Does *DSM-IV* Already Capture the Dimensional Nature of Personality Disorders?

Mark Zimmerman, MD; Iwona Chelminski, PhD; Diane Young, PhD; Kristy Dalrymple, PhD; and Jennifer Martinez, BA

ABSTRACT

Objective: Personality disorder research favors a dimensional representation of the personality disorders over categorical classification, and this is one of the central justifications for changing the diagnostic approach in *DSM-5*. However, recent research has suggested that the most important loss of information in a categorical system is the failure to account for subthreshold levels of pathology. *DSM-IV* can be considered to already accommodate a quasi-dimensional system insofar as individuals who do not meet the threshold for diagnosis can be noted to have traits of the disorder. In the present report, we examined 2 questions related to dimensional scoring of the personality disorders and the association between personality pathology and psychosocial morbidity: (1) Is the *DSM-IV* 3-point dimensional convention (absent, subthreshold traits, present) more strongly associated with indicators of psychosocial morbidity than a categorical approach toward diagnosis? and (2) How does the 3-point dimensional scoring convention compare to the 5-point system proposed for *DSM-5* and to a criterion count approach in which the dimensional score represents the sum of the number of criteria present?

Method: From September 1997 to June 2008, 2,150 psychiatric outpatients were evaluated with semistructured diagnostic interviews for *DSM-IV* Axis I and Axis II disorders and measures of psychosocial morbidity.

Results: The *DSM-IV* 3-point dimensional convention was more strongly associated with measures of psychosocial morbidity than was categorical diagnosis. There was no difference between the 3-point, 5-point, and criterion count methods of scoring the *DSM-IV* personality disorder dimensions.

Conclusions: Dimensional scoring of the *DSM-IV* personality disorders was more highly correlated with measures of psychosocial morbidity than was categorical classification. The *DSM-IV* 3-point rating convention was as valid as scoring methods using more finely graded levels of severity. These findings argue against changing the current *DSM-IV* diagnostic approach and instead advocate for the increased recognition that *DSM-IV* already includes a valid dimensional rating.

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See also Commentaries on pages 1340 and 1341.

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Corresponding author: *Mark Zimmerman, MD, Bayside Medical Center, 235 Plain St, Providence, RI 02905 (mzimmerman@lifespan.org).*

Through the years, there have been many critiques of the *DSM-III*, *DSM-III-R*, and *DSM-IV* approaches toward classifying the personality disorders. These critiques have identified problems of diagnostic overlap,[1–5] the lack of a clear boundary between normality and abnormality,[6–8] the failure to take into account findings from normal personality research,[2,9,10] and the lack of diagnostic stability over time.[4,6,8]

As a result of these problems, the *DSM-5* Work Group for Personality and Personality Disorders recommended a reformulation of the personality disorders section encompassing a novel 4-step diagnostic process as follows.

1. A 5-point severity scale to rate the level of personality functioning. This rating is based on an assessment of self-identity (identity integration, integrity of self-concept, and self-directedness) and interpersonal functioning (empathy, intimacy/cooperativeness, and complexity/integration of representations of others).
2. The Work Group recommended retaining 5 specific personality disorder "types" (borderline, antisocial, avoidant, obsessive-compulsive, schizotypal) and eliminating the other 5 personality disorders from *DSM-IV*. Each personality "type" is rated on a 5-point scale to match a prototypical "core" definition.
3. Patients are additionally rated on a subset of typical "traits" for that personality "type."
4. The evaluator determines if the patient meets the general criteria for a personality disorder.

In the present article, we focus on the recommended transition from a categorical to dimensional classification of personality disorders. The threshold set forth in *DSM* to distinguish patients with and without a personality disorder is arbitrary and does not represent a well-demarcated line separating cases and noncases.[11,12] Since the publication of *DSM-III*, the advantages of dimensional ratings over categorical classification of personality disorders have been well recognized, with some authors indicating that the question was not whether a dimensional system will replace the categorical approach, but when will it happen.[2,13]

The empirical database clearly favors a dimensional representation of the personality disorders over categorical classification. Studies of the *DSM* personality disorder criteria have consistently found that personality disorder dimensions are more reliable, with correlation coefficients of the reliability of dimensional scores higher than κ coefficients of reliability of categorical diagnoses.[14–17] The stability of personality disorder dimensions is higher than that of categorical diagnoses,[18,19] and studies of the relationship between personality disorders and psychosocial morbidity have found that more variance in the dependent variables is accounted for by personality disorder dimensions than personality disorder categories.[12,20] The superiority of the dimensional representation of the personality disorders is not surprising because when a continuously distributed variable is transformed into a dichotomy some

information is lost. Accordingly, researchers of personality disorders have advocated a dimensional approach toward evaluating them.[2,4,9,11,21,22]

While comparisons of dimensional and categorical scoring approaches have consistently favored the dimension model, 3 reports on borderline personality disorder from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project have suggested that dimensional scoring is important only for subthreshold levels of symptom severity. In the first study, Asnaani and colleagues[23] found that once the diagnostic threshold for borderline personality disorder was reached dimensional scoring was not informative. That is, the authors found that among patients who met *DSM-IV* criteria for borderline personality disorder, the number of criteria met was not significantly associated with scores on the Global Assessment of Functioning (GAF) scale, history of psychiatric hospitalizations, number of *DSM-IV* Axis I disorders, or current social functioning. Thus, dimensionality based on the number of diagnostic criteria present was not associated with indices of psychosocial morbidity once the *DSM-IV* diagnostic threshold was met.

In the second study, Zimmerman and colleagues[24] examined the other end of the severity dimension. They suggested that if a dimensional rating of personality disorder pathology is to be adopted in the diagnostic manual an important question to consider was whether mild levels of severity have clinical significance. Accordingly, they compared psychiatric outpatients with 0 or 1 *DSM-IV* criterion for borderline personality disorder and found that patients with 1 criterion had significantly more current *DSM-IV* Axis I disorders, history of suicide attempts, suicidal ideation at the time of the evaluation, history of psychiatric hospitalizations, and time missed from work due to psychiatric illness and lower ratings on the GAF. The findings of these 2 studies suggested that dimensional scoring may be important only for patients who do not meet the *DSM-IV* diagnostic threshold.

Accordingly, in the third study, Zimmerman and colleagues[25] directly tested the hypothesis that dimensional ratings of borderline personality disorder are more strongly associated with indicators of psychosocial morbidity for patients who do not versus do meet the *DSM-IV* criteria for borderline personality disorder. This hypothesis was confirmed. In the patients without borderline personality disorder, the number of borderline features was significantly associated with each of 6 indicators of psychosocial morbidity (mean correlation = 0.23), whereas in the patients with borderline personality disorder only 3 of the 6 correlations were significant (mean correlation = 0.08). Moreover, 4 of the 6 correlation coefficients were significantly higher in the patients without borderline personality disorder than in the patients with borderline personality disorder. These findings further suggested that dimensional scoring of borderline personality disorder is more important for subthreshold levels of pathology and is less critical once a patient meets the diagnostic threshold.

Clinical Points

- Increasing evidence suggests that the presence of personality disorder traits that do not meet *DSM-IV* diagnostic thresholds is associated with impaired functioning.
- *DSM-IV* allows clinicians to record the presence of subthreshold traits on Axis II.

In a critique of the *DSM-5* proposal for revising the approach toward diagnosing personality disorders, Zimmerman[26] suggested that *DSM-IV* already accommodates a quasi-dimensional convention insofar as individuals who do not meet the threshold for diagnosis can be noted to have traits of the disorder. If the most important loss of information in a categorical system is the failure to account for subthreshold levels of pathology, then this might argue against changing diagnostic approach for *DSM-5* because *DSM-IV* already allows clinicians to note the presence of personality disorder traits when the threshold is not met. Thus, the *DSM-IV* approach can be considered a 3-point dimensional convention (absent, subthreshold traits, present).

In the present report from the MIDAS project, we examined 2 questions related to dimensional scoring of the personality disorders. First, we tested the hypothesis that a 3-point dimensional convention (absent, subthreshold, present) was more strongly associated with indicators of psychosocial morbidity than a categorical approach toward diagnosis. Second, we compared a 3-point dimensional scoring approach to 2 other dimensional scoring methods based on counting the number of criteria present or converting the number of *DSM* criteria met into a uniform scaled rating.

METHOD

The MIDAS project represents an integration of research methodology into a community-based outpatient practice affiliated with an academic medical center.[27] This private practice group predominantly treats individuals with medical insurance (including Medicare but not Medicaid) on a fee-for-service basis, and it is distinct from the hospital's outpatient residency training clinic that predominantly serves lower income, uninsured, and medical assistance patients.

A comprehensive diagnostic evaluation is conducted upon presentation for treatment. During the course of the MIDAS project, the assessment battery has changed. The assessment of all *DSM-IV* personality disorders was not introduced until the study was well underway and the procedural details of incorporating research interviews into our clinical practice had been well established. The present report is based on the 2,150 patients interviewed from September 1997 to June 2008 with the full Structured Interview for *DSM-IV* Personality (SIDP-IV).[28] The data in Tables 1 and 2 show the demographic and diagnostic characteristics of the sample. The majority of the subjects were white, were female, were married or

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Table 1. Demographic Characteristics of 2,150 Psychiatric Outpatients[a]

Characteristic	n	%
Gender		
Female	1,310	60.9
Male	840	39.1
Education		
Less than high school	178	8.3
Graduated high school	1343	62.5
Graduated college or greater	629	29.3
Marital status		
Married	869	40.4
Living with someone	127	5.9
Widowed	36	1.7
Separated	112	5.2
Divorced	325	15.1
Never married	681	31.7
Race		
White	1,952	90.8
Black	95	4.4
Hispanic	58	2.7
Asian	21	1.0
Other	24	1.1

[a]Patients' mean (SD) age was 38.5 (12.8) years.

Table 2. Current *DSM-IV* Axis I Diagnoses of 2,150 Psychiatric Outpatients[a]

DSM-IV Diagnosis	n	%
Major depressive disorder	925	43.0
Bipolar disorder	111	5.2
Dysthymic disorder	179	8.3
Generalized anxiety disorder	415	19.3
Panic disorder	381	17.7
Social phobia	576	26.8
Specific phobia	225	10.5
Obsessive-compulsive disorder	138	6.4
Posttraumatic stress disorder	247	11.5
Adjustment disorder	149	6.9
Schizophrenia	8	0.4
Eating disorder	143	6.7
Alcohol abuse/dependence	207	9.6
Drug abuse/dependence	103	4.8
Somatoform disorder	167	7.8
Attention-deficit/hyperactivity disorder	143	6.7
Impulse-control disorder	123	5.7

[a]Individuals could be given more than 1 diagnosis.

single, and had some college education. The mean age of the sample was 38.5 years (SD = 12.8). The most frequent current *DSM-IV* diagnoses were major depressive disorder, social phobia, generalized anxiety disorder, and panic disorder.

Patients were interviewed by a diagnostic rater who administered the Structured Clinical Interview for *DSM-IV* (SCID)[29] and SIDP-IV. The diagnostic raters were highly trained and monitored throughout the project to minimize rater drift. Diagnostic raters included PhD-level psychologists and research assistants with college degrees in the social or biological sciences. Research assistants received 3 to 4 months of training during which they observed at least 20 interviews, and they were observed and supervised in their administration of more than 20 evaluations. Psychologists observed only 5 interviews; however, they, too, were observed and supervised in their administration of 15 to 20 evaluations. During the course of training, the senior author met with each rater to review the interpretation of every item on the SCID and SIDP-IV. Also during training, every interview was reviewed on an item-by-item basis by the senior rater who observed the evaluation and by the principal investigator who reviewed the case with the interviewer. At the end of the training period, the raters were required to demonstrate exact, or near exact, agreement with a senior diagnostician on 5 consecutive evaluations. Throughout the MIDAS project, ongoing supervision of the raters consisted of weekly diagnostic case conferences involving all members of the team. In addition, the item ratings of every case were reviewed by the senior author (M.Z.). The Rhode Island Hospital institutional review committee approved the research protocol, and all patients provided informed, written consent.

We integrated into the SCID the item from the Schedule for Affective Disorders and Schizophrenia (SADS)[30] on the amount of time missed from work due to psychiatric reasons during the past 5 years. The SCID/SADS interview also included assessments of prior psychiatric hospitalizations, lifetime history of suicide attempts, current suicidal ideation (rated on a 0-to-6 scale on the SADS), and social functioning during the past 5 years (rated on a 1-to-7 scale on the SADS). Based on the results of the SCID/SADS and SIDP-IV interviews, the Global Assessment of Functioning (GAF) was rated.

The SIDP-IV focuses on the individual's "usual self" over the past 5 years. Each *DSM-IV* criterion is rated 0 (criterion not present), 1 (subthreshold; some evidence of trait but not sufficiently pervasive or severe to be considered present), 2 (criterion present; clearly evident for the last 5 years at least 50% of the time), or 3 (criterion strongly present). Consistent with the recommended scoring guidelines of the SIDP-IV, each criterion rated 2 or 3 was counted as present, whereas ratings of 0 or 1 indicated that the criterion was absent. The questions on the SIDP-IV are grouped thematically into similar content areas, such as interpersonal relationships, interests and activities, social conformity, and emotions. Such an interview is less prone to halo effects in which ratings of individual criteria are influenced by how close the individual is to meeting criteria for a particular disorder.

The full SIDP-IV assesses the 10 *DSM-IV* personality disorders, 2 personality disorders listed in the Appendix of *DSM-IV* as disorders requiring further study (depressive and passive-aggressive personality disorder), and *DSM-III-R* self-defeating personality disorder. The present report focuses on the 10 *DSM-IV* personality disorders.

Reliability of personality disorder diagnoses was examined in 47 patients. A joint-interview design was used in which one rater observed another conducting the interview, and both of them independently made their ratings. The reliabilities of any personality disorder ($\kappa = 0.90$) and any cluster A ($\kappa = 0.79$), B ($\kappa = 0.79$), or C ($\kappa = 0.93$) personality disorder were good to excellent. Too few patients were diagnosed with individual personality disorders to calculate κ coefficients. However, intraclass correlation coefficients (ICCs) of criterion count dimensional scores were high (paranoid,

Table 3. Conversion of *DSM-IV* Criteria Into a 5-Point Rating Scale

DSM-IV Personality Disorder	No. of *DSM-IV* Diagnostic Criteria	Diagnostic Threshold	No. of *DSM-IV* Criteria for Each Point of 5-Point Rating Scale				
			0	1	2	3	4
Paranoid	7	4	0	1	2–3	4–5	6–7
Schizoid	7	4	0	1	2–3	4–5	6–7
Schizotypal	9	5	0	1–2	3–4	5–7	8–9
Histrionic	8	5	0	1–2	3–4	5–6	7–8
Borderline	9	5	0	1–2	3–4	5–7	8–9
Narcissistic	9	5	0	1–2	3–4	5–7	8–9
Antisocial	7	3	0	1	2	3–5	6–7
Avoidant	7	4	0	1	2–3	4–5	6–7
Dependent	8	5	0	1–2	3–4	5–6	7–8
Obsessive-compulsive	8	4	0	1	2–3	4–6	7–8

Table 4. Correlation Between Indicators of Psychosocial Morbidity and *DSM-IV* Cluster A Personality Disorder Dimensional Scores Based on Different Dimensional Scoring Approaches

Psychosocial Morbidity Indicator	Dichotomous Diagnosis	3-Point Dimension	5-Point Dimension	7-, 8-, or 9-Point Dimension
Paranoid personality disorder				
No. of current Axis I disorders	0.11*	0.29*	0.31*	0.31*
Global Assessment of Functioning	–0.12*	–0.25*	–0.26*	–0.26*
Suicidal ideation	0.10*	0.20*	0.20*	0.20*
No. of suicide attempts	0.03	0.09*	0.09*	0.10*
No. of psychiatric hospitalizations	0.03	0.10*	0.10*	0.10*
Time unemployed in past 5 y[a]	0.06	0.14*	0.14*	0.14*
Social functioning	0.09*	0.21*	0.22*	0.22*
Schizoid personality disorder				
No. of current Axis I disorders	0.02	0.19*	0.18*	0.17*
Global Assessment of Functioning	–0.06	–0.21*	–0.23*	–0.23*
Suicidal ideation	0.09*	0.16*	0.17*	0.17*
No. of suicide attempts	0.01	0.06	0.07	0.06
No. of psychiatric hospitalizations	0.07	0.14*	0.13*	0.13*
Time unemployed in past 5 y[a]	0.04	0.16*	0.15*	0.14*
Social functioning	0.08*	0.43*	0.44*	0.44*
Schizotypal personality disorder				
No. of current Axis I disorders	0.05	0.24*	0.25*	0.24*
Global Assessment of Functioning	–0.09*	–0.28*	–0.29*	–0.30*
Suicidal ideation	0.03	0.17*	0.18*	0.18*
No. of suicide attempts	0.00	0.05	0.06	0.08
No. of psychiatric hospitalizations	–0.01	0.11*	0.12*	0.12*
Time unemployed in past 5 y[a]	0.06	0.17*	0.19*	0.21*
Social functioning	0.08*	0.39*	0.39*	0.37*

[a]Those not expected to work (ie, retired, student, housewife, physically ill) were excluded from the analysis; thus, the sample size was 1,924.
*$P < .001$.

ICC = 0.92; schizoid, ICC = 0.95; schizotypal, ICC = 0.82; antisocial, ICC = 0.95; borderline, ICC = 0.95; histrionic, ICC = 0.91; narcissistic, ICC = 0.91; avoidant, ICC = 0.96; dependent, ICC = 0.97; obsessive compulsive, ICC = 0.90).

Data Analysis

We scored each of the 10 *DSM-IV* personality disorders in 4 ways. First, patients were diagnosed with or without the disorder based on the *DSM-IV* diagnostic threshold. Second, consistent with the *DSM-IV* approach, patients were scored on a 3-point dimension, with a score of 0 indicating the absence of all features of the disorder, a score of 1 indicating the presence of traits of the disorder not meeting the *DSM-IV* diagnostic threshold, and a score of 2 indicating that the *DSM-IV* diagnostic threshold was met. Thus, this approach differs from a dichotomous case-versus-noncase distinction in that patients below the diagnostic threshold are subdivided into those with no traits and those with at least 1 trait of the disorder. Third, consistent with the proposal by Skodol and colleagues,[12] *DSM-IV* criterion counts were converted into a uniform 5-point scoring system. We chose a 5-point scoring system because the *DSM-5* draft proposes a 5-point dimension, rather than the 6-point system used by Skodol et al. Because *DSM-IV* uses different numbers of criteria and thresholds to define the 10 personality disorders, we could not adopt a single method of transforming the number of criteria present into the 5-point rating scale. The transformation of number of criteria met for each personality disorder into the 5-point dimensional score is delineated in Table 3. Fourth, the criteria count scoring approach represents the total number of criteria met for each disorder.

For each of the 10 *DSM-IV* personality disorders, we computed correlations between the 4 scores and the following 7 indicators of psychosocial morbidity: number of current *DSM-IV* Axis I disorders, lifetime psychiatric hospitalizations, lifetime suicide attempts, suicidal ideation at the time of the evaluation, GAF ratings, social functioning ratings, and amount of time unemployed during the past 5 years due to psychiatric reasons. Because of the large number of correlations and the risk of type I error, we used an α level of .001.

We considered alternative approaches toward comparing the magnitude of the correlation coefficients. We decided not to rely on a statistical comparison of the magnitude of the correlations because the large sample size resulted in statistically significant but clinically meaningless differences. For example, a difference between correlations of 0.11 and 0.13 was statistically significant. Therefore, we instead only included as meaningful differences between correlation coefficients those that were 0.10 and greater, all of which were significantly different at the $P < .001$ level.

RESULTS

When personality disorder pathology was dichotomized as disorder presence versus absence, 34 of the 70 correlations were significant (Tables 4, 5, and 6). Across all 10 disorders, the average correlation coefficient was 0.09. When a 3-point dimensional scoring system was used, 58 of the 70 correlations were significant, and the average correlation was 0.17. Twenty-four of the 70 correlations were at least 0.10 higher

Table 5. Correlation Between Indicators of Psychosocial Morbidity and *DSM-IV* Cluster B Personality Disorder Dimensional Scores Based on Different Dimensional Scoring Approaches

Psychosocial Morbidity Indicator	Dichotomous Diagnosis	3-Point Dimension	5-Point Dimension	7-, 8-, or 9-Point Dimension
Histrionic personality disorder				
No. of current Axis I disorders	0.05	0.18*	0.18*	0.18*
Global Assessment of Functioning	−0.06	−0.16*	−0.16*	−0.17*
Suicidal ideation	0.02	0.16*	0.15*	0.16*
No. of suicide attempts	0.00	0.04	0.04	0.05
No. of psychiatric hospitalizations	0.04	0.08*	0.09*	0.10*
Time unemployed in past 5 y[a]	0.04	0.11*	0.11*	0.11*
Social functioning	0.00	0.03	0.03	0.03
Borderline personality disorder				
No. of current Axis I disorders	0.30*	0.39*	0.43*	0.44*
Global Assessment of Functioning	−0.27*	−0.35*	−0.36*	−0.36*
Suicidal ideation	0.24*	0.28*	0.31*	0.31*
No. of suicide attempts	0.15*	0.16*	0.17*	0.18*
No. of psychiatric hospitalizations	0.17*	0.20*	0.21*	0.21*
Time unemployed in past 5 y[a]	0.21*	0.25*	0.27*	0.27*
Social functioning	0.15*	0.24*	0.24*	0.23*
Narcissistic personality disorder				
No. of current Axis I disorders	0.04	0.19*	0.19*	0.18*
Global Assessment of Functioning	−0.05	−0.15*	−0.16*	−0.15*
Suicidal ideation	0.03	0.14*	0.14*	0.13*
No. of suicide attempts	0.01	0.02	0.02	0.02
No. of psychiatric hospitalizations	0.01	0.04	0.04	0.04
Time unemployed in past 5 years[a]	0.03	0.08*	0.08*	0.09*
Social functioning	0.04	0.16*	0.16*	0.14*
Antisocial personality disorder				
No. of current Axis I disorders	0.13*	0.19*	0.25*	0.18*
Global Assessment of Functioning	−0.15*	−0.19*	−0.28*	−0.20*
Suicidal ideation	0.06	0.09*	0.15*	0.10*
No. of suicide attempts	0.05	0.10*	0.08*	0.09*
No. of psychiatric hospitalizations	0.13*	0.16*	0.13*	0.16*
Time unemployed in past 5 y[a]	0.14*	0.20*	0.21*	0.20*
Social functioning	0.06	0.10*	0.17*	0.09*

[a]Those not expected to work (ie, retired, student, housewife, physically ill) were excluded from the analysis; thus, the sample size was 1,924.
*$P < .001$.

Table 6. Correlation Between Indicators of Psychosocial Morbidity and *DSM-IV* Cluster C Personality Disorder Dimensional Scores Based on Different Dimensional Scoring Approaches

Psychosocial Morbidity Indicator	Dichotomous Diagnosis	3-Point Dimension	5-Point Dimension	7-, 8-, or 9-Point Dimension
Avoidant personality disorder				
No. of current Axis I disorders	0.32*	0.44*	0.46*	0.46*
Global Assessment of Functioning	−0.20*	−0.26*	−0.28*	−0.28*
Suicidal ideation	0.18*	0.23*	0.24*	0.24*
No. of suicide attempts	0.08*	0.08*	0.08*	0.08*
No. of psychiatric hospitalizations	0.03	0.04	0.04	0.04
Time unemployed in past 5 y[a]	0.14*	0.17*	0.17*	0.18*
Social functioning	0.26*	0.36*	0.37*	0.36*
Dependent personality disorder				
No. of current Axis I disorders	0.15*	0.30*	0.32*	0.32*
Global Assessment of Functioning	−0.10*	−0.20*	−0.22*	−0.22*
Suicidal ideation	0.11*	0.20*	0.22*	0.22*
No. of suicide attempts	0.09*	0.07	0.08*	0.08*
No. of psychiatric hospitalizations	0.04	0.04	0.06	0.06
Time unemployed in past 5 y[a]	0.06	0.13*	0.15*	0.14*
Social functioning	0.08*	0.17*	0.18*	0.18*
Obsessive-compulsive personality disorder				
No. of current Axis I disorders	0.11*	0.19*	0.22*	0.22*
Global Assessment of Functioning	−0.08*	−0.11*	−0.12*	−0.13*
Suicidal ideation	0.08*	0.11*	0.12*	0.13*
No. of suicide attempts	0.02	0.04	0.02	0.02
No. of psychiatric hospitalizations	0.03	0.01	−0.01	0.01
Time unemployed in past 5 y[a]	0.02	0.01	0.00	0.01
Social functioning	0.13*	0.15*	0.15*	0.16*

[a]Those not expected to work (ie, retired, student, housewife, physically ill) were excluded from the analysis; thus, the sample size was 1,924.
*$P < .001$.

based on the 3-point scoring system than the 2-point dichotomous diagnosis. The results for the 5-point scoring system were similar to those for the 3-point scoring: 59 of the 70 correlations were significant, and the average correlation was 0.18. A comparison of the 3-point and 5-point scoring approaches found that none of the 70 correlations differed by at least 0.10. Similarly, there was no difference between the 5-point scoring approach and the criterion count method. Based on the criterion count scoring method, 59 of the 70 correlations were significant, and the average correlation was 0.18. None of differences between the 5-point and criterion count methods was 0.10 or greater.

DISCUSSION

Consistent with the results of the Collaborative Longitudinal Personality Disorders Study (CLPS),[20] we found that dimensional scoring of the *DSM-IV* personality disorders is more highly correlated with measures of psychosocial morbidity than is categorical classification. The superiority of dimensional scoring over categorical classification cut across all personality disorders, thereby extending the findings of the CLPS, which was limited to only 4 personality disorders.

Zimmerman[26] suggested that critics of the *DSM-IV* categorical system of diagnosis have ignored the fact that *DSM-IV* already includes a quasi-dimensional convention for classifying the personality disorders, albeit a limited, 3-point approach (disorder absent, subthreshold personality disorder traits, disorder present). The results of the present study suggest that the *DSM-IV* 3-point rating convention is as valid as a scoring system using more finely graded, multipoint, levels of severity. None of the correlation coefficients based on a 5-point or criterion count scoring method was 0.10 higher than the *DSM-IV* 3-point approach. In fact, only 3 of the 70 correlation coefficients based on the 5-point

or criterion count scoring methods were 0.05 higher than the correlation based on the 3-point scoring method. These findings are consistent with the hypothesis that the most important loss of information in a categorical system is the failure to account for subthreshold levels of pathology.

The obvious implication of these results is that they raise questions about the need to modify *DSM-IV* to accommodate dimensional ratings. The superiority of dimensional ratings to categorical classification was one of the central justifications for radically changing the *DSM-IV* approach toward personality disorder classification.[31]

A problem with the *DSM-IV* approach, however, is that subthreshold traits are not accounted for by diagnostic coding. There is no formal numerical code to indicate the presence of traits of a specific disorder. One could consider a diagnosis of personality disorder not otherwise specified, although this still does not permit the specification of which personality disorder traits are present. Because subthreshold traits are clinically significant, the change that is empirically supported for *DSM-5* relates to how these traits are captured by the diagnostic coding system rather than a change in classification approach.

It should be noted that the present study did not directly examine the draft proposal for *DSM-5* because the *DSM-5* proposal is based on 5-point ratings of prototypical descriptions of the personality disorders. In the present study, we compared different methods of counting criteria. In the prototype matching approach, ratings are not necessarily based on the number of traits that are present. In fact, explicit guidelines for making the ratings are not provided. Thus, clinicians could attribute more or less significance to the severity of individual traits, presence of particular traits, or overall number of traits. It is therefore not surprising that the reliability of prototype matching approaches is lower than the reliability of the *DSM-IV* criteria application approach.[32] Nonetheless, it is possible that a 5-point rating system will demonstrate superior validity to a 3-point system based on a prototype rating approach.

In the present study, the ratings of the personality disorder criteria were based on a semistructured interview. It is possible that in clinical practice, in which clinicians are not as comprehensive in their assessment of all diagnostic criteria, a 5-point rating system will be more valid than a 3-point system.

We did not statistically compare the correlation coefficients. The large sample size, usually considered a strength of research, resulted in small differences in correlation coefficients being significantly different. We did not consider an overall difference between correlation coefficients of 0.02 to be clinically meaningful and therefore did not statistically compare the correlation coefficients.

The present report was based on a sample of patients presenting for outpatient treatment. However, almost one-quarter of the patients evaluated in the MIDAS project had a history of at least 1 psychiatric hospitalization. The study was conducted in a single clinical practice in which the majority of the patients were white, were female, and had health insurance. Replication of the results in other clinical samples with different demographic characteristics, and in general population epidemiologic samples, is warranted. A limitation of the present study is that we examined the association between personality disorder dimensions and a limited number of external validators. Other variables such as quality of life and work presenteeism were not assessed. Also, we did not examine other aspects of validity such as long-term stability. A strength of the study is the use of highly trained diagnostic interviewers to reliably administer a semistructured diagnostic interview.

In conclusion, the results of the present study are consistent with previous reports demonstrating the superiority of dimensional scoring of personality disorders compared to categorical classification. Moreover, a 5-point rating system (as proposed for *DSM-5*) is as valid as a criterion count approach that uses a 7-, 8-, or 9-point scale (depending on the number of criteria used to define the disorder). Likewise, the strength of association with multiple indices of psychosocial morbidity was not increased when expanding the *DSM-IV* 3-point scoring to the proposed *DSM-5* 5-point system. Accordingly, if changes to the official nomenclature are to be based on empirical demonstration of superiority of a new approach to a previous one, then we believe that it is premature to change the existing *DSM-IV* diagnostic approach because of its presumed failure to capture the dimensionality of personality disorders. Instead, we advocate for increasing recognition that *DSM-IV* already includes a valid dimensional rating convention.

Author affiliations: Department of Psychiatry and Human Behavior, Brown University School of Medicine, Providence, Rhode Island.
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