THE RELATION OF DEFENSIVE STYLE TO PERSONALITY PATHOLOGY AND THE BIG FIVE PERSONALITY FACTORS

Stephen Soldz, PhD, Simon Budman, PhD, Annette Demby, LICSW, MSW, and Jocelyn Merry, BA

This study investigated the relationship between self-reported defensive style and personality pathology and the Big Five-factor model of personality. Outpatients with a high incidence of Axis II pathology from a health maintenance organization were administered the Defense Style Questionnaire (DSQ), the 50 Bipolar Self-Rating Scales (a Big Five measure), and the Personality Disorder Examination (PDE—a structured clinical interview to diagnose personality disorders). The DSQ was factor analyzed, resulting in three factors identified as Immature Defenses, Mature Defenses, and Withdrawal Defenses. Significant relationships were found between the DSQ factors and the other measures, indicating that defensive style was strongly related to personality pathology, and that there is significant empirical overlap between defensive style and trait models of personality. Furthermore, the DSQ contributed significantly to explaining Axis II pathology, after the Big Five factors were accounted for.

As psychoanalytic ego psychology attempted to move psychoanalytic theory from a theory concerned exclusively with unconscious mental processes to a general theory of mental functioning (Hartmann, 1939/1958), defense mechanisms increased in conceptual importance. A. Freud (1936/1946), in an attempt to deal with the characterological issues raised by Reich (1949) within an ego psychological approach, was led to systematize extant thinking about defense mechanisms (c.f., Sterba, 1953). More recent theorists have further amplified the concept of defense mechanisms. Kernberg (1975), for example, saw splitting, projective identification, omnipotence, and devaluation as defenses central to borderline pathology.
Contemporary researchers from a psychodynamic, though not necessarily psychoanalytic, orientation have reconceptualized defenses as styles of adaptation (Vaillant, 1977, 1986b; cf. Cramer, 1991). Others have discussed coping mechanisms that have some similarity to defenses (McCrae & Costa, 1986). Haan (1977), however, has made a forceful argument that defenses should be distinguished from coping mechanisms.

In any case, regardless of the details of one's theoretical orientation, defenses are an important part of a psychodynamic approach to personality. Although individual defenses are psychological processes, the propensity to use particular defenses, or defensive style, constitutes a personality trait. The question then arises as to how defensive style relates to other conceptualizations of personality. In particular, recent decades have seen a systematization of personality trait theory as many personality researchers have reached agreement regarding the utility of a five-factor model of personality traits, encompassing Extraversion, Agreeableness, Emotional Stability (vs. Neuroticism), Conscientiousness or Dependability, and Openness to Experience (also referred to as Culture and Intellect or Sophistication) (e.g., Costa & McCrae, 1990; Goldberg, 1992; McCrae, 1989; McCrae & Costa, 1989a, 1989b, 1990; Wiggins & Trapnell, In press). The five factors, known as the Big Five, have shown great utility in systematizing our understanding of normal personality; recent attention has focused on the utility of the Big Five model in elucidating clinical phenomena (McCrae, 1989; McCrae & Costa, 1989a, 1989b; Soldz, Budman, Davis, & Demby, 1993; Soldz, Budman, Demby, & Merry, 1993; Wiggins & Pincus, 1989, In press).

At the same time that the Big Five model of normal personality was becoming prominent, attempts to systematize our understanding of the structure of disordered personality led to the development of the Axis II of DSM-III-R (American Psychiatric Association, 1987). DSM-III-R was based on the attempt to operationalize symptom sets characteristic of each personality disorder.

Given these three models of personality and personality pathology—the psychodynamic, trait, and DSM-III-R diagnostic—it is important to examine the relationships between the models. Several recent attempts have been made to relate the five-factor model of personality to the DSM-III-R Axis II diagnostic system (Clark, Vorheis & McEwen, 1994; Lyons, Ozer, Young, Merla, & Hyler, 1991; Soldz et al., 1993b; Wiggins & Pincus, 1989, 1994), and McCrae and Costa (1986) have related coping styles to the five-factor model. Other attempts have been made to relate personality pathology to defensive style (Bond, 1990; Bond, Paris, & Zweig-Frank, 1994; Bond & Vaillant, 1986; Perry & Cooper, 1986; Vaillant & Drake, 1985). However, the latter studies have either simply examined personality disorder as a generic category or have looked at only a subset of the personality disorders. Bond (1990) and Bond, Paris, and Zweig-Frank (1994), for example, examined whether certain defenses are specific for borderline pathology, as was argued by Kernberg (1975) by comparing borderlines to heterogeneous groups of other patients (e.g., "other personality disorders"). However, many of these other patients may have exhibited some borderline characteristics without meeting the full criterion for the disorder. Further, as there is
considerable controversy regarding the validity of the DSM-III-R classification system (Soldz et al., 1993b; Widiger, 1991; Widiger & Frances, 1987) and because it is known that, at least when structured clinical interviews are used, patients frequently receive more than one personality disorder diagnosis (Soldz, Budman, Demby, & Merry, 1993a; Widiger, 1991), tying such a study to DSM-III-R categorical diagnoses may bias it against finding relations of diagnosis to defensive style. Using categorical diagnoses may also result in a loss of statistical power (Cohen, 1988).

The current study is an attempt to further understand the nature of defensive style by examining the relation of self-reported defensive style to other conceptualizations of personality in clinical samples. We examine the relations between defense use and a measure of the five-factor model in two samples, as well as the relation between defensive style and the number of symptoms met for each of the DSM-III-R Axis II disorders in a personality-disordered sample. The sample used in this latter study was selected for the presence of long-standing personality difficulty and a low incidence of confounding Axis I pathology.

METHOD

SUBJECTS

The subjects were 257 patients (170 F, 87 M) drawn from two pools of outpatients engaged in studies of group psychotherapy at Harvard Community Health Plan (HCHP), a health maintenance organization in New England. Patients in the first subsample were from a variety of groups, including 22 short-term (15 weeks) psychotherapy groups and one long-term (18 months) group (ST Group, n = 148). Two of the groups were African-American women's groups and several were for adult children of alcoholics; the other groups were geared to a generic outpatient population. Seventy-four percent of this subsample were female, and the mean age was 32.7 years. They were 79.7% white, 8.8% African-American, and 2.7% Hispanic, and 8.8% of the subsample did not give us racial/ethnic information; 56% of the subjects were single, 24% were married, and 16% were separated, divorced, or widowed. The data used in this study were collected before the patients began the groups. Formal diagnoses were not obtained for these patients, but they were primarily mildly disturbed, with problems such as depression, anxiety and difficulties with relationships. These patients are typical of the majority of patients seen in the HCHP outpatient clinics.

Subjects for the second subsample (PD Group, n = 109) were recruited for a study of long-term (18 month) groups for people with personality disorders. If referred patients met preliminary inclusion criteria they were interviewed with the Personality Disorder Examination (PDE) and asked to fill out a packet of pregroup questionnaires. As exclusion criteria included the presence of any active Axis I pathology that would need to be the focus of treatment¹ (such as major depression, active substance abuse, suicidality, or neurological impairment), this subsample consisted of patients primarily with long-standing personality problems. These patients had a mean age of 36.6 and were 55% female. They were 89.9% White, 5.5% African-American, and 2.8% Hispanic, 1 person was Asian-American, and 1

¹. In a number of instances there had been, of course, previous Axis-I pathology.
person did not give us racial/ethnic information; 63.3% of this population was single, 12.8% were married, 22.9% were separated or divorced, and one person was widowed.

MEASURES

Personality Disorder Examination (PDE). The PDE, version II, is a structured interview for diagnosing DSM-III-R personality disorders (Loranger, 1988). We used the number of DSM-III Criteria met for each disorder for analyses in this paper, except in the case of antisocial personality, where we used the number of adult criteria met. The PDE was administered to all subjects in the PD sample. Three of our PDE interviewers had been previously trained by Loranger, the PDE developer, and the fourth was trained by the previously trained raters. Although there were continuous discussions of rating issues throughout the project, we did not obtain Interrater reliability data on the PDE due to fiscal constraints.

Defense Style Questionnaire (DSQ). The revised Defense Style Questionnaire is a self-report questionnaire for assessing a patient’s perception of her/his habitual defensive style. This revised instrument contains 77 items purporting to measure 25 defenses: it also contains 11 items forming a Lie scale. Bond, Gardner, Christian, and Sigal (1983) found that clusters of defenses exhibited predictable correlations with measures of ego adaptation and ego development. Vaillant, Bond, and Vaillant (1986) found considerable agreement between items measuring DSQ defenses and clinical ratings of defenses made years before from extensive interviews in a longitudinal sample. Bond, Perry, Gautier, Goldberg, Oppenheimer, and Simand (1989) found further areas of agreement between the DSQ and the Defense Mechanism Rating Scale (Perry & Cooper, 1986), a rating instrument for clinician assessment of defenses from videotaped interview material. These lines of research suggest that the DSQ has considerable validity, though it also exhibits areas of divergence from clinically judged defenses in each study.

Fifty Bipolar Self-Rating Scales (50-BRS). The 50-BRS measures the “Big Five” personality factors of Extraversion, Agreeableness, Emotional Stability, Conscientiousness, and Openness (Goldberg, 1992). Although Goldberg defines the fifth factor as “Intellect or Sophistication,” we prefer the Openness conceptualization of Costa and McCrae (1990) and have used that designation here. The 50-BRS uses 10 bipolar adjective pairs to measure each of the five personality factors on a 9-point scale. The score for each of the five factors is the sum of the items for that factor. According to Goldberg, these scales have a mean coefficient alpha reliability of .84 and have concurrent validity as demonstrated by expected patterns of correlations with other personality measures. The 50-BRS has been shown to have excellent psychometric properties in a clinical sample consisting of most of the PD Group subsample from the present study. It has also been shown to exhibit strong and meaningful relationships to personality pathology in this sample (Soldz et al., 1993b); in particular, a principal component analysis showed almost perfect agreement with the theoretical placement of individual items. The 50-BRS was administered to 48 subjects from the ST Group sample and to 108 of the 109 in the PD Group sample.

RESULTS

STRUCTURE OF THE DSQ

Two previous factor analyses of the DSQ yielded distinct structures. Bond and associates (1983) reported a four-factor solution consisting of
"maladaptive action patterns," "image distorting defenses," "self-sacrificing
defenses" and "adaptive defenses." Andrews, Pollock, and Stewart (1989) analyzed both the defenses as labeled by Bond et al. and a set of relabeled
defenses. In both cases they found a three-factor solution fit the data; they
labeled these defense factors "immature," "neurotic" and "mature."

Because of the divergence in previous factor analytic results, making it
unclear which of the previous scorings we should use with our data, we
decided to perform our own factor analysis of our data sets. Initially, we
analyzed the short-term and personality-disordered samples separately,
using principal factor analysis with squared multiple correlations as initial
communality estimates and iterating the communalities three times, as
suggested by Gorsuch (1983). The resulting factor structures were subject-
ted to varimax rotation. We analyzed the defenses as labeled by both
Bond et al. (1983) and Andrews et al. (1989), and obtained similar struc-
tures with each labeling, as did Andrews et al. However, the factor structure
with the Bond et al. labeled defenses was somewhat clearer, so we decided
to use that labeling. We also obtained very similar results in both samples;
we therefore combined the two samples and refactored. Here we will present
the results for the Bond et al. labeled defenses in the combined sample
(Table 1).

There were three eigenvalues greater than 1.0; and the minimum average
of the number of factors to retain indicated two factors, whereas the scree
test was less clear, with breaks at two and four factors. We therefore
examined the two-, three-, and four-factor solutions. As the three factor
solution was clearly interpretable and was replicated in both subsamples,
as well as the combined sample, we report those results.

We obtained good replications for two of the three Andrews et al. (1989)
factors. Factor 1 was similar to their first factor (Immature Defenses) with
high loadings (> .30) for 12 defenses, namely, acting out, projection, passive
aggression, help rejecting, complaining, splitting, regression, omnipotence/devaluation, undoing, projective identification, fantasy, somatiza-
tion, and consumption. Of these 12 defenses, only undoing and
consumption did not have their highest loadings on the Andrews et al.
Immature Defenses, yet they did have loadings of .40 and .25, respectively,
in that study. The loading for denial (one of their Immature Defenses) did
not reach .30, but its loading of .26 was its highest. Isolation was the only
defense loading on Andrews et al. Immature Defenses that did not load on
our Factor 1. Because of the similarity to the Andrews et al. Immature
Defenses, we have retained this name for our factor.

Factor 2 contained loadings greater than .30 for four of the five defenses
from Andrews et al. (1994) Mature Defenses: anticipation, task orientation,
suppression, and sublimation. The other defense from the Andrews et al.
factor was humor, which had its highest loading of .24 on this factor in our

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2. Bond (1984) recommended that each research group using the DSQ conduct its own
factor analysis.

3. Quartimax rotation, as used by Bond et al. (1983), resulted in strikingly similar structure
to varimax, with many loadings identical in magnitude (to two decimal places) and none more
than .02 different.
analyzing the data, we found that the defenses of immature style were significantly different from those of mature style. The table below shows the factor structure of the DSQ, with immature and mature defenses listed separately.

<table>
<thead>
<tr>
<th>Defenses</th>
<th>Immature Defenses</th>
<th>Mature Defenses</th>
<th>Withdrawal Defenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acting out</td>
<td>76*</td>
<td>-6</td>
<td>-7</td>
</tr>
<tr>
<td>Projection</td>
<td>71*</td>
<td>-12</td>
<td>21</td>
</tr>
<tr>
<td>Passive aggression</td>
<td>65*</td>
<td>-7</td>
<td>1</td>
</tr>
<tr>
<td>Help rejecting complaining</td>
<td>63*</td>
<td>-11</td>
<td>23</td>
</tr>
<tr>
<td>Splitting</td>
<td>57*</td>
<td>0</td>
<td>-3</td>
</tr>
<tr>
<td>Regression</td>
<td>54*</td>
<td>-39</td>
<td>11</td>
</tr>
<tr>
<td>Omnipotence/devaluation</td>
<td>52*</td>
<td>27</td>
<td>-21</td>
</tr>
<tr>
<td>Undoing</td>
<td>51*</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Projective identification</td>
<td>43*</td>
<td>9</td>
<td>13</td>
</tr>
<tr>
<td>Fantasy</td>
<td>40</td>
<td>-9</td>
<td>14</td>
</tr>
<tr>
<td>Somatization</td>
<td>37*</td>
<td>-1</td>
<td>14</td>
</tr>
<tr>
<td>Consumption</td>
<td>32*</td>
<td>-7</td>
<td>8</td>
</tr>
<tr>
<td>Anticipation</td>
<td>4</td>
<td>55*</td>
<td>-13</td>
</tr>
<tr>
<td>Task orientation</td>
<td>7</td>
<td>52*</td>
<td>0</td>
</tr>
<tr>
<td>Suppression</td>
<td>-25</td>
<td>48*</td>
<td>19</td>
</tr>
<tr>
<td>Sublimation</td>
<td>-7</td>
<td>43*</td>
<td>-17</td>
</tr>
<tr>
<td>Inhibition</td>
<td>18</td>
<td>-16</td>
<td>59*</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>18</td>
<td>0</td>
<td>50*</td>
</tr>
<tr>
<td>Isolation</td>
<td>13</td>
<td>-2</td>
<td>42*</td>
</tr>
<tr>
<td>Affiliation</td>
<td>6</td>
<td>14</td>
<td>-40*</td>
</tr>
<tr>
<td>Idealization</td>
<td>28</td>
<td>11</td>
<td>6*</td>
</tr>
<tr>
<td>Dental</td>
<td>26</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Reaction formation</td>
<td>6</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Humor</td>
<td>-7</td>
<td>24</td>
<td>-9a</td>
</tr>
<tr>
<td>Pseudoaltruism</td>
<td>11</td>
<td>13</td>
<td>0</td>
</tr>
</tbody>
</table>

Variance | 15.8% | 5.9% | 5.7%

* Loads > .30 on a factor.

In our analysis, Reaction formation had its highest loading of .28 on this factor. It is possible that the self-control element of reaction formation led to this loading. Again, despite the minor differences from the Andrews et al. factor, we have retained their name for this factor.

The surprise from our analysis was in our Factor 3, which clearly does not replicate the Andrews et al. Neurotic Defenses, consisting of reaction formation, undoing, inhibition, withdrawal, idealization and pseudoaltruism.
TABLE 2. Regression of DSQ on 50-BSRS

<table>
<thead>
<tr>
<th>DSQ Factors</th>
<th>50-BSRS (β)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extraversion</td>
</tr>
<tr>
<td>Immature Defenses</td>
<td>0.096</td>
</tr>
<tr>
<td>Mature Defenses</td>
<td>0.079</td>
</tr>
<tr>
<td>Withdrawal Defenses</td>
<td>-0.600***</td>
</tr>
</tbody>
</table>

Note. n = 156.
*p < .05  **p < .001  ***p < .0001.

Of these defenses, only inhibition and withdrawal load on our Factor 3, along with isolation and (with a negative loading) affiliation. Factor 3 thus appears to represent defenses involving withdrawal versus attachment. A factor of this nature appeared whether we analyzed both samples separately or together, and whether we used the Bond et al. or the Andrews et al. labeled defenses; this factor's interpretation was a little clearer with the Bond et al. defenses, partially because the inclusion of affiliation provides a marker for the opposite pole of the factor. This factor was called Withdrawal Defenses.

Because our factor analysis only partially replicated a previously published structure, we used our factors in subsequent analyses. We therefore calculated scores for each of the three factors by averaging all the items measuring defenses loading greater than .30 on that factor and used these scores in analyses relating defensive style to other variables of interest.4

DEFENSIVE STYLE AND BIG FIVE

One goal of this research was to examine the overlap between defensive style and the Big Five model of personality. This question was examined by regressing the three DSQ scales on the five factors from the 50-BSRS (Table 2). These regressions indicated that each of the DSQ factors was significantly related to one of the Big Five factors. Immature Defenses was negatively related to Emotional Stability whereas Mature Defenses was positively related to Openness, with a marginally lower, though not statistically significant, relation to Emotional Stability. Withdrawal Defenses was negatively related to Extraversion. The shrunken R² value, an estimate of the population variance explained in a dependent variable by a set of independent variables, indicate that the Big Five taken together explained 38% of the variance in Immature Defenses, 40% of the variance in Withdrawal Defenses, and only 6% of the variance in Mature Defenses.

We further examined the relationship between defensive style and the Big

4. It is worth noting that only a small proportion of the total variance was explained by our three factors, suggesting that the DSQ items contain much unique variance and/or random error.
on our Factor 3 thus attachment. A
bles separately andrews et al.
With the tion provides is called With-
ously publish-
We therefore all the items and used these of interest.

When defensive examined by -BSRS (Table 1) was signifi-
defenses was defenses was not statistically. Defenses was an estimate of by a set of better explained in With-
and the Big explained by our and/or random

Five by regressing the 50-BSRS scales on the three DSQ factors (see Table 3). Each of the Big Five factors was significantly predicted by defensive style. Extraversion and Emotional Stability had 43% and 39%, respectively, of their population variance explained by the DSQ, and the other factors had between 11% and 14% explained.

DEFENSIVE STYLE AND PERSONALITY PATHOLOGY

The relation between defensive style and personality pathology was investigated by regressing the number of criteria met for each of the personality disorders on the three DSQ factors. These results are presented in Table 4. It can be seen there that Immature Defenses was significantly related to paranoid, borderline, histrionic, narcissistic, dependent, passive aggressive, sadistic and self-defeating personality disorders. However, the relationship with Sadistic personality disorder may have been due to chance, because the overall F was not significant. Immature Defenses was also significantly related to the total number of personality disorder symptoms met by a patient.

Withdrawal Defenses was positively related to the schizoid, schizotypal, avoidant and obsessive-compulsive personality disorders, and negatively to histrionic. This pattern of relationships is clearly consistent with an interpretation of this factor as representing the use of withdrawal as a defensive style. Mature Defenses was not related to any personality disorders in our sample.

Examination of the shrunken $R^2$'s indicated that histrionic personality disorder had the most variance explained by the DSQ (32%); and that paranoid, borderline, narcissistic, avoidant, dependent, obsessive-compulsive, passive-aggressive and self-defeating disorders each had at least 10% of their variance explained by the DSQ factors. The DSQ explained 41% of the variance in the total number of personality disorder symptoms possessed by a patient.

Given the above findings regarding the relation of defensive style to the Big Five, we wished to determine if the DSQ retained a relationship to personality pathology after we accounted for the Big Five. We therefore performed a series of multiple regressions with each personality disorder
<table>
<thead>
<tr>
<th></th>
<th>Immature Defenses</th>
<th>Mature Defenses</th>
<th>Withdrawal Defenses</th>
<th>Shrunken $R^2$ DSQ</th>
<th>Shrunken $R^2$ DSQ + 50-BSRS</th>
<th>DSQ factors increment in shrunken $R^2$</th>
<th>DSQ factors significantly contributing to shrunken $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paranoid</td>
<td>0.387***</td>
<td>0.061</td>
<td>0.057</td>
<td>0.14***</td>
<td>0.22***</td>
<td>0.06*</td>
<td>1</td>
</tr>
<tr>
<td>Schizoid</td>
<td>-0.058</td>
<td>-0.166</td>
<td>0.302**</td>
<td>0.09**</td>
<td>0.10**</td>
<td>0.02</td>
<td>-</td>
</tr>
<tr>
<td>Schizotypal</td>
<td>0.099</td>
<td>-0.052</td>
<td>-0.218*</td>
<td>0.05***</td>
<td>0.08*</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Antisocial</td>
<td>0.209*</td>
<td>0.157</td>
<td>-0.163</td>
<td>0.05***</td>
<td>0.03</td>
<td>0.03</td>
<td>-</td>
</tr>
<tr>
<td>Borderline</td>
<td>0.527****</td>
<td>-0.076</td>
<td>-0.103</td>
<td>0.25***</td>
<td>0.34***</td>
<td>0.07**</td>
<td>1</td>
</tr>
<tr>
<td>Histrionic</td>
<td>0.564****</td>
<td>-0.044</td>
<td>-0.326****</td>
<td>0.32***</td>
<td>0.34***</td>
<td>0.16***</td>
<td>1</td>
</tr>
<tr>
<td>Narcissistic</td>
<td>0.493****</td>
<td>-0.065</td>
<td>-0.198*</td>
<td>0.22****</td>
<td>0.30****</td>
<td>0.12***</td>
<td>1</td>
</tr>
<tr>
<td>Avoidant</td>
<td>-0.029</td>
<td>-0.062</td>
<td>-0.526****</td>
<td>0.26***</td>
<td>0.36***</td>
<td>0.03</td>
<td>-</td>
</tr>
<tr>
<td>Dependent</td>
<td>0.370***</td>
<td>0.014</td>
<td>-0.043</td>
<td>0.10***</td>
<td>0.07*</td>
<td>0.05*</td>
<td>1</td>
</tr>
<tr>
<td>Obsessive-compulsive</td>
<td>0.134</td>
<td>-0.124</td>
<td>-0.252**</td>
<td>0.10**</td>
<td>0.14**</td>
<td>0.02</td>
<td>-</td>
</tr>
<tr>
<td>Passive-aggressive</td>
<td>0.421****</td>
<td>-0.126</td>
<td>0.039</td>
<td>0.19***</td>
<td>0.38***</td>
<td>0.11***</td>
<td>1, 2</td>
</tr>
<tr>
<td>Sadistic</td>
<td>0.223*</td>
<td>-0.073</td>
<td>-0.038</td>
<td>0.02***</td>
<td>0.03</td>
<td>0.00</td>
<td>-</td>
</tr>
<tr>
<td>Self-defeating</td>
<td>0.477****</td>
<td>0.039</td>
<td>0.045</td>
<td>0.22****</td>
<td>0.28****</td>
<td>0.15***</td>
<td>1</td>
</tr>
</tbody>
</table>

Total number of PD criteria 0.602**** -0.081 0.110 0.41**** 0.44**** 0.20**** 1

*Note: n = 109. "DSQ increment" is the increase in shrunken $R^2$ from DSQ after 50-BSRS scales added to regression. "DSQ factors significantly contributing to shrunken $R^2$" indicates the number of DSQ factors significantly adding to 50-BSRS in explaining PDE. A negative sign means that factor had a negative loading in the regression.

*p < .05, **p < .01, ***p < .001, ****p < .0001
scale as dependent variable and with the DSQ factors entered as predictors after the five 50-BSRS scales. The significance of the change in shrunken $R^2$s assessed whether the DSQ added any additional explanatory power over and above that of the Big Five (Table 4).

For seven personality disorders, and for the total number of personality disorder symptoms, the DSQ did indeed have unique explanatory power. The DSQ explained additional variance for paranoid, borderline, histrionic, narcissistic, dependent, passive-aggressive, and self-defeating personality disorders. The amount of additional variance explained in these disorders ranged from 5% for dependent to 19% for self-defeating and 20% for the number of PD symptoms. For most disorders, only Immature Defenses had a significant relationship with the disorder when all variables were entered; the only exceptions were avoidant disorder, where Withdrawal Defenses had a significant relationship, and passive-aggressive, where both Immature and Mature Defenses were significant.

**DISCUSSION**

The analyses in this study have replicated two of the three DSQ factors that have been found in a previous analysis (Andrews et al., 1989) but did not replicate the third factor. We found strong and significant relations between the DSQ and the Big Five personality factors. Two of the DSQ factors were found to be related to personality pathology.

**STRUCTURE OF DSQ**

The fact that three different factor analyses of the DSQ have led to three different structures is grounds for caution regarding indiscriminate use of any particular scoring schemes. Although two of our factors were reasonable replications of factors found by Andrews et al. (1989), the third factor, representing the use of Withdrawal Defenses, had not been found in either of the previous studies. The existence of a factor manifesting adaptive or mature defenses has been replicated across three studies, and the existence of a factor grouping the more Immature Defenses has been found in our study as well as the Andrews et al. (1989) one. It is possible that this factor would have appeared in the Bond et al. (1983) analysis if only three factors had been extracted, as this factor contains many of the defenses from Bond et al.'s two most severe defensive styles.

**RELATION TO BIG FIVE**

We found considerable overlap between defensive style and the Big Five. Regressions showed that a significant portion of the variance in Immature and Withdrawal Defenses is explained by the 50-BSRS, and that the DSQ explained a significant proportion of the variance in each of the 50-BSRS scales. Examination of the regression results indicates that the most substantial overlap is between Immature Defenses and 50-BSRS Emotional Stability, and between Withdrawal Defenses and Extraversion, where the overlap was clear in both directions. Agreeableness and Conscientiousness
did not have any unique variance that predicted DSQ factors, though they were each negatively predicted by Immature Defenses. As there is a positive correlation between the 50-BSRS Agreeableness, Conscientiousness and Emotional Stability scales in clinical samples (Soldz et al., 1993b), it seems most parsimonious to assume that the relationships between Immature Defenses and 50-BSRS Agreeableness and Conscientiousness is due to the correlation of these two scales with Emotional Stability.

Openness positively predicted and was predicted by Mature Defenses. However, the shrunken $R^2$s make it clear that both the Mature Defenses and the Big Five have considerable variance that they do not share.

Overall, these findings suggest substantial empirical overlap between self-rated defensive style and the Big Five trait approach to personality. Though the constructs involved may be conceptualized differently, their operationalization seems to cover much of the same domain.

RELATION TO PERSONALITY PATHOLOGY

It was found that the DSQ had a strong relationship to personality pathology. The DSQ predicted a significant amount of the population variance in every disorder except sadistic, and, indeed, 41% of the variance in the total number of personality disorder symptoms was explained by defensive style. The DSQ factor that played the largest role in personality pathology was Immature Defenses.

Withdrawal defenses was positively related to schizoid, schizotypal, avoidant, and obsessive-compulsive personality disorders, and negatively to histrionic. With the possible exception of obsessive-compulsive, such findings are exactly what one would expect. It should be noted that in other studies (Soldz et al., 1993b) we have found obsessive-compulsive personality to group together with avoidant, schizoid, and schizotypal in being introverted.

Mature Defenses was not found to be related to any of the personality disorders. Bond and associates (1994), however, found that borderlines were less likely to use Adaptive Defenses than were non-borderline personality-disordered patients. The reasons for the discrepancy are unclear, though it is possible that the difference may be due to differences in the instruments used to assess borderline pathology in the two studies (PDE versus Diagnostic Interview for Borderlines).

The finding that DSQ-measured defensive style is related to personality pathology is in general agreement with the findings of Bond and associates (1994) but is in contradistinction with previous negative findings by Bond (1990) and Bond and Vaillant (1986). The reasons for the inconsistency in findings between studies is unclear, though one of the studies with negative findings (Bond, 1990) had an extremely small sample size. Furthermore, it is worth noting that the two studies with positive findings are those using structured interviews for assessing personality pathology. It is also worth noting that these findings are broadly consistent with other studies using rater-based strategies to assess defensive style (e.g., Perry & Cooper, 1986; Vaillant & Drake, 1985). In general, convergence between personality pathology and measures of defensive style is to be expected because there
is substantial conceptual overlap between personality disorder criteria and the behaviors used to assess defensive style.

Multiple regression analyses also showed that the DSQ maintained its relationship to personality pathology after we controlled for the Big Five. In most instances it was Immature Defenses that added explanatory power, though Mature Defenses made a significant contribution to explaining the degree of passive-aggressive pathology. Thus, despite the strong relationship between Immature Defenses and the 50-BSRS Emotional Stability scale, the DSQ factor contributes significant, and in several cases substantial additional variance to explaining the degree of personality pathology.

The fact that the DSQ adds substantial variance to that explained by the 50-BSRS has three possible explanations. One explanation would be that defensive style can indeed be encompassed within the Big Five personality model, but that the Big Five measure used in this study, the 50-BSRS, is deficient in operationalizing this model. Evidence contrary to this explanation includes the replication of the five factor structure and the finding of meaningful personality disorder—Big Five relationships in a subset of the current sample (Soldz et al., 1993b). In addition, analyses in which a subsample of the current sample also completed the NEO-PI (Costa & McCrae, 1985), perhaps the most widely used measure of the Big Five factors, indicate good to excellent agreement between the two Big Five instruments (Soldz et al., in press), as was found previously in nonclinical samples (Goldberg, 1992).

Another explanation is that defensive style, despite its overlap with the Big Five, does indeed contribute uniquely to understanding personality pathology. This explanation would have it that the DSQ, based as it is on the psychodynamic concept of defense, measures distinctive aspects of personal functioning that overlap with, but are not encompassed within, the model of personality traits represented by the Big Five. This interpretation is clearly consistent with the findings.

The final interpretation of the DSQ—50-BSRS results is that the personality aspects encompassed in defensive style can indeed be represented in the five-factor model, but that the five factors have to be measured from a variety of perspectives, not just that of the patients themselves. In nonclinical populations, there is striking agreement between personality trait ratings by an individual and ratings of that individual by spouses and close friends (Costa & McCrae, 1985; McCrae & Costa, 1990). This finding may not generalize to clinical populations, however. In other work (Soldz et al., 1993b; in press), we have argued that the measurement of the Big Five in clinical populations may be strongly influenced by the perspective of the person doing the ratings. That is, clinicians, significant others, or other therapy group members may not necessarily rate the person as that person rates him- or herself. Such a presumption would agree with the old clinical assumption that patients often selectively focus on their problems and are often unaware of their strengths (cf. Soldz, 1992). This view would argue that the DSQ would not exhibit unique variance in predicting other clinical scales if Big Five trait ratings from these various perspectives were partialled out.

At this point it is impossible to choose between the various explanations.
of our findings. Our guess is that the truth is a combination of all of these explanations. That is, defensive style may indeed represent aspects of personality that overlap with the Big Five model, and that measuring the Big Five traits from a variety of perspectives will lead to the maximum overlap between these concepts. At the same time, because of its explicit consideration of dynamic process, defensive style may have unique value as an explanatory concept that is not subsumed under the Big Five model. Furthermore, defense style may also exhibit perspective effects; style measured from the perspective of clinical observers may exhibit additional unique variance not explained by the Big Five model. Only the proverbial further research will further elucidate these issues.

Regardless of the degree of overlap between the Big Five model and defensive style, these conceptualizations are likely to play distinct roles in the planning and conducting of treatment. Consideration of a patient’s habitual way of defending has been at the core of psychodynamic thinking since the beginning (Freud, 1936/1948; Reich, 1949). The Big Five model, in contrast, arose out of traditions studying normal personality and has only recently been applied to clinical phenomena and treatment planning (Costa & Widiger, 1994). It remains to be seen if these efforts will ultimately prove as fruitful to clinical practice as has the concept of defenses.

In any case, our study provides further evidence that the DSQ measures clinically significant aspects of personality. We have shown that defensive style, as measured by the DSQ, is related to both personality traits and personality pathology in outpatient populations. The hunch of Bond et al. (1983) that defensive style could be usefully measured by self-report questionnaire has received additional support. The scale certainly deserves further attention from clinical researchers.

REFERENCES


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