $r = -.25$; and aggressive-sadistic personality, $r = -.26$. Again, men reported higher levels of schizoid, antisocial, and aggressive-sadistic personality and lower levels of histrionic personality in general than did women.

Among BDI scores, an independent t test was not statistically significant for gender, $t(137) = 1.65, p = .10$. Finally, chi-square analyses did not suggest disproportionate frequencies among gender for the four depressive severity groups, $\chi^2(2, N = 139) = 4.04, p = .13$.

TABLE 2
Means and Standard Deviations of MCMI-II Personality Scales and PANAS Scales
by Depression Severity

Scale	Nondepressed ^a		Mild ^b		Moderate ^c		Severe ^d		F
	M	SD	M	SD	M	SD	M	SD	
1 (Schizoid)	47.49 _a	27.11	47.56 _{a,b}	28.96	63.93 _{b,c}	22.56	68.64 _c	21.01	4.75**
2 (Avoidant)	50.02 _a	22.27	62.26 _a	28.36	78.34 _b	19.18	92.36 _b	18.43	17.78***
3 (Dependent)	51.83 _a	31.88	54.54	32.97	70.34 _b	30.77	72.71	18.62	3.53*
4 (Histrionic)	66.22	21.67	68.10	23.07	64.28	26.25	61.92	30.11	.29
5 (Narcissistic)	59.88	24.62	64.21	29.36	51.31	30.62	54.57	26.16	1.37
6 (Antisocial)	54.33	23.27	61.07	19.31	50.58	23.04	66.79	23.88	2.41
6A (Aggressive)	50.78	23.73	58.44	30.59	56.07	25.43	64.78	16.60	1.46
7 (Compulsive)	47.61	23.67	51.00	22.33	54.76	26.65	52.14	26.66	0.60
8A (Passive-Aggressive)	46.73 _a	28.80	63.10 _b	30.85	67.79 _b	24.83	91.57 _c	22.77	11.17***
8B (Self-Defeating)	45.22 _a	25.15	65.10 _b	20.66	79.45 _c	19.44	95.00 _c	18.18	27.61***
S (Schizotypal)	46.64 _a	15.93	51.97 _b	19.89	60.14 _{b,c}	14.72	74.28 _c	22.70	10.94***
C (Borderline)	47.76 _a	20.44	59.10 _b	12.84	67.07 _b	13.22	88.43 _c	20.52	23.99***
P (Paranoid)	49.64	17.68	56.82	15.25	57.55	11.51	61.57	16.36	3.44*
Positive Affect	32.77 _a	6.17	24.82 _b	6.68	25.10 _b	8.50	19.85 _b	5.89	20.56***
Negative Affect	20.98 _a	6.41	27.66 _b	8.22	30.96 _{b,c}	6.00	35.64 _c	7.11	24.35***

Note. $N = 139$. MCMI-II = Millon Clinical Multiaxial Inventory-II; PANAS = Positive Affectivity/Negative Affectivity Schedule. Means in the same row with different subscripts are significantly different at $p < .05$ in the Tukey honestly significant difference comparison.

^a $n = 58$. ^b $n = 39$. ^c $n = 28$. ^d $n = 14$.

TABLE 3
Correlation of Predictor Variables With Discriminant Function and Standardized
Discriminant Function Coefficient

<i>Predictor Variable</i>	<i>Correlation With Discriminant Function</i>	<i>Standardized Discriminant Function Coefficient</i>
Schizoid	.21	.22
Avoidant	.49	-.03
Dependent	.21	-.22
Passive-Aggressive	.39	-.36
Self-Defeating	.63	.51
Schizotypal	.38	-.06
Borderline	.57	.31
Paranoid	.23	.31
Positive Affect	-.53	-.56
Negative Affect	.58	.54

Discriminant Analysis of MCMI-II and PANAS Subscales

When it is necessary to categorize participants into groups or categories that will be predicted by a combination of variables, discriminant analyses are frequently employed (Betz, 1987; Huberty, 1984). One advantage of using discriminant analyses is that information about the dimensionality of group differences is provided while statistically controlling for each predictor simultaneously. In this investigation, it was necessary to categorize participants into four groups. To examine the data by employing regression analyses would have misrepresented (enhanced) the relationships studied, due to the 58 participants with no depression who also did not appear to possess any Axis II symptomatology. The between-group differences reported previously also suggest that the four groups are qualitatively different. Therefore, in an effort to conduct an unbiased examination of the data, we employed both a descriptive and predictive discriminant analysis when testing our last hypothesis.

Only those variables that reached statistical significance in the ANOVAs were used as predictor variables. The results of the descriptive discriminant analysis revealed the emergence of one significant linear discriminant function: Wilks's $\Lambda = .313$; $\chi^2(30, N = 139) = 152.12, p < .001$; eigenvalue = 1.58; canonical correlation = .78. Taken collectively, salient loadings (i.e., $\geq |.40|$) for the function indicated avoidant, self-defeating, borderline, positive affect, and negative affect dimensions (see Table 3).

Using predictive discriminant analysis, we found that 74.8% of the cases were correctly classified in terms of the group with severe depression as a function of the selected MCMI-II and PANAS scales (see Table 4). Cohen's kappa coefficient between the predicted and actual group membership was .63, $p < .001$. Five stan-

TABLE 4
Classification Analysis for Depression Severity

Actual Severity Group Membership	Predicted Severity Group Membership							
	1		2		3		4	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1. Nondepressed ^a	52	89.7	4	6.9	2	3.4	0	0.0
2. Mildly depressed ^b	11	28.2	24	61.5	3	7.7	1	2.6
3. Moderately depressed ^c	1	3.6	8	28.6	18	64.3	1	3.6
4. Severely depressed ^d	1	7.1	2	14.3	1	7.1	10	71.4

Note. Overall percentage of correctly classified cases = 74.8%.

^a*n* = 58. ^b*n* = 39. ^c*n* = 28. ^d*n* = 14.

dard normal statistics (Huberty, 1994) were also computed to find whether the observed classification accuracy was better than what may be expected by chance for each group and the entire sample. These statistics are calculated using estimated prior probabilities, group participant sizes, and observed frequencies. The prior probability of the group with no depression was .42, and the percentage of participants with no depression correctly classified was 89.7%, $z = 7.35$, $p < .001$. For the group with mild depression, the prior probability was .28, whereas the percentage of participants with mild depression correctly classified was 61.5%, $z = 4.66$, $p < .001$. The prior probability of the group with moderate depression was .20, and the percentage of participants with moderate depression correctly classified was 64.3%, $z = 5.85$, $p < .001$. The prior probability of the group with severe depression was .10, and the percentage of participants with severe depression correctly classified was 71.4%, $z = 7.66$, $p < .001$. For the entire sample, where .60 was held as the estimated prior probability, 74.8% of the cases were correctly classified, $z = 3.57$, $p < .01$. These findings provide support for our final hypothesis by suggesting that the obtained classification results greatly exceeded chance probability.

DISCUSSION

This investigation was designed to examine the relationship between depression severity and personality disorders measured by the MCMI-II and affectivity measured by the PANAS. In addition, discriminant analyses were employed to identify the personality and affective dimensions that maximally discriminate between four different levels of depressive severity. The relationship between personality disorders and depression, with respect to severity, is not only important for the treatment of depression but for current theory and research.

Despite Kool et al.'s (2000) findings, we considered previous research (Carter et al. 1999; Garyfallos et al., 1999; Libb, Stankovic, Freeman, et al., 1990; Schuller,

Bagby, Levitt, & Joffe, 1993; Southwick, Yehuda, & Giller, 1995; Western et al., 1992; Wetzler et al., 1995) that indicated significant relationships between depression and the prevalence of borderline, histrionic, avoidant, dependent, and self-defeating personality disorders when forming our hypotheses. Previous research has identified several significant relationships, but they may not be as useful as those from a categorical perspective. Further research that focuses on a continuous approach may contribute to this area of investigation by employing multiple regression or discriminant analyses to control for relationships that may exist between the personality disorders themselves. Discriminant analyses may also be more appropriate for investigating nonlinear relations (Huberty, 1994).

Our second hypothesis, that unique patterns of personality and affectivity would emerge with respect to depression severity, was tested. Unique patterns were found for both patients with severe and mild depression. Examining the group BR means, note that clinical significance was not met on four of the eight statistically significant personality disorder scales. The clinically significant personality differences found here centered on the avoidant, passive-aggressive, self-defeating, and borderline personalities. Examining the means of the PANAS scales indicated that much of the clinically significant difference between the four groups rests on their affect.

However, we wanted to identify the most important components of such patterns and discover the degree of accuracy to which they could be used to statistically predict depression severity. Thus, we employed discriminant analyses to examine our last hypothesis. Among personality disorders, avoidant, self-defeating, and borderline were the most important predictors involved in discriminating among the four degrees of depressive severity. Both positive and negative affectivity also proved essential in producing a degree of accuracy that was greater than was expected by chance. The canonical correlation of the emerged function (squared, an effect size similar to that of the R^2 in a regression) revealed that 61% of the total variance in depression was accounted for by the differences between the groups among the 10 discriminant predictor variables.

The self-defeating personality is often conceptualized as involving an individual's tendency to involve him- or herself in victim-bound situations in addition to self-blame. Such characteristics may be manifested through thoughts, motives, and emotions. One with a self-defeating personality may also present him- or herself as inferior and undeserving of pleasure or happiness and tends to invite exploitation from relationships with others. The avoidant personality is characterized by a tendency to allow intense fears of being rejected or humiliated to inhibit much desired acceptance and involvement with other people. One with an avoidant personality may feel inadequate or become preoccupied with negative evaluation. Instability and unpredictability of self-image and mood tends to be the core characteristics of the presentation of the individual with borderline personality disorder. Such an individual may also actively avoid real or imagined abandonment

while experiencing chronic feelings of emptiness (American Psychiatric Association, 1994; Millon, 1987). Considering such symptomatology, it is little wonder why such personality disorders may have strong relationships with depression. However, what appears common across these three personality disorders deserves more empirical attention regarding the specific components of personality disorders that are strongly related to depression.

Some concern about the stability of the MCMI (Millon, 1983) has been encountered among the assessment of patients with depression (Libb, Stankovic, Sokol, et al., 1990). Libb, Stankovic, Freeman, et al. (1990) found significant decreases in schizoid, avoidant, passive-aggressive, and borderline scores and significant increases in narcissistic and compulsive scores after 12 weeks of treatment for 28 patients with depression. The issues as to whether updated versions of the MCMI have encountered similar reliability concerns, or if personality disorders measured by it are not as stable as was once thought, have yet to be studied. Our results may suggest that personality disorders may be important to consider, especially among patients with moderate or severe depression. However, as Alnæs and Torgersen (1990) contended, Axis I disorders other than depression are also likely to coexist with personality disorders. At this point, the role of severity among the association of personality disorders and other symptomatology is largely unknown.

An obvious implication of this study may be found among the results of the participants with mild depression. Personality disorders, often thought to be associated with depression irrespective of severity, may not be prevalent for the patient with mild depression. However, with respect to the notion that the severity of depression follows a developmental process (Beck et al., 1979; Young, 1990); the variance of our sample means; the implications inherent in Libb, Stankovic, Freeman, et al.'s (1990) study; and the long-standing knowledge that patients with depression are more dependent, obsessive, introverted, and lack self-confidence and assertiveness, personality disorders may be more prevalent for patients with mild depression than is indicated by this study. Such reasoning calls into question, once again, the stability of personality traits measured by the MCMI-II and certainly warrants more empirical investigation in this area of study.

Other limitations of this study involve the lack of diversity among the characteristics of the sample as well as with other Axis I symptomatology. The examination of depressive severity group BR standard deviations suggests that the derived means of the sample may be a poor indicator of personality disorder severity. Subsequent investigations that adopt the same methodology employed here may extend these findings by recruiting larger samples. Larger samples may also better address the problem with cultural or racial representation lacking here. Finally, replication using current diagnostic standards, such as the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) that may be more appropriately measured by the MCMI-III (Millon, Millon, & Davis, 1994) is warranted.

Past research in this area has been overly inclusive by ignoring the level of depression severity when examining the prevalence of personality disorders among individuals with and without depression. Here, we found that the level of depressive severity does make a difference when examining the personality characteristics of outpatients with depression. Not only do there appear to be unique patterns of personality characteristics among individuals with mild, moderate, and severe depression, but these patterns also appear to play essential roles in the differences among the four groups by serving as accurate predictors of depressive severity.

REFERENCES

- Akiskal, H. S., Hirschfeld, R. M. A., & Yerevanian, B. I. (1983). The relationship of personality to affective disorders: A critical review. *Archives of General Psychiatry*, *40*, 801–810.
- Alnæs, R., & Torgersen, S. (1990). MCMI personality disorders among patients with major depression with and without anxiety disorders. *Journal of Personality Disorders*, *4*, 141–149.
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive therapy of depression*. New York: Guilford.
- Beck, A. T., Steer, R. A., & Garbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, *8*, 77–100.
- Betz, N. E. (1987). Use of discriminant analysis in counseling psychology research. *Journal of Counseling Psychology*, *34*, 393–403.
- Carter, J. D., Clin, D., Joyce, P. R., Mulder, R. T., Sullivan, P. F., & Luty, S. E. (1999). Gender differences in the frequency of personality disorders in depressed outpatients. *Journal of Personality Disorders*, *13*, 67–74.
- Charney, D. S., Nelson, J. C., & Quinlan, D. M. (1981). Personality traits and disorder in depression. *American Journal of Psychiatry*, *138*, 1601–1604.
- Choca, J. P., Shanley, L. A., & Van Denburg, E. (1996). *Interpretive guide to the Millon Clinical Multiaxial Inventory* (2nd ed.). Washington, DC: American Psychological Association.
- Clark, L. A., & Watson, D. (1988). Mood and the mundane: Relations between daily life events and self-reported mood. *Journal of Personality and Social Psychology*, *54*, 296–308.
- Derogatis, L. (1983). *SCL-90-R administration, scoring and procedures manual—II for the revised version and other instruments of the Psychopathology Rating Scale series*. Townson, MD: Clinical Psychometric Research.
- Dyer, F. J. (1997). Application of the Millon inventories in forensic psychology. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 124–139). New York: Guilford.
- Everly, G. (1995). Domain oriented personality theory. In P. Retzlaff (Ed.), *Tactical psychotherapy of the personality disorders: An MCMI-III based approach* (pp. 24–39). Needham Heights, MA: Allyn & Bacon.
- Garyfallos, G., Adamopoulou, A., Karastergiou, A., Voikli, M., Sotiropoulou, A., Donias, S., Giouzevas, J., & Paraschos, A. (1999). Personality disorders in dysthymia and major depression. *Acta Psychiatrica Scandinavica*, *99*, 332–340.
- Hamilton, M. (1967). Development of a rating scale for primary depressive illness. *British Journal of Social Clinical Psychology*, *6*, 278–296.
- Huberty, C. J. (1984). Issues in the use and interpretation of discriminant analysis. *Psychological Bulletin*, *95*, 156–171.

- Huberty, C. J. (1994). *Applied discriminant analysis*. New York: Wiley.
- Hyer, L., Brandsma, J., & Boyd, S. (1997). The MCMI and posttraumatic stress disorder. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 191–216). New York: Guilford.
- Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress management: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine*, *4*, 1–39.
- Kool, S., Dekker, J., Duijnsens, I., De Jonghe, F., De Jong, P., & Schouws, S. (2000). Personality disorders and social functioning in depressed patients. *Social Behavior and Personality*, *28*, 163–176.
- Libb, J. W., Stankovic, S., Freeman, A., Sokol, R., Switzer, P., & Houck, C. (1990). Personality disorders among depressed outpatients as identified by the MCMI. *Journal of Clinical Psychology*, *46*, 277–284.
- Libb, J. W., Stankovic, S., Sokol, R., Freeman, A., Houck, C., & Switzer, P. (1990). Stability of the MCMI among depressed psychiatric outpatients. *Journal of Personality Disorders*, *55*, 209–218.
- McCann, J. T. (1991). Convergent and discriminant validity of the MCMI–II and MMPI personality disorder scales. *Psychological Assessment*, *3*, 9–18.
- Millon, T. (1983). *Millon Clinical Multiaxial Inventory manual*. Minneapolis: Interpretive Scoring Systems.
- Millon, T. (1987). *Millon Clinical Multiaxial Inventory–II manual* (2nd ed.). Minneapolis, MN: National Computer Systems.
- Millon, T., Millon, C., & Davis, R. (1994). *Millon Clinical Multiaxial Inventory–III manual*. Minneapolis, MN: National Computer Systems.
- Nyström, S., & Lindeård, B. (1975). Predisposition for mental syndromes: A study comparing predisposition for depression, neurasthenia and anxiety state. *Acta Psychiatrica Scandinavica*, *51*, 69–76.
- Retzlaff, P. (Ed.). (1995). *Tactical psychotherapy of the personality disorders: An MCMI–III based approach*. Needham Heights, MA: Allyn & Bacon.
- Retzlaff, P. (1997). The MCMI as a treatment planning tool. In T. Millon (Ed.), *The Millon inventories: Clinical and personality assessment* (pp. 217–244). New York: Guilford.
- Retzlaff, P. D., Lorr, M., Hyer, L., & Ofman, P. (1991). An MCMI–II item-level component analysis: Personality and clinical factors. *Journal of Personality Assessment*, *57*, 323–334.
- Schuller, D. B., Bagby, M., Levitt, A. J., & Joffe, R. T. (1993). A comparison of personality characteristics of seasonal and nonseasonal major depression. *Comprehensive Psychiatry*, *34*, 360–362.
- Shea, M. T., Glass, D. R., Pilkonis, P. A., Watkins, J., & Docherty, J. P. (1987). Frequency and implications of personality disorders in a sample of depressed outpatients. *Journal of Personality Disorders*, *1*, 27–42.
- Southwick, S. M., Yehuda, R., & Giller, E. L. (1995). Psychological dimensions of depression in borderline personality disorder. *American Journal of Psychiatry*, *152*, 789–791.
- Tellegen, A. (1985). Structure of mood and personality and their relationship to assessing anxiety on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681–706). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.
- Weissman, M. M., Prusoff, B. A., & Klerman, G. L. (1978). Personality and the prediction of long-term outcome of depression. *American Journal of Psychiatry*, *135*, 797–800.
- Western, D., Moses, M. J., Silk, K. R., Lohr, N. E., Cohen, R., & Segal, H. (1992). Quality of depressive experience in borderline personality disorder and major depression: When depression is not just depression. *Journal of Personality Disorders*, *6*, 382–393.
- Wetzler, S., Khadivi, A., & Oppenheim, S. (1995). The psychological assessment of depression: Unipolars versus bipolars. *Journal of Personality Assessment*, *65*, 557–566.

- Young, J. E. (1990). *Cognitive therapy for personality disorders: A schema-focused approach*. Sarasota, FL: Professional Resource Exchange.
- Zimmerman, M., Prohl, B., Coryell, W., Stangl, D., & Corenthal, C. (1988). Diagnosing personality disorder in depressed patients. *Archives of General Psychiatry*, 45, 733–737.

John V. Petrocelli
Department of Counseling and Human Development Services
University of Georgia
402 Aderhold Hall
Athens, GA 30602
E-mail: jpetroce@coe.uga.edu

Received October 12, 2000
Revised December 7, 2000