Broad and Specific Personality Dimensions Associated With Major Depression in a Nationally Representative Sample

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Separate lines of research using select study groups have identified both broad (neuroticism, extraversion) and specific (self-criticism, interpersonal dependency) personality dimensions associated with major depression. The current study sought to extend research on personality and depression to a large, nationally representative sample. Participants were from the National Comorbidity Survey Part II (N = 5,877). A detailed psychosocial battery that included items from established indices of neuroticism, extraversion, self-criticism, and three facets of interpersonal dependency was administered to all respondents. Separate regression analyses indicated that each of the personality dimensions was significantly associated with lifetime major depression. In a hierarchical multivariate regression analysis that controlled for sociodemographic variables, history of anxiety disorders, alcohol or substance abuse or dependence, dysthymic disorder, and current emotional distress, self-criticism was the only personality dimension that remained significantly associated with major depression. The inclusion of self-criticism also significantly improved the overall statistical model. Results from this nationally representative mental health survey indicate that self-criticism is robustly associated with major depression.

Enns and Cox2 reviewed research on both higher-order and lower-order personality dimensions in relation to depression. Among the most promising of the higher-order personality domains were neuroticism and extraversion. Neuroticism refers to a broad temperamental sensitivity to negative stimuli and tendency to experience a range of negative affective states.5,8,9 It has robust, but generally nonspecific associations with a variety of distress disorders, including major depression. A higher-order personality dimension that is thought to be more uniquely associated with major depression is (low) extraversion. Extraversion is a stable, heritable, and broad temperamental dimension that is characterized by positive emotionality and high energy.5,8,9 The combination of high neuroticism and low extraversion appears to characterize depressed patients.10 This personality combination is also a major cornerstone of the empirically supported, tripartite model of personality dimensions in depression and anxiety.11

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THE ROLE of personality dimensions in major depression has long been of interest to psychopathology researchers.1,2 Within this substantial body of literature a distinction can be made between research efforts that seek to understand broad, highly heritable personality dimensions such as neuroticism,3 and research on more specific personality traits believed to be related to depression (e.g., interpersonal dependency). In hierarchical models of personality,4-6 the specific personality factors are thought to represent lower-order “surface” traits that are in turn nested within the higher-order broad personality dimensions or source traits. Although associations between personality and depression may appear stronger when both lower-order and higher-order personality dimensions are examined in combination,6 there is also evidence of redundancy in some of these factors in depressed patients.7 It is therefore important to simultaneously examine the relative contributions of both levels of the personality hierarchy when attempting to understand their relationship with psychopathology. There is a need to demonstrate the unique contribution or incremental validity of lower-order specific surface traits over the broad source traits in which they are nested.

Enns and Cox2 reviewed research on both higher-order and lower-order personality dimensions in relation to depression. Among the most promising of the higher-order personality domains were neuroticism and extraversion. Neuroticism refers to a broad temperamental sensitivity to negative stimuli and tendency to experience a range of negative affective states.5,8,9 It has robust, but generally nonspecific associations with a variety of distress disorders, including major depression. A higher-order personality dimension that is thought to be more uniquely associated with major depression is (low) extraversion. Extraversion is a stable, heritable, and broad temperamental dimension that is characterized by positive emotionality and high energy.5,8,9 The combination of high neuroticism and low extraversion appears to characterize depressed patients.10 This personality combination is also a major cornerstone of the empirically supported, tripartite model of personality dimensions in depression and anxiety.11

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personal failure. Self-criticism is strongly related to clinical depression, remains stable and elevated in recovered depressed patients, and was associated with negative treatment outcome for depression across a range of modalities (i.e., pharmacotherapy, cognitive therapy, and interpersonal therapy).

Excessive interpersonal dependency consists of beliefs about the need to rely upon valued other people. Behavior is often structured to please others and to avoid disapproval. Dimensions of interpersonal dependency reflecting emotional reliance on another person and lack of social self-confidence appear to be particularly stable and linked to depression.

In their review, Enns and Cox noted that most of the findings on personality and depression were based on select samples of clinical patients or high-risk groups (e.g., offspring of a depressed parent). In particular, there is a paucity of research on personality and major depression in population-based, representative samples. In addition to extending the validity of clinical observations to the general population, this type of research is needed to provide the population-based perspective that is necessary for public health initiatives such as early intervention and secondary prevention efforts in the community. In this context, the National Comorbidity Survey (NCS) offers a unique opportunity to overcome several limitations in the extant literature on personality and depression.

The NCS was a large (N = 8,098), nationally representative mental health survey of the US population ranging in age from 15 to 54 years. The NCS obtained a high response rate (82.4%) and included detailed and reliable diagnostic interviews to capture DSM-III-R psychiatric disorders. Part II of the NCS (N = 5,877, 99% response rate from Part I) was administered to a large subsample in the survey and involved an extensive psychosocial battery. This assessment incorporated sets of items to assess broad personality domains (including neuroticism and extraversion) and specific personality dimensions (including self-criticism and interpersonal dependency). Although its cross-sectional design does not permit causal inferences, the breadth and scope of the NCS has facilitated several studies of relationships between psychosocial factors and psychopathology such as childhood adversity and parental bonding experiences.

The purpose of the present study was to use the NCS to evaluate associations of broad and specific personality dimensions with lifetime occurrence of major depression after controlling for a number of sociodemographic and psychiatric variables related to depression. In their review, Enns and Cox stressed the need for research on personality and depression to move toward simultaneous examination of broad, higher-order traits before evaluating the incremental validity of specific, lower-order personality variables. The design of the NCS facilitates this form of hierarchical examination in a representative, general population survey.

A further methodological limitation that has plagued much of the research on personality and depression involves the issue of overlap between personality and severity of current distress. This problem is especially applicable to research with clinical samples in which apparent personality disturbance becomes normalized upon clinical recovery and is therefore more appropriately viewed as a correlate of the affective state than as an independent trait. The NCS included a 30-day distress index administered to all Part II respondents. This index assessed the severity of 14 different symptoms of emotional distress, mostly reflecting depression. Therefore, in addition to using a community-based, representative sample and examining the effects of psychiatric history, we were also able to partition the effects of current emotional distress before evaluating the associations of personality dimensions with major depression.

Preliminary results from the NCS based on indices of two of the personality dimensions found that neuroticism and negative beliefs about self-worth were associated with current (12-month) depression in regression models. However, this study did not simultaneously examine the effects of lifetime histories of other mental disorders or current severity of emotional distress as independent variables in their regression models. Schmitz et al also acknowledged that the psychometric properties of the personality data collected in the NCS have not yet been established.

The objective of the present study was to use psychometrically supported indices of broad and specific personality dimensions and evaluate their association with major depression in a nationally representative sample. It was hypothesized that the broad personality domains of neuroticism and extraversion and the specific personality traits of self-
criticism and two of three facets of interpersonal dependency (emotional reliance and lack of social self-confidence) would each be significantly associated with lifetime prevalence of major depression. Based on the Enns and Cox\(^2\) review of the extant literature on personality and depression, it was also hypothesized that self-criticism would display the strongest association with depression once the effects of comorbidity and current distress were statistically controlled.

**METHOD**

**Participants**

Respondents were from Part II of the National Comorbidity Survey (N = 5,877) and ranged in age from 15 to 54 years (mean, 33.17 years). The survey was based on a stratified, multistate area probability sample of the noninstitutionalized civilian population in the 48 contiguous US states. The majority of the final sample used in the present study was Caucasian (75.6\%), followed by Black (11.4\%) and Hispanic (9.4\%). Most of the respondents were married or cohabitating (60.2\%), 10.8\% were separated/divorced, and 28.9\% were never married. Level of education was less than Grade 12 for 21.4\%, and 25.3\% had less than $20,000 annual income. The appropriate statistical weight was applied in the NCS public use dataset in all analyses so that the data closely approximated the US population on a number of sociodemographic indicators. Verbal informed consent was obtained from all participants and parental informed consent was also obtained in the case of minors (15 to 17 years of age). The lifetime prevalence of depression was 17\% and lifetime dysthymia was 6.6\%. The lifetime prevalence of one or more anxiety disorders was 28.8\% and substance use disorders was 26.9\%. Only 4.5\% of those respondents with a lifetime history of major depression had seen someone for help in the past month because of emotional problems or substance abuse.

**Psychiatric Diagnoses**

Psychiatric diagnoses were made using a modified version of the World Health Organization’s Composite International Diagnostic Interview (CIDI 1.0).\(^{20,21}\) The CIDI is a state-of-the-art structured diagnostic interview based on DSM-III-R criteria and was designed for use by trained interviewers who are not clinicians. The WHO CIDI field trials indicated good reliability and validity of the diagnoses generated from the CIDI based on inter-rater reliability, test-retest reliability, clinical reappraisals and other methods (for a detailed description, see Kessler et al.\(^{20}\)). NCS diagnostic estimates of the prevalence and distribution of major depression in the United States are considered a significant improvement over earlier epidemiological surveys.\(^{27}\) In the present study, lifetime history of major depression, lifetime history of an anxiety disorder (generalized anxiety disorder, social phobia, simple phobia, agoraphobia, panic disorder, and post-traumatic stress disorder), lifetime history of dysthymia, and lifetime history of alcohol or substance abuse or dependence were each coded as either present (1) or absent (0). Obsessive-compulsive disorder was not assessed in the NCS.

**Measures and Procedure**

In many psychosocial domains assessed in the NCS, neither the length of lists of items nor the number of potential personality domains that could be assessed was exhaustive. This restriction was necessary because of the large number of variables in the NCS and the need to ensure a high response rate. Psychometric analysis was therefore required to ensure that all the broad and specific personality indices had support for their validity and reliability.

**Broad personality dimensions.** Neuroticism and extraversion were assessed in the NCS by asking participants to rate the degree to which a series of self-descriptive adjectives generally applied to them. Most of the broad personality items were drawn from Goldberg\(^7\)'s inventory of markers of the broad “Big Five” personality dimensions. Items were rated on a scale ranging from 1 (“not at all”) to 4 (“very”). The neuroticism and extraversion scales used in the present study were developed through a psychometric analysis of broad personality dimensions using random split-half samples of the NCS data. The first half was used for exploratory factor analysis and the items with the highest factor loadings or “marker items” were retained. The decision to select five items allowed us to focus on only the best or most representative items for each factor, and to select items that did not cross-load on other factors. Five items for each dimension was also a sufficient number to obtain acceptable internal consistency values.

A measurement model of the broad personality dimensions in the NCS was then cross-validated by employing confirmatory factor analysis with a number of goodness-of-fit indicators using the second half of the NCS data. A correlation matrix was generated with the weighted data and maximum likelihood estimation was applied to this matrix using EQS 5 for Windows.\(^{28}\) For both the broad and specific personality models tested, items were specified to load on a single factor, errors were uncorrelated, and the latent factors were allowed to covary. The model had good fit to the data (goodness of fit index [GFI] = 0.92, adjusted goodness of fit index [AGFI] = 0.89, comparative fit index [CFI] = 0.91, root mean square error of approximation [RMSEA] = 0.08). The neuroticism and extraversion scales were found to have good internal consistency (alphas = 0.84 and 0.82, respectively). The five neuroticism items that comprised the scale were “temperamental, discontented, nervous, irritable, and tense.” The five extraversion items were “outgoing, self-confident, talkative, lively, and sociable.” The extraversion measure was then reverse scored so that high scores denoted a maladaptive level, consistent with the other variables.

**Specific personality dimensions.** A separate section of the NCS contained a set of items to measure specific individual difference variables. This item set also relied on a 4-point rating scale and included a domain of self-criticism based on items from the Depressive Experiences Questionnaire of Blatt et al.\(^12\) and Rosenberg\(^8\) measure of (low) self-esteem. It also included items from the multidimensional measure of interpersonal dependency of Hirschfeld et al.\(^{16}\) which contains three facets: emotional reliance on another person, lack of social self-confidence, and assertion of autonomy. All of the scale items were analyzed collectively in an exploratory factor analysis with the NCS split-half sample and separate factors reflecting each of the constructs emerged. Marker items were chosen
for self-criticism and the three facets of interpersonal dependency. Following the same procedure employed with the broad personality indices, a measurement model of the specific individual difference variables assessed in the NCS was subjected to confirmatory factor analysis with the second half of the NCS sample. The measurement model surpassed all of the goodness of fit criteria (GFI = 0.92, AGFI = 0.91, CFI = 0.90, RMSEA = 0.05). The number of items and alpha values for the self-criticism and interpersonal dependency scales were as follows: Self-Criticism (six items; alpha = 0.86), Emotional Reliance on Another Person (five items; alpha = 0.80), Lack of Social Self-confidence (four items; alpha = 0.71), and Assertion of Autonomy (three items, reverse scored; alpha = 0.72). The item content of these scales is presented in the Appendix.

To summarize personality measurement in the present study, indices of neuroticism, extraversion, self-criticism, and interpersonal dependency were derived from established and well-known scales. To further ensure their validity in the NCS sample, we conducted exploratory and confirmatory factor analysis with separate NCS subsamples to select the most representative items of each construct and then evaluated the two sets of items as part of measurement models of broad and specific personality dimensions assessed in the NCS. The correlations between the broad and specific personality dimensions ranged from 0.06 to 0.56, indicating that they were largely non-overlapping measures.

Current emotional distress. The NCS included a 14-item index (alpha = 0.92) of severity of emotional distress (mainly depression) experienced over the previous 30 days. The distress index utilized a response scale ranging from 1 (“never”) to 4 (“often”). The scale has been found to possess good psychometric properties.23 For example, it has very good internal consistency (alpha = 0.92) and correlates in expected directions with maladaptive and adaptive personality dimensions. Diagnostic groups characterized by depressed mood and worry have been found to score higher on this index compared to those disorders marked by fear and hyperarousal.24

In order to maximize policy significance, epidemiological research typically categorizes independent variables into presence/absence of an elevated level, maladaptive level of each variable.25 This approach has been used to create profiles of mental health correlates in NCS-based investigations.19 In the present study we controlled for previously identified sociodemographic and psychiatric factors in the NCS in order to evaluate the ability of broad and specific personality dimensions to demonstrate robust associations with lifetime history of major depression. Accordingly, we categorized these personality variables (along with the distress index) into the presence or absence of an elevated level. An elevated level was defined as a score greater than one standard deviation above the normative NCS mean score for each personality variable.

A small number of participants had one or more missing item responses on the personality and distress measures. If only one item was missing, a common approach in NCS analyses was employed whereby an estimate was used for the missing item.27 In the present case the estimate was based on the respondent’s mean score for the remaining completed items on the relevant scale. If more than one item was missing for any given scale the entire data for that participant was excluded from the analysis. Only 3% of the sample had to be excluded for this reason (final n for analysis = 5,689). There was no significant difference between prevalence of depression in the excluded participants and the overall sample (χ² = 0.23, not significant), and the average item response ratings of the two groups on the personality measures looked very similar.

Because of the complex sampling design of the NCS, standard errors were recalculated using the Taylor linearization method available in SUDAAN. This common procedure was followed in order to provide accurate estimates based on stratified sampling design effects. Stratification information is available in the NCS dataset specifically for this purpose.

### RESULTS

Separate logistic regression analyses were used to examine the individual associations between the personality variables and lifetime major depression. The findings of these analyses are presented in Table 1. All of the personality variables were positively and significantly associated with major depression.

A hierarchical logistic regression was then conducted to examine whether the personality variables could provide incremental validity with lifetime major depression after controlling for a range of variables previously found to be significantly associated with affective disorders in the NCS.19 In the first block, relevant sociodemographic variables were entered. These included gender (male =

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Wald F</th>
<th>P Value</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>143.30</td>
<td>&lt;.001</td>
<td>3.59</td>
<td>2.89-4.45</td>
</tr>
<tr>
<td>Extraversion</td>
<td>11.88</td>
<td>&lt;.01</td>
<td>1.55</td>
<td>1.20-2.01</td>
</tr>
<tr>
<td>Self-criticism</td>
<td>169.35</td>
<td>&lt;.001</td>
<td>4.35</td>
<td>3.46-5.46</td>
</tr>
<tr>
<td>Emotional reliance on another person</td>
<td>38.94</td>
<td>&lt;.001</td>
<td>2.04</td>
<td>1.62-2.57</td>
</tr>
<tr>
<td>Lack of social self-confidence</td>
<td>26.83</td>
<td>&lt;.001</td>
<td>1.86</td>
<td>1.46-2.37</td>
</tr>
<tr>
<td>Assertion of autonomy</td>
<td>12.25</td>
<td>&lt;.01</td>
<td>1.39</td>
<td>1.15-1.68</td>
</tr>
</tbody>
</table>

NOTE. All scales were dichotomized into the presence versus absence of an elevated level of each measure, defined as a score 1 SD above the normative NCS mean for each scale.
0, female = 1), income ($0 to $19,000 = 1, other incomes = 0), and race (Black = 0, other = 1). In the second block, lifetime history of other psychiatric disorders (dysthymia, lifetime history of an anxiety disorder, and lifetime history of alcohol or substance abuse or dependence) were entered. In addition, elevated current emotional distress was also entered on this block. In the third block, the broad or higher-order personality variables of neuroticism and extraversion were entered. In the final block, the specific lower-order personality variables were entered. The division of broad and specific personality dimensions into separate blocks is a recommended procedure in research on hierarchical models of personality that attempts to determine the incremental statistical contribution of specific, lower-order traits over broad, higher-order traits.

The regression model including the first block (sociodemographic variables) and the model including the first two blocks (sociodemographic variables and psychiatric variables) were both significant (Wald $F = 340.19, P < .001$, Wald $F = 187.84, P < .001$, respectively). Lifetime history of dysthymia and current psychological distress were the variables most strongly associated with major depression. The addition of the higher-order personality measures (block 3) resulted in a significant improvement to the model (Wald $F = 3.21, P = .05$). In this block, neuroticism was significantly associated with depression (odds ratio = 1.30; 95% confidence interval, 1.01 to 1.67), but extraversion was not. The addition of the lower-order personality measures (block 4) significantly improved the model (Wald $F = 5.67, P < .002$). The final model is presented in Table 2. Self-criticism was the only specific personality variable that was significantly associated with major depression. Further, when the specific personality variables were entered, neuroticism was no longer significant in the model.

### DISCUSSION

The present study sought to address several limitations noted in the extant literature on personality and depression. It is the first study to simultaneously evaluate the relative effects of a number of previously identified broad and specific personality dimensions in their association with carefully diagnosed major depression in a large, nationally representative sample. The results indicated that all of the personality dimensions were significantly associated with major depression when examined individually. The incremental validity of these personality dimensions was then assessed by first accounting for the contributions of lifetime psychiatric comorbidity and relevant sociodemographic variables. We also imposed a difficult but impor-

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**Table 2. Results of Final Hierarchical Regression Model of Personality Factors and Major Depression**

<table>
<thead>
<tr>
<th>Predictor Variable</th>
<th>Wald $F$</th>
<th>$P$ Value</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Block 1 (sociodemographic risk variables)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (female = 1, male = 0)</td>
<td>56.39</td>
<td>&lt;.001</td>
<td>2.15</td>
<td>1.75-2.64</td>
</tr>
<tr>
<td>Race (non-black = 1, black = 0)</td>
<td>5.15</td>
<td>.03</td>
<td>1.51</td>
<td>1.05-2.17</td>
</tr>
<tr>
<td>Income (low income = 1, other = 0)</td>
<td>2.59</td>
<td>NS</td>
<td>0.85</td>
<td>0.70-1.04</td>
</tr>
<tr>
<td><strong>Block 2 (psychiatric variables)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime history of an anxiety disorder</td>
<td>65.67</td>
<td>&lt;.001</td>
<td>2.75</td>
<td>2.14-3.55</td>
</tr>
<tr>
<td>Lifetime history of dysthymia</td>
<td>150.56</td>
<td>&lt;.001</td>
<td>8.41</td>
<td>5.92-11.93</td>
</tr>
<tr>
<td>Lifetime history of alcohol or substance abuse or dependence</td>
<td>2.46</td>
<td>NS</td>
<td>1.23</td>
<td>0.94-1.60</td>
</tr>
<tr>
<td>Current psychological distress</td>
<td>90.93</td>
<td>&lt;.001</td>
<td>2.97</td>
<td>2.36-3.75</td>
</tr>
<tr>
<td><strong>Block 3 (higher-order personality)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>0.38</td>
<td>NS</td>
<td>1.09</td>
<td>0.82-1.46</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.73</td>
<td>NS</td>
<td>1.10</td>
<td>0.88-1.36</td>
</tr>
<tr>
<td><strong>Block 4 (lower-order personality)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-criticism</td>
<td>22.19</td>
<td>&lt;.001</td>
<td>2.02</td>
<td>1.49-2.73</td>
</tr>
<tr>
<td>Emotional reliance on another person</td>
<td>0.00</td>
<td>NS</td>
<td>1.01</td>
<td>0.76-1.32</td>
</tr>
<tr>
<td>Lack of social self-confidence</td>
<td>1.66</td>
<td>NS</td>
<td>0.83</td>
<td>0.63-1.11</td>
</tr>
<tr>
<td>Assertion of autonomy</td>
<td>0.22</td>
<td>NS</td>
<td>0.95</td>
<td>0.77-1.18</td>
</tr>
</tbody>
</table>

Abbreviation: NS, not significant.
tient hurdle for personality factors to overcome by also accounting for the effects of current distressed affective state, a long standing methodological confound in this area of research. In the final model, only the specific personality dimension of self-criticism was able to demonstrate significant incremental validity in the hierarchical regression analysis.

Before discussing the role of personality factors, it is important to mention the strong statistical model afforded by sociodemographic and psychiatric variables. In particular, dysthymia and severity of current emotional distress were strong correlates of lifetime major depression. Severity of emotional distress has not been previously studied in the NCS and it represented a stringent test of potential overlap with current distress for personality dimensions to overcome. Together, the demonstrated role of dysthymia and subthreshold current distress in their association with lifetime major depression underscores the continuum view of depression symptoms wherein subthreshold or sub-syndromal depression is often predictive of threshold major depression. $	ext{31,32}$

Both of the broad personality dimensions of neuroticism and extraversion were associated with lifetime major depression when evaluated individually. This finding is consistent with previous research showing that broad tendencies toward high negative affect and low positive affect are both associated with depression. $	ext{10}$ However, the effect was much stronger for neuroticism than it was for (low) extraversion, and the effects of extraversion became nonsignificant when sociodemographic and psychiatric variables were entered in the regression analysis. Previous studies on personality and depression have yielded mixed results for the role of extraversion, and positive findings have been less consistent than for neuroticism. $	ext{5}$ Rather than representing an independent personality dimension associated with depression, the present results suggest that features of extraversion (positive emotionality, energy, and dominance) may be better viewed as reflective of shared variance with depression, distress, and dysthymia. Neuroticism appears to be a more robust correlate of major depression, a finding that is consistent with earlier prospective research. $	ext{33}$ However, neuroticism has been linked to a number of distress disorders and lacks diagnostic specificity. This strong but nonspecific association with psychopathology is borne out in the present study, which found its association with depression was diminished when anxiety, substance, and other mood disorders were controlled. Further, much of the emphasis in the neuroticism construct is in its disposition to experience negative affect. As a result our findings are consistent with earlier work, including twin data $	ext{1}$ that has shown there is a large degree of overlap with current distress in this broad personality dimension. In the present study its association with major depression was significant, but greatly reduced when other psychiatric diagnoses and current distress were statistically controlled. It was not significant in the final model that included specific personality dimensions.

The three facets of interpersonal dependency were each associated with major depression when examined separately. Consistent with earlier research using more select samples, $	ext{2}$ emotional reliance on another person and lack of social self-confidence produced the largest odds ratios and assertion of autonomy had the smallest. However, once the effects of sociodemographic variables, psychiatric history, current emotional distress, and broad personality dimensions were entered in a hierarchical regression analysis, none of the interpersonal dependency dimensions were significantly associated with major depression. This finding suggests that apparent dysfunctional interpersonal features might be more appropriately viewed as a correlate of psychiatric history or current emotional distress, rather than as an independent personality trait associated with depression.

The inclusion of a number of determinants in the hierarchical regression analysis, particularly dysthymia, emotional distress, and neuroticism, represented a stringent test of incremental validity for specific personality dimensions. Self-criticism was the only personality variable able to overcome this hurdle and was significantly associated with major depression in the final model. This finding suggests that core beliefs about self-worth are strongly related to depression and are not merely a correlate of psychiatric comorbidity or current elevated emotional distress (although the association of self-criticism with depression may in part reflect a scar from depressive episodes). In addition, the results indicated that self-criticism is not redundant with the broad source trait from which it derives (neuroticism). The increased specificity of the lower-order trait of self-criticism for depression over the higher-order trait of neuroticism is con-
sistent with current views of the hierarchical structure of personality and the incremental ability of the specific traits to add to the prediction of behavior.6

The item content that comprised self-criticism in this study emphasized concern over perceived shortcomings and personal inadequacy, dwelling on mistakes, and lack of self-worth. This content is very similar to the central features of the depressive temperament factor that emerged in a large factor analytic study.34 Together, these results underscore the importance of identifying fundamental negative beliefs about the self that operate on a separate level from state (distress) and trait (neuroticism) forms of negative affect. The benefit of this emphasis on identification of disturbed self-image that goes beyond negative affect, is that it may tap into a core psychopathological process that is specific to depression rather than to more general negative affect. The results from the hierarchical multiple regression analysis in this study suggest that self-criticism is robustly associated with major depression and is not redundant with other known factors such as subthreshold depressive symptoms.31 This research extends earlier clinical observations14 on self-criticism in depressed patients to a nationally representative community sample.

There are several limitations in the present study, the most important of which is the cross-sectional design. One of the restrictions imposed by this limitation is that it does not permit causal inferences. Although personality researchers often conceptualize these variables as a vulnerability or diathesis for depression, the relationship between personality and depression observed in the present study could be due to causal influences of depression on personality. The cross-sectional design also limits our ability to definitively separate state and trait effects. Further longitudinal research is required to establish the existence of any enduring personality diathesis for depression. The stringent requirements imposed by the hierarchical multivariate approach employed in the present research, along with the large representative study sample, indicate that self-criticism is a promising candidate variable for future prospective research efforts. From a clinical perspective, the positive findings for self-criticism in this study were obtained with a brief and reliable measurement format. It could be readily incorporated into any assessment endeavor that seeks to understand the nature and course of major depression, along with more commonly assessed factors such as psychiatric history.

APPENDIX: ITEM CONTENT OF SPECIFIC PERSONALITY DIMENSIONS

Items comprising the Self-criticism, Emotional Reliance on Another Person, Lack of Social Self-confidence, and Assertion of Autonomy scales are listed below.

Self-criticism
There is a considerable difference between how I am now and how I would like to be.
I wish I could have more respect for myself.
At times I think I am no good at all.
Sometimes I think I have an inferiority complex.
Many times I feel helpless.
I dwell on my mistakes more than I should.

Emotional Reliance on Another Person
I would be completely lost if I did not have someone special.
I must have one person who is very special to me.
I would feel helpless if deserted by someone I love.
The idea of losing a close friend is terrifying to me.
Disapproval by someone I care about is very painful to me.

Lack of Social Self-Confidence
In an argument I give in easily.
I would rather be a follower than a leader.
I am quick to agree with the opinions expressed by others.
I have a lot of trouble making decisions by myself.

Assertion of Autonomy
What people think of me does not affect how I feel.
What other people say does not bother me.
I do not need other people to make me feel good.

REFERENCES

6. Paunonen SV. Hierarchical organization of personality