Clinical Application of the Five-Factor Model

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Abstract
The Five-Factor Model (FFM) has become the predominant dimensional model of general personality structure. The purpose of this paper is to suggest a clinical application. A substantial body of research indicates that the personality disorders included within the American Psychiatric Association’s (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM) can be understood as extreme and/or maladaptive variants of the FFM (the acronym “DSM” refers to any particular edition of the APA DSM). In addition, the current proposal for the forthcoming fifth edition of the DSM (i.e., DSM-5) is shifting closely toward an FFM dimensional trait model of personality disorder. Advantages of this shifting conceptualization are discussed, including treatment planning.

The Five-Factor Model (FFM) has arguably become the predominant dimensional model of general personality structure within psychology (Casp, Roberts, & Shiner, 2005; John, Naumann, & Soto, 2008). The FFM was derived originally from studies of the English language with an aim toward identifying the essential domains of personality. This lexical hypothesis suggests that the relative importance of a trait is indicated by the number of terms that have been developed within a language to describe the different magnitudes and nuances of that trait, and the structure of the traits is evident by the relationship among the trait terms (see Goldberg, 1993, for a discussion of and support for the lexical paradigm). Five broad domains have been isolated in the lexical studies of the English language: Extraversion (otherwise known as surgency or positive affectivity), Agreeableness (versus antagonism), Conscientiousness (or constraint), Neuroticism (emotional instability or negative affectivity), and Openness to Experience (intellect or unconventionality). Subsequent lexical studies have been conducted on many additional languages (e.g., Chinese, Czech, Dutch, Filipino, German, Greek, Hebrew, Hungarian, Italian, Korean, Polish, Russian, Spanish, and Turkish), and this research has confirmed reasonably well the existence of the FFM domains (Ashton & Lee, 2001; John et al., 2008), although there is relatively less support for the universality of the fourth and fifth domains (i.e., Neuroticism and Openness to Experience) than there is for the first three (De Raad et al., 2010).

“Personality psychology has been long beset by a chaotic plethora of personality constructs that sometimes differ in label while measuring nearly the same thing, and sometimes have the same label while measuring very different things” (Funder, 2001, p. 200). One of the strengths of the FFM has been its robustness. It was constructed to be able to accommodate all of the trait terms within the language and subsequent research has indicated, not surprisingly then, that it also accommodates well the personality trait constructs included within alternative models of personality structure (Costa & McCrae, 1992b; O’Connor, 2002). “One of the great strengths of the Big Five taxonomy is that it can capture, at a broad level of abstraction, the commonalities among most of the existing systems of personality traits, thus providing an integrative, descriptive model” (John et al., 2008, p. 139). Goldberg (1993) even described the FFM as analogous to a Cartesian map of the world, its domains serving as fundamental coordinates for identifying the convergence and divergence among all trait constructs. Researchers have indeed found the FFM to be quite useful in organizing vast amounts of otherwise disparate trait research. For example, Feingold (1994) organized the considerable body of research concerning gender differences in personality with respect to the FFM; Shiner and Caspi (2003) productively organized the large body of temperament literature with respect to the FFM; Roberts and Del Vecchio (2000) provided a compelling and informative integrative summary of the temporal stability research of personality in terms of the FFM; Segerstrom (2000) structured the research on personality and health with respect to the FFM; and Weinstein, Capitano, and Gosling (2008) similarly organized research concerning intra- and inter-species animal behavior in terms of the FFM.

Costa and McCrae (1992a) foresaw as well that the FFM might prove to be useful within clinical practice, “in under-
standing the patient, formulating a diagnosis, establishing rapport, developing insight, anticipating the course of therapy, and selecting the optimal form of treatment for the patient” (p. 5). We discuss within this article the clinical application of the FFM, emphasizing in particular its potential value in description and diagnosis, as well as treatment planning.

**PATIENT DESCRIPTION AND DIAGNOSIS**

The authoritative source for the description and diagnosis of personality disorder is the American Psychiatric Association’s (APA) Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; APA, 2000). DSM-IV-TR includes 10 personality disorders in the main body of its text (e.g., borderline, antisocial, and narcissistic) as well as two provisional diagnoses within an appendix (i.e., depressive and negativistic). Each of these personality disorders can be conceptualized as extreme and/or maladaptive variants of the domains and facets of the FFM (Widiger & Costa, 1994).

Widiger, Trull, Clarkin, Sanderson, and Costa (2002) coded each of the DSM-IV-TR diagnostic criteria in terms of the FFM, providing thereby an FFM profile of each respective personality disorder. However, these profile descriptions were confined to how the personality disorders were diagnosed within DSM-IV-TR. It is not necessarily the case that the DSM-IV-TR provides the most optimal or valid descriptions (Westen & Shedler, 1999). Therefore, Lynam and Widiger (2001) surveyed researchers and Samuel and Widiger (2004) surveyed clinicians, asking them to describe a prototypic case of each respective DSM-IV-TR personality disorder in terms of the FFM. The researchers’ and clinicians’ descriptions converged well, ranging from .90 for dependent to .97 for antisocial. Convergence with the Widiger et al. coding was not as high, as the researchers’ and clinicians’ descriptions went beyond the DSM-IV-TR criterion sets to include additional features (e.g., for the obsessive-compulsive personality disorder, low openness to feelings and actions, and low warmth and excitement-seeking).

It might not seem a major stretch of the imagination to suggest that a disorder of personality is a maladaptive variant of general personality structure. However, there is significant opposition to this perspective, suggesting that a disorder of personality cannot be understood simply as a constellation of maladaptive personality traits (Gunderson, 2010; Hopwood, 2011; Shedler et al., 2010). Nevertheless, there is now a considerable body of empirical support for the hypothesis that the DSM-IV-TR personality disorders are maladaptive variants of the FFM domains and facets. For example, O’Connor (2005) conducted an interbattery factor analysis of personality disorder covariation matrices reported in 33 studies and the relationship of the FFM to these personality disorders reported in 20 additional data sets and concluded that “the dimensions that underlie personality disorders can be understood by reference to dimensions that have emerged from research on normal personality” (p. 340). Saulsman and Page (2004) conducted a meta-analysis of FFM personality disorder research and concluded that the “results of this meta-analysis are consistent with the view that personality disorders can be conceptualized using the five-factor model of normal personality” (p. 1075). Markon, Krueger, and Watson (2005) conducted meta-analytic and exploratory hierarchical factor analyses of numerous measures of normal and abnormal personality, and obtained consistently a five-factor solution that they indicated “strongly resembles the Big Five factor structure commonly described in the literature, including neuroticism, agreeableness, extraversion, conscientiousness, and openness factors” (p. 144).

Samuel and Widiger (2008) replicated and extended the meta-analysis of Saulsman and Page with 16 studies (containing 18 independent samples) that administered a facet-level assessment of the FFM. They concluded that the findings were “congruent at the facet level with hypothesized FFM translations of the DSM-IV-TR personality disorders” (p. 1326), albeit they did note significant variation of the strength of findings across different assessment instruments.

**FIVE-FACTOR MODEL OF PERSONALITY DISORDER**

Widiger, Costa, and McCrae (2002) provided a 4-step procedure for the diagnosis of a personality disorder from the perspective of the FFM: (1) obtain a description of the client’s personality traits with respect to the domains and facets of the FFM, (2) identify the problems, impairments, and/or maladaptive variants of each elevated normal personality trait; (3) determine whether the impairments are sufficiently significant to warrant a diagnosis; and (4) determine whether the constellation of FFM traits matches the profile for a particular personality disorder pattern. The first step is required; the subsequent three are all optional depending upon the clinician’s or researcher’s particular interests or needs. Details regarding this 4-step procedure are provided elsewhere (e.g., Widiger & Lowe, 2007; Widiger & Mullins-Sweatt, 2009), but an abbreviated summary will be provided herein.

**Step 1**

The first step of the FFM 4-step procedure is to obtain a hierarchical and multifactorial description of an individual’s general personality structure in terms of the domains and facets of the FFM. There are quite a number of alternative measures to facilitate this description, which perhaps is itself a testament to the interest in the FFM (DeRaad & Perugini, 2002). These alternative measures include various self-report inventories (e.g., Costa & McCrae, 1992b; DeYoung, Quilty, & Peterson, 2007; Goldberg et al., 2006; Van Kampen, 2009), a semistructured interview (Trull, Widiger, & Burr, 2001), childhood rating scales (Mervielde, De Clercq, De Fruyt, & Van Leeuwen, 2005), and clinician brief rating scales (e.g., Mullins-Sweatt et al., 2006).
Step 2

Step 2 of the 4-step procedure is the identification of any maladaptive variants that might be associated with any particular trait elevation. Widiger, Costa, et al. (2002) provided a reasonably comprehensive list of potential impairments that could be associated with each of the 60 poles of the 30 facets of the FFM. Researchers are also now developing measures specifically to assess these maladaptive variants of the domains and facets of the FFM (e.g., De Clercq, De Fruyt, Van Leeuwen, & Mervielde, 2006; Piedmont, Sherman, Sherman, Dy-Liacco, & Williams, 2009). Simms et al. (2011), for example, are using item response theory analyses to identify extreme FFM traits and to develop an optimal set of scales for their assessment. Lynam et al. (2011) developed scales for the assessment of psychopathic personality traits from the perspective of the FFM. They first identified which facets of the FFM are most relevant for the description of psychopathy, considering a survey of researchers (Lynam & Widiger, 2001), survey of clinicians (Samuel & Widiger, 2004), coding of the DSM-IV-TR criteria for antisocial personality disorder (Widiger, Trull, et al., 2002), and research correlating measures of the FFM to measures of antisocial or psychopathic personality disorder (e.g., Samuel & Widiger, 2008). They identified 18 facets of the FFM as being potentially relevant (Lynam & Widiger, 2007): low anxiousness, low depressive-ness, low self-consciousness, and low vulnerability, as well as high angry hostility and impulsivity from Neuroticism; low warmth and high assertiveness and excitement-seeking from Extraversion; low trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness from Agreeableness; and low dutifulness, self-discipline, and deliberation from Conscientiousness. They then developed scales to assess psychopathic variants of these FFM facets: Unconcern, Self-Contentment, Self-Assurance, and Invulnerability, as well as Anger and Urgency from Neuroticism; Coldness, Dominance, and Thrill-Seeking from Extraversion; Distrust, Manipulation, Self-Centeredness, Oppositional, Arrogance, and Callousness from antagonism; and Disobliged, Impersitence, and Rashness from low Conscientiousness (respectively). Similar scales for the assessment of schizotypal (Edmundson, Lynam, Miller, Gore, & Widiger, 2011), histrionic (Tomiatti, Gore, Lynam, Miller, & Widiger, 2012), borderline (Mullins-Sweatt et al., 2012), obsessive-compulsive (Samuel, Riddle, Lynam, Miller, & Widiger, 2012), narcissistic (Glover, Miller, Lynam, Crego, & Widiger, 2012), dependent (Gore, Presnall, Lynam, Miller, & Widiger, 2012), and avoidant (Lynam, Loehr, Miller, & Widiger, 2012) FFM personality traits have since been developed.

One concern that has been raised with respect to the FFM of personality disorder is its potential complexity (First, 2005). To the extent that the model is comprehensive in its coverage of maladaptive personality functioning there is indeed the potential for any particular individual’s FFM profile to be exceedingly complex. Some degree of complexity in trait description can be addressed through factor analytic methods to reduce redundancy (e.g., Krueger et al., 2011; Simms et al., 2011). In addition, in step 2 of the 4-step procedure maladaptive facets would be assessed only if there is an elevation on a respective domain. For example, if a person is high in Agreeableness then there would be little need to assess for the many maladaptive variants of antagonism. An assessment of the five broad domains can serve in part as a screening process (exceptions to this can occur if a person is both extremely high and extremely low on facets within the same domain). An FFM assessment of personality disorder generally takes half the amount of time than an assessment of the DSM-IV-TR personality disorders, as much of the administration of the latter is spent in the assessment of overlapping diagnostic criteria, many to most of which are not present (Widiger & Lowe, 2007). Finally, further simplification can occur by confining the assessment just to the domain level. A considerable body of information is provided at the domain level (e.g., see the discussion of treatment planning) and so clinicians can opt for a confinement of their FFM description just to the five domains.

Step 3

The third step of the 4-step procedure is to determine whether the impairment and distress reach a clinically significant level of functioning, thereby warranting a diagnosis of personality disorder. The FFM of personality disorder is dimensional but also recognizes that distinctions along the continua must be made for various social and clinical decisions, including whether to hospitalize, medicate, provide disability, and/or insurance coverage, to name just a few. It is clear that the diagnostic thresholds for the DSM-IV-TR personality disorders do not relate well to any one of these clinical decisions, hence the lack of clinical utility for the existing nomenclature (Verheul, 2005). In addition, any single diagnostic threshold is unlikely to be optimal for all of these different clinical decisions. A potential advantage of a dimensional classification is that different thresholds can be provided for different social and clinical decisions (Mullins-Sweatt & Lengel, 2012). The diagnostic system could then be constructed to maximize utility for different clinical decisions, an option that might be quite helpful for various public health care services and agencies.

With respect to the specific threshold for the fundamental question of whether the person should be provided with a personality disorder diagnosis, we suggest that a useful guide for this decision is the global assessment of functioning scale on Axis V of DSM-IV-TR (APA, 2000). A score of 71 or above indicates a normal range of functioning (i.e., problems are transient and expectable reactions to stressors, with no more than slight impairments), whereas a score of 60 or below would represent a clinically significant level of impairment (moderate difficulty in social or occupational functioning, such as having few friends or significant conflicts with co-workers). This point of demarcation is arbitrary in that it does not carve...
nature at a discrete joint but it provides a reasonable basis for identifying the presence of disorder that can be used consistently across different personality disorders (Widiger & Trull, 2007). A discussion of the empirical support for (and potential limitations of) the GAF for clinical usage is provided by Hilsenroth et al. (2000).

**Step 4**

The fourth step of the FFM of personality disorder is a quantitative matching of the individual’s personality profile to profiles of theoretically, socially, or clinically important constructs for those researchers or clinicians who wish to continue to provide a single diagnostic term to describe a heterogeneous profile of maladaptive personality traits. One method of obtaining this profile matching index is to correlate a patient’s FFM profile with the FFM profile for a prototypic case of a respective syndrome (Miller, Bagby, Pilkonis, Reynolds, & Lynam, 2005). Another approach is to simply sum the number of the FFM maladaptive variants that are present for a respective syndrome, such as the 12 scales of the Five-Factor Borderline Inventory (Mullins-Sweatt et al., 2012).

DSM-5 will continue to include some syndromal personality types (e.g., antisocial and borderline) and we expect that researchers and clinicians will continue to study and treat patients in terms of these heterogeneous personality syndromes. The FFM profile matching indices provide a bridge between the syndromal constructs of the DSM with the FFM trait profiles. Nevertheless, we also expect that in time clinicians and researchers will gravitate toward the more homogeneous and distinct domains and facets of the FFM (advantages in doing so will be discussed later). The ultimate purpose of the FFM is not simply to provide an alternative means to return to the problematic DSM-IV-TR heterogeneous syndromes (Clark, 2007). We feel that the more specific and precise information provided by the person’s actual FFM trait profile will be more informative than the extent to which the person is close to the FFM profile of a hypothetical syndrome. Using the FFM to return to the DSM-IV categorical diagnoses does not solve and only perpetuates the inherent limitations of these categories. For example, the heterogeneity within the categories will remain (e.g., persons who match a DSM-IV prototype may do so for different reasons). We expect (or at least hope) that clinicians and researchers in the future will be more interested in the extent to which a person is extraverted, emotionally dysregulated, and/or antagonistic than the extent to which he or she is antisocial or borderline.

**DSM-5**

The limitations of the DSM-IV-TR categorical diagnoses, along with the empirical support for and advantages of the FFM, have contributed to the proposal of the authors of the forthcoming DSM-5 to shift the diagnosis of personality disorders much closer to the FFM. Currently proposed for DSM-5 is a 5-domain, 25-trait dimensional model of maladaptive personality (Skodol, 2012). As expressed by the authors of this proposal, “the proposed model represents an extension of the Five Factor Model (FFM; Costa & Widiger, 2002) of personality that specifically delineates and encompasses the more extreme and maladaptive personality variants” (APA, 2012, p. 7). DSM-5 emotional dysregulation aligns with FFM Neuroticism, DSM-5 detachment aligns with FFM Introversion, DSM-5 psychoticism (or peculiarity) aligns with FFM Openness, DSM-5 antagonism aligns with FFM Antagonism, and DSM-5 disinhibition aligns with low FFM Conscientiousness.

Currently available for researchers and clinicians is a self-report measure of the 25 traits that are included within each of the proposed DSM-5 trait domains. The scales of the Personality Inventory for DSM-5 (PID-5; Krueger et al., 2012) parallel closely the scales from the maladaptive FFM trait self-report inventories discussed earlier (e.g., Glover et al., 2012; Lynam et al., 2011; Mullins-Sweatt et al., 2012). Empirical support for the convergence of the PID-5 scales with the FFM (including a convergence of the PID-5 psychoticism scales with FFM Openness) has been provided by De Fruyt, De Clercq, De Bolle, Markon, and Krueger (2012) and Thomas et al. (in press). A significant limitation, however, of both the PID-5 and the FFM maladaptive trait scales is the current lack of cut-off points for clinical interpretation. However, there are conceptually based cut-off points for the clinician rating forms for both the DSM-5 and FFM trait models (e.g., Mullins-Sweatt et al., 2006) and for the FFM semistructured interview (Trull et al., 2001).

There have been and will likely continue to be some disagreement as to the alignments of the FFM with the DSM-5 at the domain level. Westen and Shedler (2007), for example, suggest that emotional instability does not align with FFM Neuroticism, Clark and Krueger (2010) at one point argued that compulsivity did not align with FFM Conscientiousness, and Krueger et al. (2011) has suggested that DSM-5 psychoticism (or peculiarity) does not align with FFM Openness. We respectfully suggest that these points of disagreement are largely a reflection of how the FFM is being assessed and/or conceptualized (Widiger, 2011). Consider, for example, the question of the alignment of FFM Neuroticism with emotional instability. Neuroticism, as assessed by the NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992b), conceptualizes anxiousness, depressiveness, and angry hostility as distinct traits that are relatively stable over time. However, an alternative assessment of this domain is provided by the Big Five Aspects Scale (DeYoung et al., 2007), which includes a subscale to assess for emotional volatility. In fact, Goldberg (1993) originally identified this domain of the FFM as emotional instability.

Costa and McCrae (1985) developed their assessment of Neuroticism, Extraversion, and Openness prior to their familiarity with the Big Five model of Goldberg (1993). The limi-
tations of the NEO PI-R assessment of maladaptive variants of the FFM are most clearly evident in its assessment of Openness. Costa and McCrae originally conceptualized this domain akin to a humanistic self-actualization (Costa & McCrae, 1985). Alternative assessments of this domain are provided by Tellegen’s (Tellegen & Waller, 1987) Unconventionality and Lee and Ashton’s (2004) Openness to Experience scales that correspond conceptually and empirically with FFM Openness. The HEXACO-Personality Inventory openness scale includes four subscales, one of which is titled Unconventionality and assesses the disposition to be eccentric, weird, peculiar, odd, and strange. Piedmont et al. (2009) have developed scales to assess maladaptive variants of high and low Openness. The “odd and eccentric” Openness subscale assesses for schizotypal personality disorder symptoms and paranormal beliefs.

We would also suggest that it is neither parsimonious nor theoretically consistent to propose that four of the five domains of normal personality have an abnormal variant but one (i.e., Openness) does not, and that four of the five domains of abnormal personality have a normal variant but one (i.e., psychoticism or peculiarity) does not. A more consistent and parsimonious understanding of normal and abnormal personality is to suggest a fully integrative model in which the maladaptive variants of FFM Openness (or unconventionality) include oddity, peculiarity, and eccentricity. Further empirical support for considering peculiarity and even psychoticism to represent a maladaptive variant of FFM Openness is provided by Piedmont, Sherman, and Sherman (2012), De Fruyt et al. (2012), DeYoung, Grazioplene, and Peterson (2012), Edmundson et al., (2011), Thomas et al. (in press), Trull (2012), and Widiger (2011).

Also currently proposed for DSM-5 is to retain six personality disorder types (i.e., borderline, antisocial, schizotypal, narcissistic, obsessive-compulsive, and avoidant) that would be diagnosed in large part by maladaptive personality traits (Skodol, 2012), consistent with the FFM prototype matching approach developed by Miller et al. (2005). As noted earlier, the fourth step of the FFM 4-step approach is to match the FFM profile with the profile of a prototypic case of a respective diagnostic construct (if one wishes to continue to describe heterogeneous personality syndromes using one diagnostic term). The traditional approach has been to correlate the FFM profile with the FFM profile of a prototypic case (e.g., Trull, Widiger, Lynam, & Costa, 2003). This correlation serves as an index for the presence of the respective personality disorder to the extent that the FFM assessment has sufficient fidelity for the maladaptive variants (i.e., adequately covers the respective maladaptive variants). Miller et al., however, indicated that simply summing the number of elevated FFM traits also provides a comparably valid assessment. This is the approach proposed for DSM-5. For example, the diagnostic criteria proposed for DSM-5 borderline personality disorder include emotional lability, anxiousness, separation insecurity, depressivity, impulsivity, risk-taking, and hostility (APA, 2012). These seven maladaptive traits align closely with scales from the Five Factor Borderline Inventory (FFBI; Mullins-Sweatt et al., 2012): Affective Dysregulation, Anxious Uncertainty, Despondence, Behavior Dysregulation, Rashness, and Dysregulated Anger. The FFBI though goes further than the DSM-5 to include such additional traits as self-disturbance, fragility, distrust, manipulation, and oppositionality (the DSM-5 criterion set though also includes impairments in self and interpersonal functioning hypothesized to be independent of personality traits; Skodol, 2012).

There are important differences between the FFM of personality disorder and the DSM-5 dimensional trait model. The latter is largely a unidimensional model (Krueger et al., 2011; Widiger, 2011). Persons who are low in disinhibition, detachment, or antagonism are not considered to have any maladaptive personality traits. They simply lack the traits of disinhibition, detachment, or antagonism. The FFM has a bipolar structure, such that opposite to disinhibition is Conscientiousness (or constraint), opposite to detachment (introversion) is Extraversion, and opposite to antagonism is Agreeableness. From the perspective of the FFM of personality disorder, there do exist maladaptive variants of Conscientiousness (e.g., compulsivity, rumination deliberation, workaholism, and perfectionism), maladaptive variants of Extraversion (e.g., authoritarianism, thrill-seeking, attention-seeking, and exhibitionism), and maladaptive variants of Agreeableness (e.g., gullibility, selflessness, and subservience). These maladaptive traits are either not present within the DSM-5 trait model (e.g., excluded are authoritarianism, exhibitionism, workaholism, compulsivity, gullibility, and selflessness) or they are placed within other domains (e.g., submissiveness is placed within negative affectivity [Neuroticism] and attention-seeking is placed within antagonism). Nevertheless, the convergence of the proposed DSM-5 dimensional trait model with the FFM is far greater than the divergence. DSM-5, as currently proposed (and it could be significantly revised prior to the final publication), appears to be taking a significant step closer to the FFM of personality disorder by conceptualizing personality disorders in large part as constellations of maladaptive personality traits organized within a five domain dimensional trait model (APA, 2012).

**POTENTIAL ADVANTAGES OF FFM PERSONALITY DISORDER DIAGNOSIS**

Conceptualizing personality disorders from the perspective of the FFM and the DSM-5 dimensional trait model has a number of potential advantages for clinical practice (Widiger & Costa, 2012). One significant benefit is bringing to an understanding of personality disorder a large body of scientific research that has accumulated concerning the etiology, course, temporal stability, genetics, life outcomes, and universality of the FFM (McCrae & Costa, 2008). The FFM has amassed considerable empirical support (McCrae & Costa, 2008; Widiger & Costa,
2012), including multivariate behavior genetics with respect to the structure of the FFM (e.g., Yamagata et al., 2006), childhood antecedents (Caspi et al., 2005; Merriegel et al., 2005), temporal stability across the life span (Roberts & Del Vecchio, 2000; Soto, John, Gosling, & Potter, 2011), correlations with brain structure (DeYoung et al., 2010), and cross-cultural validity, both through emic studies (Ashton & Lee, 2001) and etic studies (Allik, 2005; McCrae et al., 2005). The FFM has also been shown to be useful in predicting concurrently or over time a substantial number of important life outcomes, both positive and negative, such as subjective well-being, social acceptance, relationship conflict, criminality, unemployment, physical health, mortality, and occupational satisfaction (John et al., 2008; Lahey, 2009; Ozer & Benet-Martinez, 2006). As acknowledged by the Chair of the DSM-5 Personality Disorders Work Group, “similar construct validity has been more elusive to attain with the current DSM-IV personality disorder categories” (Skodol et al., 2005, p. 1923).

An additional potential advantage of the FFM approach is the disambiguation of the heterogeneous personality disorders into their component parts. Paris (2006) suggests that clinicians, when treating a personality disorder, do not attempt to treat the entire personality structure all at once. He suggests that they focus instead on underlying components, such as the dysregulated anger, fragility, anxious uncertainty, affective dysregulation, oppositionality, and/or manipulativeness of persons diagnosed with borderline personality disorder. As suggested by Linehan (2000), improvements in patient functioning are not shared equally by all of the component traits of borderline personality disorder, and therefore should be assessed specifically and independently as provided, for instance, by the FFBI (Mullins-Sweatt et al., 2012). We suggest that this more disambiguated assessment could provide greater utility for the clinician and third party payers when tracking clinical progress, in comparison to the more global measures of the entire syndrome as a single diagnostic entity (Mullins-Sweatt & Lengel, 2012).

Another potential advantage is increased coverage. One of the many concerns raised with respect to the DSM-IV-TR personality disorders is lack of adequate coverage (Westen & Arkowitz-Westen, 1998). Personality disorder not otherwise specified (PDNOS) is provided when a clinician has judged that a personality disorder is present, but the symptoms do not meet the criteria for one of the 10 available options. The fact that PDNOS is so often used in clinical practice is perhaps a testament to the inadequacy of the existing 10 diagnoses to provide adequate coverage (Verheul & Widiger, 2004). Idiosyncratic constellations of personality traits do appear to be addressed well by a dimensional trait profile (Widiger & Lowe, 2007). In fact, clinicians and researchers interested in studying diagnostic constructs that are outside of the existing nomenclature can use the FFM to provide a reasonably specific description of a clinical construct that is not currently recognized within the diagnostic manual, such as successful psychopathy (Mullins-Sweatt, Glover, Derefinko, Miller, & Widiger, 2010), depressive personality (Vachon, Sellbom, Ryder, Miller, & Bagby, 2009), and alexithymia (Taylor & Bagby, 2013).

The FFM approach will also allow the clinician to recognize the presence of personality strengths (step 1 of the 4-step procedure; Widiger, Costa, et al., 2002) as well as the deficits and impairments (step 2). Personality disorders are among the more stigmatizing labels within the diagnostic manual. Anxiety and mood disorders are events that happen to the person, whereas a personality disorder is who that person is and might always be (Millon, 2011). The FFM of personality disorder recognizes and appreciates that the person is more than just the disorder and that other aspects of the self can be adaptive, even commendable, despite the presence of some maladaptive personality traits. “Some of these strengths may also be quite relevant to treatment, such as openness to experience indicating an interest in exploratory psychotherapy, agreeableness indicating an engagement in group therapy, and conscientiousness indicating a willingness and ability to adhere to the demands and rigor of dialectical behavior therapy” (Widiger & Mullins-Sweatt, 2009, p. 203).

**TREATMENT PLANNING**

Personality is not fixed. It can change, typically for the better (i.e., increased Conscientiousness and Agreeableness, along with decreased Neuroticism) as one matures through adulthood (Roberts, Walton, & Viechtbauer, 2006). There are also numerous studies indicating that personality disorders (Leichsenring & Leibing, 2003; Perry & Bond, 2000) and FFM personality traits (e.g., De Fruyt, Van Leeuwen, Bagby, Rolland, & Rouillon, 2006; Knutson et al., 1998; Piedmont, 2013) are responsive to clinical interventions. However, a notable failing within the field of personality disorder has been the absence of the development of manualized therapies to help clinicians provide empirically-based interventions (Mullins-Sweatt & Lengel, 2012). The primary purpose of the APA diagnostic manual is to facilitate treatment planning (APA, 2000; First, 2005). It has been over 20 years since the APA has been developing practice guidelines for each of the mental disorders included within DSM-IV-TR and to date guidelines have been published for only one personality disorder: borderline (APA, 2001).

One possible reason for the absence of empirically-based manualized treatment plans might be the complex heterogeneity of the DSM-IV-TR personality disorders (Mullins-Sweatt & Widiger, 2009; Presnell, 2013; Smith, McCarthy, & Zapolowski, 2009). Each DSM-IV-TR personality disorder appears to be a compound assortment of maladaptive personality traits (Lynam & Widiger, 2001). Two patients, each meeting the diagnostic criteria for the same personality disorder, may even have only one single trait in common (Trull & Durrert, 2005). Given the substantial variability of defining features within a diagnostic category, it would be understandably difficult to
develop a uniform treatment program for persons sharing the same personality disorder diagnosis (Verheul, 2005).

The analytically factor-based five domains of the FFM might be better suited for treatment planning than the DSM personality disorder diagnoses because they are considerably more distinct and homogeneous. Extraversion and Agreeableness are domains of interpersonal relatedness, Neuroticism is a domain of emotional instability and dysregulation, Conscientiousness is a domain of work-related behavior, constraint, and responsibility, and Openness is a domain of cognitive intellect, curiosity, unconventionality, and creativity (Mullins-Sweatt & Widiger, 2006). Extraversion and Agreeableness are concerned specifically with social, interpersonal dysfunction, an area of functioning that is relevant to relationship quality both outside and within the therapy office. Interpersonal models of therapy, marital-family therapy, and group therapy might be particularly suitable for these two domains. In contrast, Neuroticism provides information with respect to mood, anxiety, and emotional dyscontrol, often targets for pharmacologic interventions, as well as cognitive, behavioral, and/or psychodynamic. There are very clear pharmacologic implications for mood and anxiety dysregulation and emotional instability (e.g., anxiolytics, antidepressants, and/or mood stabilizers), but little to none for maladaptive antagonism or introversion, the interpersonal domains of the FFM. Maladaptively high Openness implies cognitive-perceptual aberrations, and so would likely have pharmacologic implications (i.e., neuroleptics) that are quite different from those for Neuroticism. The domain of Conscientiousness, in contrast to Agreeableness and Extraversion, is the domain of most specific relevance to occupational dysfunction, or impairments concerning work and career. Maladaptively high levels involve workaholism, perfectionism, and compulsivity, low levels involve laxness, negligence, and irresponsibility. There might be specific pharmacologic treatment implications for low Conscientiousness (e.g., methylphenidates; Nigg et al., 2002) although, as yet, none for maladaptively high Conscientiousness.

Perhaps there never will be a pharmacotherapy for high Conscientiousness, but the point is that the structure of the FFM could very well be more commensurate with more specific treatment implications than the existing diagnostic categories. For instance, most of the DSM-IV-TR personality disorders are saturated with high levels of Neuroticism (Lynam & Widiger, 2001), contributing to the difficulty in developing distinct treatment protocols. Some of the facets of the FFM do correlate with other domains (e.g., angry hostility and impulsivity from Neuroticism correlating with antagonism and conscientiousness, respectively; Costa & McCrae, 1992b) but the FFM domains obtain much better discriminant validity than the DSM-IV-TR diagnostic categories (Samuel & Widiger, 2010). It is possible then that a personality disorder description (and diagnosis) solely in terms of the relatively distinctive five domains of the FFM, and/or the DSM-5 dimensional trait model, will prove to be more useful in treatment guidance than the existing APA nomenclature. Clinicians might even confine their assessment solely to the domain level (although we do expect that many clinicians will also wish to consider the more specific facets within any particular domain). Space limitations prohibit a thorough discussion of all five domains, but herein we will consider each briefly in turn.

**Neuroticism**

There has been a considerable effort given to developing empirically validated therapies for emotion regulation, depressed mood, and anxiousness (Combs, Spillane, & Smith, 2011), all of which might be applicable to FFM Neuroticism (Presnall, 2013). Knutson et al. (1998) in fact examined the effects of a selective serotonin reuptake inhibitor (SSRI) on normal personality in a double-blind protocol involving 51 randomly assigned medically and psychiatrically healthy volunteers receiving either paroxetine \((N = 25)\) or placebo \((N = 26)\). None of the participants met currently, or throughout their lifetime, DSM-IV-TR diagnostic criteria for any mental disorder, as assessed with a semistructured interview. None of them had ever received a psychotropic medication, had ever abused drugs, or had ever been in treatment for a mental disorder, nor were any of them currently seeking or desiring treatment for a mental disorder. Therefore, one could not attribute any subsequent changes in their personality traits to the effect of treating a co-occurring mood or anxiety disorder. The paroxetine (and placebo) treatment continued for four weeks. Knutson et al. reported that the SSRI administration (relative to placebo) reduced significantly scores on a self-report measure of Neuroticism. The magnitude of change even correlated with plasma levels of SSRI within the SSRI treatment group. As concluded by Knutson et al. (1998), this was a clear “empirical demonstration that chronic administration of a selective serotonin reuptake blockade can have significant personality and behavioral effects in normal humans in the absence of baseline depression or other psychopathology” (p. 378). The effect of SSRI on Neuroticism has since been replicated (Tang et al., 2009).

Personality traits tend to be stable over time, but they are not fixed in stone. Neuroticism tends to decrease as one gets older (Roberts et al. 2006; Soto et al., 2011). The reasons for this are not entirely clear, but it may reflect simply the maladaptivity and undesirability of elevated Neuroticism. The personality trait of Neuroticism refers to the characteristic disposition to experience states of emotional distress (McCrae & Costa, 2008). As such, clients presenting with maladaptively high Neuroticism will describe the distress as an ongoing pattern that has become increasingly unbearable. Neuroticism is then one of the few traits of the FFM that could be said to be ego-dystonic. Many clients will be entirely comfortable with their high levels of Agreeableness or antagonism, with their high levels of Extraversion or introversion, but not with their high levels of Neuroticism, and they may even seek treatment for personality change (just as many persons seek treatment for borderline personality disorder; Widiger, 2009).
**Extraversion**

Extraversion is the first domain to be extracted from factor analytic language studies, as it shares with Agreeableness all manner of interpersonal relatedness (Extraversion also includes positive emotionality, energy, and excitement-seeking, in addition to the manner of interpersonal relatedness). It is perhaps not surprising that the domains of personality functioning considered to be relatively most important to people across all cultures and languages when describing themselves and other persons would concern how persons relate to one another (Widiger & Costa, 2012). Many personality disorder theorists have similarly placed considerable emphasis on interpersonal relatedness as providing the core of personality disorder (Pincus, Lukowitsky, & Wright, 2010). FFM Agreeableness and Extraversion are essentially 45-degree rotations of the axes that define the interpersonal circumplex (IPC) dimensions of agency and communion (Wiggins & Pincus, 1989). As noted earlier, interpersonal modalities of therapy, such as group, family, and marital therapy, might be particularly important for treating maladaptive Extraversion (and Agreeableness).

At maladaptively high levels gregariousness turns into attention-seeking and inappropriate flirtatiousness, normal assertiveness becomes pushy and authoritarian, and normal excitement-seeking becomes reckless and risky (Gore, Tomiatti, & Widiger, 2011). Persons with maladaptively high Extraversion, however, will often experience their behavior as ego-syntonic, not appreciating the costs and problems that result from their behavior. One approach to therapy for maladaptively high Extraversion clients would be individual interpersonal therapy, with the eventual transition to group interpersonal therapy (Presnall, 2013). Interpersonal therapy creates a setting in which the therapist gives immediate, clear, and direct feedback regarding the impact of the client’s interpersonal behaviors (Benjamin, 2003). There is not, however, as yet any empirically-based treatment program for maladaptive Extraversion.

Persons who are maladaptively low in Extraversion will be well familiar to clinicians (Presnall, 2013). They will be shy, introverted loners. One of the facets of Extraversion is positive emotionality, the temperament “furnace” that drives Extraversion (Clark & Watson, 2008). When this furnace is bone dry the person is essentially anhedonic, losing all interest in nearly any activity or relationship (i.e., schizoid). Less severe variants of introversion include being passive (unassertive), socially withdrawn, and disengaged (Lynam et al., 2012).

**Openness**

Openness reflects a culture’s or society’s interest in creativity, intellect, imagination, and unconventionality. It contrasts being an open, imaginative, creative, unusual, and divergent thinker with being conventional, closed-minded, and inflexible (McCrae & Sutin, 2009). Tellegen and Waller (1987) described this domain as unconventionality versus conventionality. It is the smallest and least stable of the FFM lexical domains (De Raad et al., 2010; McCrae, 1990).

Maladaptively high Openness includes the tendency to be eccentric, weird, and out of place, both with respect to one’s behavior as well as cognition (Edmundson et al., 2011; Piedmont et al., 2009; Widiger, 2011). There has been little progress in the development of cognitive behavior therapies for these cognitive-perceptual aberrations. The focus has instead been on pharmacologic interventions that are quite distinct from the pharmacotherapy for Neuroticism (Presnall, 2013).

Persons maladaptively low in Openness will be extremely rigid in their thoughts, ideas, or beliefs (Piedmont et al., 2009). They may describe themselves as practical, realistic, and down to earth, but others will describe them as closed-minded, intolerant, rigid, or inflexible. When coupled with antagonism, persons low in openness are prone to prejudicial attitudes and behaviors (Flynn, 2005). Alexithymia is a personality construct characterized by difficulties in identifying and describing subjective feelings, a restricted imaginal capacity, and an externally-oriented cognitive style that is closely associated with FFM closedness, particularly closedness to feelings (Taylor & Bagby, 2013). There has been some work in the development of treatment programs for alexithymia (Taylor, 2004), although not for other facets of closedness.

**Agreeableness**

Agreeableness is the other FFM domain of interpersonal relatedness and, as such, might also imply interpersonally oriented therapies, such as group, marital, and family. An individual rated high in Agreeableness is traditionally considered to be highly prosocial, cooperative, pleasant, giving, considerate, kind, and honest. These traits are nearly universally valued as positive and may even be described as virtuous. However, when taken to their extremes, they can be quite maladaptive, as trusting becomes gullibility, altruism becomes self-sacrificing selflessness (Widiger & Presnall, 2012), compliance becomes subservience, and modesty becomes self-effacement (Gore et al., 2012; Lowe, Edmundson, & Widiger, 2009).

Persons who are maladaptively high in agreeableness will often fail to have the insight that it is their personality traits that are causing problems, but they will recognize that they have a history of troubled, problematic, and at times even abusive relationships (Widiger & Presnall, 2012). Assertiveness training might be particularly beneficial to these patients, along with other cognitive-behavioral and interpersonal methods to address their meekness, self-effacement, and self-sacrificing timidity (Bornstein, 2005; Presnall, 2013). There is no known pharmacotherapy for reducing Agreeableness.

Low Agreeableness is the FFM domain primarily related to relationship dissatisfaction, conflict, and criminality (Ozer & Benet-Martinez, 2006). Persons who are maladaptively low in Agreeableness (i.e., antagonistic) will be among the most difficult of patients to treat. They will be disagreeable, distrustful,
suspicious, oppositional, manipulative, and/or arrogant, and they will often lack insight into the maladaptivity of their traits (perhaps even with respect to their presence). They may have been compelled to enter therapy by others who are much more appreciative of the problematic nature of their personalities.

Conscientiousness

Maladaptively high Conscientiousness resembles in many respects the traits and features of obsessive-compulsive personality disorder (Samuel & Widiger, 2011). Individuals maladaptively high in conscientiousness will be perfectionistic (excessive emphasis on FFM competence), preoccupied with order and organization, rigidly principled (FFM dutifulness), workaholic (FFM achievement-striving), single-mindedly determined (FFM self-discipline), and ruminative in their decision-making (FFM deliberation), although it should also be noted that obsessive-compulsive personality disorder involves traits beyond simply maladaptively extreme conscientiousness (e.g., anxiousness, authoritarianism, risk aversion, and closed-mindedness; Samuel et al., 2012).

Because of its organization, straightforward approach, and homework components, cognitive behavioral treatment might appeal to clients high in conscientiousness (Presnall, 2013). In the cognitive portion, therapists could assist these clients in examining their faulty beliefs regarding perfectionism, order and control. Behaviorally, the clinician should make use of shaping within the context of homework assignments. For example, a client who tends to work 12–14 hours a day at her salaried job would be encouraged to first track her work hours, and would then work to gradually reduce them, perhaps by 10 minutes per day (Beck, Freeman, & Davis, 2003). There is as yet, however, no empirically validated treatment manual for high Conscientiousness (nor for obsessive-compulsive personality disorder).

Maladaptively low conscientiousness involves being lax, easily distracted, irresponsible, careless, disinhibited, reckless, rash, and carefree (Widiger, Trull, et al., 2002). These persons, like those high in antagonism, are unlikely to seek treatment on their own. They can be highly cognizant of the impairments they are suffering secondary to their low conscientiousness, but they could also lack much interest in committing themselves to make the necessary changes to improve their lives. Conscientiousness is the domain of the FFM that is most intimately related to work-related behavior (Roberts, Jackson, Fayard, Edmonds, & Meints, 2009). Persons low in Conscientiousness will tend to have a poor employment history as well as financial, health, and perhaps even legal concerns (Ozer & Benet-Martinez, 2006).

Persons low in Conscientiousness will rival persons low in Agreeableness for being problematic clients because their laxness, irresponsibility, and negligence will contribute to an array of treatment-disruptive and interfering behavior. They will not complete homework assignments, they won’t recall what was previously discussed, and they will be late for or skip sessions. Nevertheless, behavioral therapy could provide a potentially effective treatment option as the structure and organization will themselves be beneficial to these clients. Improvement in level of Conscientiousness was in fact one of the key findings in the Davenport, Bore, and Campbell (2010) study of dialectical behavior treatment of persons with borderline personality disorder, with scores shifting from the abnormal to the normal range.

Low Conscientiousness may also have a pharmacologic treatment implication that is relatively unique in comparison to the FFM domains of Neuroticism (i.e., anxiolytics, antidepressants, and mood stabilizers) and FFM unconventionality (i.e., antipsychotics). Nigg et al. (2002) demonstrated a significant relationship between the inattentive symptoms of attention-deficit hyperactivity disorder (ADHD) and low conscientiousness in adults, assessed through both self and spouse reports. Some children with ADHD grow up to have no further problems, but others will have substance use disorders, mood disorders, and/or an adult variant of ADHD that involves low conscientiousness (i.e., inattentive, low in self-discipline, and rash) that is potentially responsive to methylphenidates.

Conclusions

The FFM has become the predominant dimensional model of general personality structure in psychology and it appears that the APA’s diagnostic manual of mental disorders might be shifting away from its categorical personality disorder diagnoses (e.g., borderline, dependent, and narcissistic) toward the FFM of personality disorder. In DSM-5, personality disorders might be understood in large part as extreme and/or maladaptive variants of the FFM domains and facets (APA, 2012). Advantages of this shifting conceptualization include more precise individualized patient description, the deconstruction of complex heterogeneous categories into more homogeneous specific components, the recognition of adaptive personality strengths, increased coverage, and the ability to reference a strong scientific foundation. A tentative outline for treatment planning from the perspective of the FFM was provided, hopefully to help stimulate the development of the manualized treatment protocols that are currently lacking for the APA personality disorder nomenclature.

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