SPECIAL ARTICLE

Dimensional models of personality disorder

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There is little doubt that someday the classification of personality disorder will be dimensional. The failures of the categorical model are so many and are so well established that it is difficult to imagine that this model will ultimately survive. This paper provides a brief discussion of the major alternative proposals for a dimensional classification of personality disorder. It is possible that the authors of a future edition of a psychiatric diagnostic manual will simply choose one of these alternative proposals. However, the ideal solution might be to develop a common, integrative representation including the important contributions of each of the models.

Key words: Personality disorder, classification, dimensional, categorical

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Work is now underway toward the revision of the personality disorders sections of the ICD-10 (1) and the DSM-IV (2). There is perhaps little doubt that someday the classification of personality disorder will be dimensional. The failures of the categorical model are so many and are so well established that it is difficult to imagine that this model will ultimately survive. This paper, though, will not be concerned with a further reiteration of these failures, as they have been well specified in quite a number of prior reviews (3). This paper will focus instead on the future of personality disorder classification.

In 1999, a DSM-V Research Planning Conference was held under joint sponsorship of the American Psychiatric Association and the National Institute of Mental Health. The Nomenclature Work Group, charged with addressing fundamental assumptions of the diagnostic system, concluded that it is "important that consideration be given to advantages and disadvantages of basing part or all of DSM-V on dimensions rather than categories" (4). They recommended in particular that initial efforts toward a dimensional model of classification be conducted with the personality disorders. The DSM-V Research Planning Conference was followed by a series of international conferences to further enrich the empirical data base in preparation for the eventual development of the psychiatric diagnostic manual. The first such conference was devoted to reviewing the research and setting a research agenda that would be most useful and effective in leading the field toward a dimensional classification of personality disorder (5).

ALTERNATIVE DIMENSIONAL MODELS

By one count, there are 18 alternative proposals for a dimensional classification of personality disorder (6). This number is itself a testament to the interest in shifting the ICD-10 and DSM-IV personality disorder classifications to a dimensional model. This article will confine its coverage to what might be reasonably considered to be primary alternatives (7,8): a) a dimensional classification of the existing categories (9); b) the 18 scales of the Dimensional Assessment of Personality Pathology (DAPP, 10) and/or the 12 scales of the Schedule for Nonadaptive and Adaptive Personality (SNAP, 11); c) the three polarities of Millon (12); d) the seven-factor model of Cloninger (13); and e) the five-factor model (FFM) (14).

A DIMENSIONAL CLASSIFICATION OF THE EXISTING CATEGORIES

One proposal is to simply provide a dimensional profile of the existing (or somewhat revised) diagnostic categories (9,15). A personality disorder could be characterized as "prototypic" if all of the diagnostic criteria are met, "moderately present" if one or two criteria beyond the threshold for a categorical diagnosis are present, "threshold" if the patient just barely meets diagnostic threshold, "subthreshold" if symptoms are present but are just below diagnostic threshold, "traits" if no more than one to three symptoms are present, and "absent" if no diagnostic criteria are present (9). This proposal was actually made for DSM-IV (15), but was rejected at that time as providing a too radical shift in the conceptualization of personality disorder (16). It is perhaps now the most conservative of proposals and, with Andrew Skodol appointed as the Chair of the DSM-V Personality Disorders Work Group, it is probably the proposal most likely to be implemented for the nomenclature used predominately within the United States (9).

A significant limitation of this proposal is that clinicians would continue to be describing patients in terms of markedly heterogeneous and overlapping constructs. A profile description of a patient in terms of the anankastic, dissocial, dependent, histrionic, anxious and other existing personality disorder constructs would essentially just reify the excessive diagnostic co-occurrence that is currently being obtained (17). The problem of excessive diagnostic co-occurrence would be "solved" by simply accepting it.

A modified version of the proposal has been provided by Westen and Shedler (18). They suggest that the clinician be

provided a narrative description of a prototypic case of each personality disorder (half to full page, containing 18-20 features), with the clinician indicating on a 5-point scale the extent to which a patient matches this description (i.e., 1=little to no match; 2=slight match, only minor features; 3=significant match; 4=good match, patient has the disorder; and 5=very good match, exemplifies the disorder, prototypic case). Westen et al (19) suggest that their version of the prototypal matching procedure addresses the problem of diagnostic co-occurrence. They compared empirically the extent of diagnostic co-occurrence obtained with their prototypal matching to that obtained if the same clinicians systematically considered each diagnostic criterion. They reported considerably less diagnostic co-occurrence with their prototypal matching.

However, their findings in fact indicated that their prototypal matching procedure is "solving" the problem of diagnostic co-occurrence by simply neglecting to provide an adequate recognition of its existence. The fact that diagnostic co-occurrence increases when clinicians are encouraged to consider specific features of other personality disorders suggests that this co-occurrence is actually present but is not being recognized when clinicians are allowed to base their diagnoses on whatever feature or feature(s) they wish. Prior studies have shown that clinicians who do not systematically use diagnostic criterion sets grossly underestimate diagnostic co-occurrence and the extent of maladaptive personality functioning that is in fact present (20).

The prototypal matching of Westen and Shedler (18) can be supported by the Shedler-Westen Assessment Procedure-200 (SWAP-200). The SWAP-200 is a clinician rating form of 200 items, drawn from the psychoanalytic and personality disorder literature (21). Initial research with the SWAP-200 has reported good to excellent convergent and discriminant validity (21,22). The positive results obtained with the SWAP-200 should be tempered though by methodological limitations of the initial research (7,23,24). For example, clinicians who have provided the personality disorder criterion ratings have typically been the same persons who have provided the SWAP-200 rankings. This is comparable to having semi-structured interviewers provide their own criterion diagnoses in a study testing the validity of their semi-structured interview assessments. No such studies have ever been conducted because they would not be particularly informative. An additional methodological concern is that the clinicians in each study have been provided with guidelines for the distribution of their rankings (23,24). For example, in the typical SWAP-200 study, clinicians are required to identify half of the items as being absent, with an increasingly restrictive distribution for higher ranked items. Only eight SWAP-200 items can be given the highest ratings (21), no matter the opinions of the raters or the symptoms present. Convergent and discriminant validity of any semi-structured interview assessment of personality disorder diagnostic criteria would be improved dramatically if interviewers were instructed to code half of the diagnostic criteria as absent and to identify only a few of them as present. A final concern is that in all prior SWAP-200 studies the ratings were provided by persons who already knew the patients very well. It is not at all clear that reliable or valid SWAP-200 ratings would or could be made of persons during an initial clinical or research intake interview, which is precisely when a diagnostic assessment is typically conducted.

REORGANIZATION OF DIAGNOSTIC CRITERIA

Two predominant dimensional models of personality disorder symptomatology are the 18 scales of the DAPP (10) and the 12 scales of the SNAP (11). These two instruments were constructed by factor analyzing personality disorder diagnostic criteria, along with additional features, to yield more distinctive scales of maladaptive personality traits. The DAPP and SNAP scales provide profile descriptions of symptomatology that would be more differentiating and less susceptible to construct and scale overlap than five-point Likert scales of the existing diagnostic categories. Patients could be described more precisely with respect to elevations on such scales as mistrust, manipulativeness, insecure attachment, identity problems, affective lability, and self-harm.

A potential limitation of the DAPP and SNAP approaches is an absence of an explicit coordination with general personality structure. Coordinating the psychiatric manual with general personality structure would be consistent with the research indicating the lack of a distinct boundary between, and the close relationship of, normal and abnormal personality functioning, and would bring to psychiatry a wealth of scientific research on the etiology, course, and mechanisms of personality structure (6,14). The SNAP is coordinated in theory with three fundamental temperaments (i.e., positive affectivity, negative affectivity, and constraint), but factor analysis of the 12 SNAP scales does not generally obtain a corresponding three-factor solution. Joint factor analyses of the DAPP and SNAP have usually yielded four factors, described as negative affectivity, positive affectivity, antagonism, and constraint, which do correspond well with four of the five domains of personality functioning included within the FFM (25).

MILLON'S THREE POLARITIES

Millon hypothesized that each of the personality disorders reflects elevations on one or more of six fundamental dispositions of general personality structure organized with respect to three polarities (12). The three polarities are pleasure-pain, active-passive, and self-other. As suggested by Strack (26), Millon's personality disorder theoretical model is perhaps "one of the most frequently applied personality frameworks of this generation". Millon has been a prominent theorist in the conceptualization of personality

disorder. The inclusion of the avoidant personality disorder in DSM-III is due largely to him. The Millon Clinical Multiaxial Inventory-III (MCMI-III) (27) might be the most favored self-report inventory among practicing clinicians for the assessment of the personality disorders.

His particular theoretical model, however, is among the least studied (28), and the limited amount of research that has been conducted has often been refutative. For example, O'Connor and Dyce (29), using a variety of samples and assessment instruments provided by nine previously published studies, demonstrated that personality disorders do not covary in a manner that is consistent with how they are described in terms of the three polarities.

The Millon Index of Personality Styles (MIPS, 30) is a self-report measure of general personality functioning that includes scales constructed to directly assess the fundamental polarities. Piersma et al (31) reported that the MIPS assessment of the three polarities does not in fact relate to personality disorders in the manner outlined by the theory, even when the personality disorders were assessed with the MCMI-III. A replication of the findings of Piersma et al demonstrated incremental validity for an alternative dimensional model (32).

CLONINGER'S SEVEN FACTOR MODEL

Cloninger (13) has proposed a seven-factor model of normal and abnormal personality functioning. The seven factors consist of four fundamental temperaments, three of which are said to be associated with particular neurotransmitters: novelty seeking (dopamine), harm avoidance (serotonin), reward dependence (norepinephrine), and persistence. In addition, he suggests that there are also three character dimensions of self-directedness, cooperativeness, and self-transcendence, that developed through a nonlinear interaction of temperament, family environment, and life experiences (33).

Cloninger's theory is grand in its effort to integrate humanistic, existential theory with modern neurobiology (33) and his seven-factor model has generated a substantial amount of research. However, efforts to validate the seven-factor structure have raised significant concerns (34-37), and there does not appear to be support for the temperament and character distinction (36,38). The four temperaments do not appear to be well tied to the existing literature on childhood temperaments (39), and current understanding of neurobiology appears to be inconsistent with the model (40).

FIVE FACTOR MODEL (FFM)

An empirical approach for determining personality structure is through the study of the language. Language can be understood as a sedimentary deposit of the observations of persons over the thousands of years of the language's development and transformation. The most important domains of personality functioning would be those with the greatest number of words to describe and differentiate their various manifestations and nuances, and the structure of personality will be evident by the empirical relationship among the trait terms. Such lexical analyses of languages have typically identified five fundamental dimensions of personality: extraversion (or positive emotionality), antagonism, conscientiousness (or constraint), neuroticism (or negative affectivity), and openness (or unconventionality) (41). Each of these five broad domains can be differentiated further in terms of underlying facets. For example, the facets of antagonism versus agreeableness include suspiciousness versus trusting gullibility, tough-mindedness versus tender-mindedness, confidence and arrogance versus modesty and meekness, exploitation versus altruism and sacrifice, oppositionalism and aggression versus compliance, and deception and manipulation versus straightforwardness and honesty (42).

The FFM has considerable empirical support with respect to underlying genetic structure (43), childhood antecedents (39), temporal stability across the life span (44), universality (45) and functional relevance for a wide variety of important life outcomes, including work, well-being, marital stability, and even physical health (46). In addition, a considerable body of research has well documented that personality disorders are readily understood as maladaptive variants of the domains and facets of the FFM (7,14,47-50). Widiger et al (51) outline a procedure for the diagnosis of personality disorder in terms of the FFM. A clinical illustration of this procedure is provided by Widiger and Lowe (52).

A significant limitation of the FFM, as it is currently assessed, is that some of the lower order facet scales focus primarily on the normal variants of personality functioning (e.g., altruism, openness to aesthetics) rather than on the maladaptive personality functioning that would be of most clinical interest.

INTEGRATION OF ALTERNATIVE MODELS

It is possible that the authors of a future edition of a psychiatric diagnostic manual will simply choose one of the above alternative proposals. However, the ideal solution might be to develop a common, integrative representation that includes the important contributions and potential advantages of each of the models (6). Each model does appear to have some flaws and deficits, and each model would likely have at least some useful features. In fact, it is apparent that the alternative dimensional models are readily integrated within a common hierarchical structure (6,53).

The FFM is itself well integrated with the DAPP (10) and the SNAP (11). For instance, the conscientiousness domain of the FFM aligns well with the compulsivity domain of the DAPP and the constraint domain of the SNAP. The

lower order SNAP scales of workoholism and impulsivity, and the lower order DAPP scale of compulsivity, align well with the FFM personality scales of achievement striving, dutifulness, order, self-discipline, deliberation, and competence. Within an integrated dimensional model, one could retain the FFM domain scales (e.g., conscientiousness) but use DAPP and/or SNAP scales for the maladaptive variants. For example, high scores on FFM conscientiousness would lead to a consideration of DAPP compulsivity and/or SNAP workaholism, whereas low scores would lead to an assessment of DAPP passivity and SNAP impulsivity (14).

In any case, it is hoped that the authors of the ICD and DSM will recognize the importance and value of shifting to a dimensional classification of personality disorder, and one that is well integrated with basic science research on general personality structure. An integration of psychiatry's classification of personality disorder with dimensional models of general personality structure would transfer to the psychiatric nomenclature a wealth of knowledge concerning the origins, development, mechanisms, and stability of personality (14), and provide a bold and innovative paradigmatic shift that would help advance and reinvigorate a seriously troubled field.

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