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Approaches to Personality Disorder Diagnosis: Comparing the Cognitive Affective Processing and the Five Factor Models of Personality

by

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Thesis

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Abstract

The Cognitive-Affective Processing Model (CAPS) suggests that personality is best understood as a collection of cross-situationally consistent traits that are expressed based upon features of the situation. This differs from the Five Factor Model (FFM) of personality, in which personality is believed to be composed of five broad trait domains that are observed consistently across multiple situations. This study compares the diagnostic accuracy of 202 licensed members of the Michigan Psychological Association who assessed personality pathology using short vignettes written to represent situationally-specific expression of traits (CAPS) compared to vignettes written with FFM trait description and DSM-IV TR description. The data suggest using CAPS descriptions yields more accurate diagnoses compared to using FFM trait descriptions and equivalent diagnostic accuracy when using the DSM-IV. Based on these initial findings, it appears that clinicians may be able to judge personality disorders better with situationally-specific, or context-dependent, information than simple trait descriptions.

TABLE OF CONTENTS

Abstractii
Introduction and Background
Aims of Study16
Hypotheses16
Method
Participants17
Materials17
Design and Procedure
Follow-up
Results
Discussion
Clinical Utility of CAPS
Limitations and Future Research
Conclusions32
References
Tables
Figures
Appendix A Questionnaire and Vignettes used in Study51
Appendix B Lists created from items in the NEO-PI R56

LIST OF TABLES

<u>Table</u>	Pag	<u>e</u>
1	Characteristics of Michigan Psychological Association Clinician	
	Participants Sample	4
2	Frequency of Correct (Incorrect) Diagnoses by Method of Vignette	
	Presentation and Diagnosis	5
3	Frequency of DSM-IV Axis II Diagnoses Assigned by Vignette	
	Diagnosis Type4	6
4	Proportion of Correct Diagnoses (Standard Deviation) by Method of	
	Presentation and Diagnosis Type4	7
5	Mean ConfidenceRatings (Standard Deviation) and Mean Prototypicality	
	Ratings (Standard Deviation) by Method of Presentation and Diagnosis48	8

LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Strategy used for writing situationally-specific, FFM, and DSM	
	casebook vignettes	50
2	Possible combinations of presentation method and personality disorders	
	for the vignettes	51

Approaches to Personality Disorder Diagnosis: Comparing the Cognitive Affective

Processing and the Five Factor Models of Personality

The Diagnostic and Statistical Manual of Mental Disorders 4th edition, Text Revision [DSM-IV TR, American Psychiatric Association (APA), 2000] employs a categorical perspective in which personality disorders are conceptualized as qualitatively distinct clinical syndromes. Following this current categorical system, researchers and clinicians conceptualize personality disorders as falling outside the realm of normal functioning (Widiger & Samuel, 2005). By categorizing personality disorders this way, the DSM-IV TR (APA, 2000) is designed to help clinicians determine if a mental disorder is present, and, if so, which particular mental disorder is present, which in turn leads to understanding the nature and specificity of the pathology and employing a specific treatment (Frances, First, & Pincus, 1995; Kendell, 1975). At the same time, the categories established in the DSM-IV TR (APA, 2000) create a common language so clinicians can communicate clinical descriptions quickly (i.e., "Borderline" or "Narcissistic" are easily recognized patient types). It is this "intuitive diagnostic and clinical template" that has kept the Axis-II personality disorder system in place (Bagby, Costa, Widiger, Ryder, & Marshall, 2005). Despite this, there are repeated criticisms and substantial empirical evidence documenting the problems with the way personality disorders are conceptualized and diagnosed using the current diagnostic manual.

One of the first problems that has been recognized in the research on personality disorders is the high levels of comorbidity of Axis-II diagnoses using the DSM system (Clark, Livesley, & Morey, 1997). In fact, comorbidity is so high that researchers frequently report data regarding personality disorders at the cluster level (A, B, C) as

opposed to the individual category level (Westen, Shedler, & Bradley, 2006). However, when clinicians assign a diagnosis, they are encouraged to report only one and thus prioritize which diagnosis best fits the client (Westen, 1997). In research and practice, these frequent, co-occurring diagnoses lead many to question the validity and utility of the constructs, the assessment instruments, or both. Mineka, Watson, and Clark (1998) question the validity of the diagnostic categories as being conceptualized as separate constructs: "The greatest challenge that the extensive comorbidity data pose to the current nosological system concerns the validity of the diagnostic categories themselves" (Mineka et al, 1998, p.380). Widiger and Simonsen (2005) suggest that the comorbidity of diagnoses may imply the presence of common, shared pathologies, such as negative affectivity or externalization. Another possible cause of the poor discrimination may be that the categories and criteria as they stand in the DSM-IV TR (APA, 2000) are not empirically based and often disagree with empirical findings from cluster and factor analysis (see Livesley, 1995; Morey, 1988; Bell & Jackson, 1992; Mischel & Shoda, 1995; Westen, 1995).

In addition to concerns about the high level of co-occurring diagnoses, there are also questions as to whether the current personality diagnosis system represents the entire spectrum of personality pathology. Axis II seems inadequate in assessing the broad range of personality problems for which patients seek treatment because Axis II instruments do not assess maladaptive personality patterns that fail to meet the diagnostic standard, but nonetheless need clinical attention (Westen, 1997; Westen & Arkowitz-Westen, 1998). A study by Westen and Arkowitz-Westen (1998) studied diagnostic data provided by a random national sample of psychiatrists and psychologists on their patients treated for

maladaptive personality patterns. They found that the majority of patients with personality pathology significant enough to warrant clinical psychotherapeutic attention (60.6%) are currently undiagnosable on Axis-II (Westen & Arkowitz-Westen, 1998). Thus, clinicians report treating these patterns even though they cannot assign an Axis II diagnosis.

One of the contentions concerning the extent to which PDs accurately and thoroughly cover the domain of personality psychopathology is the way personality disorders are assessed. For example, direct questioning of patients has led to many problems including empirical and conceptual limitations (Livesley, 1995). Westen and Shedler (1999b) believe that Axis II committees have tended to exclude criteria that cannot be assessed by direct questions rather than identify the best diagnostic criteria and then determine how they can be operationalized. Additionally, over-reliance on self-report methods of assessment can be problematic because it is dependent upon patients' ability to describe their personality traits accurately, which may or may not represent deliberate attempts to distort their self-presentation in a positive or negative way (Huprich & Ganellen, 2006; Huprich & Bornstein, 2007). Consequently, "we may be limiting the clinical applicability of DSM by linking its refinement so closely to a particular method of assessment" (Westen & Shedler, 1999b, p. 274).

The aforementioned problems involve the clinical utility of current assessment and conceptualization of personality disorders. Additionally, the current diagnostic criteria do not encompass all of the domains of functioning relevant to personality. For example, it fails to consider personality strengths, which could rule out a personality diagnosis (Westen & Shedler, 1999a). According to Westen and Shedler (1999b) this is

related to the fact that the designers of the DSM system attempted to avoid criteria that are tied too closely to any particular theoretical orientation. As a result, there is no consensus as to which domains of functioning should be included in the concept of "personality." Westen and Shedler (1999b) contend the lack of theoretical orientation in the diagnostic system is a fundamental problem and that a theoretical orientation is critical in providing insight into the possible functions of the patient's symptoms, as well as psychological strengths and weaknesses that bear on the person's adaptation to life.

With all of the criticisms of the current Axis II diagnostic system, clinicians and researchers are examining alternative models for diagnosing and conceptualizing personality disorders. Shedler and Westen (1999a) believe that the current classification system artificially dichotomizes the diagnostic criteria as being present or absent when they ought to be viewed as a continuous variable. Livesley (2005) maintains this same position, adding that serious problems with the current diagnostic system arise from the assumption that personality disorders are discrete categories. He asserts that the co-occurrence among diagnoses and multivariate evaluations of diagnostic criteria indicate that current diagnoses are not "natural kinds" based on fundamental differences in biological organization of personality, but that they are contrived constructs (Livesley, 2005). For these reasons, the models that have recently gained popularity are taking a dimensional approach to personality disorders.

In fact, the American Psychiatric Association's DSM-V Research Planning Nomenclature Work Group reached the conclusion that the advantages and disadvantages of basing part or all of DSM-V on dimensions rather than categories should be taken into account (Rounsaville, Alarcon, Andrews, Jackson, Kendell, & Kendler, 2002). One of the

reasons that the dimensional approach is being considered is that it addresses the problem of clinical utility found in the current system. Dimensional approaches help integrate an understanding of both normal and pathological personality (Shedler & Westen, 2004) and are more representative of the whole person. In this same line of thinking, it is believed that because dimensional models accurately represent the natural organization of personality and personality pathology, they have the potential to improve clinicians' understanding of the patient (Huprich & Bornstein, 2007). Dimensional ratings also have psychometric advantages and lend themselves to statistical analysis (Shedler & Westen, 2004). For example, dimensions of personality can be established empirically by means of factor analysis rather than by committee decision (Widiger, 1992; Clark et al., 1997).

In response to dissatisfaction with the existing system of classification and increased interest in a dimensional approach, many researchers have developed alternative models to describe and classify personality pathology (e.g. Clark, 1990; Clark, McEwen, Collard, & Hickick, 1993; Cloninger, Svrakic, & Przybeck, 1993; Harkness, McNulty, & Ben-Porath, 1995; Livesley, 1991; Livesley, Jackson, & Schroeder, 1991; Westen & Shedler, 1999a, 1999b). Among these efforts, there has been the attempt to apply existing models of personality to understand personality psychopathology.

Foremost in this regard is the Five-Factor Model of Personality (FFM) as conceptualized by Costa and McCrae (1985, 1992; McCrae & Costa, 1997). The FFM proposes that personality is composed of five broad trait domains: Neuroticism (N), Extraversion (E), Openness (O), Conscientiousness (C), and Agreeableness (A). Each of these trait domains contains six lower-order trait facets (Costa & McCrae 1985, 1992; McCrae & Costa, 1995). For example, McCrae and Costa (1995) identify the facets of the

Agreeableness domain as Trust, Modesty, Altruism, Compliance, Tender-Mindedness, and Straightforwardness. These domains and facets initially emerged from a factor analysis of adjectives used to describe personality taken from the English language. This method of investigation is based upon the lexical hypothesis that speculates that the most socially relevant personality characteristics become encoded in everyday language (John & Srivastava, 1999). Using this method across a variety of languages and cultures, these same five domains (factors) have been consistently identified (McCrae & Costa, 1997; McCrae & Allik, 2002). In addition, the same five factors extracted in non-patient samples have been recovered in patient samples (Bagby et al., 1999). This empirical foundation is one of the main attractions of this model (Widiger & Trull, 1997, 2007).

Although the FFM was originally used as a model to encompass normal personality functioning, recent studies have found that personality disorders can be understood as maladaptive variants of general FFM personality structure (e.g., Bagby et al., 2005; Huprich, 2003). For example, the domain of Extraversion contains the facet, Positive Emotions, with two poles: High Positive Emotions and Low Positive Emotions. A normal variant of High Positive Emotions could be high-spirited or cheerful, while an abnormal or maladaptive variant of High Positive Emotions could be giddy, euphoric, or excitable (Widiger, Trull, Clarkin, Sanderson, & Costa, 2002). Schroeder, Wormworth, and Livesley (1992) argue that a personality disorder can be described with traits or dimensions that are descriptive of both disordered and normal personality rather than being characterized by differences in quality from normal functioning. Assessments based on the FFM, like the NEO PI-R (Costa & McCrae, 1992), consider extreme values on these normal traits as indications of whether or not a diagnosis of a personality

disorder is warranted. Thus, a major advantage of using FFM assessment is that it includes the provision of a precise, yet comprehensive, description of both normal and abnormal personality functioning, which avoids many limitations and problems inherent to categorical diagnosis, and incorporates basic science research on general personality structure and functioning into the description and understanding of personality disorders (Widiger & Lowe, 2007).

Beyond the reasons discussed above, there are many other aspects of the FFM that make it an appealing model for understanding personality pathology. For example, the FFM serves as the predominant model of personality in a number of different fields like health psychology, aging, and developmental research (McCrae & Costa, 2003; Mullins-Sweatt & Widiger, 2007). The use of FFM in various fields within psychology is likely to be related to the comprehensiveness of the model. John and Srivastava (1999) emphasize that one apparent strength of FFM is its ability to provide an "integrative descriptive model for research" by merging existing personality systems based upon their commonalities. In addition to the taxonomy being widely used, each of the five domains and 26 of the 30 personality trait factors are believed to be heritable, with additive genetic effects accounting for 25-65% of the reliable specific variance (Jang, McCrae, Angleitner, Riemann, & Livesley, 1998).

Despite the popularity of the FFM, there are criticisms regarding the clinical application of this model. For instance, an empirically elegant system does not necessarily mean that it is clinically relevant (Westen et al., 2006) Although there are many studies addressing the assessment of personality disorders using FFM (e.g. Trull & Widiger, 1997; Huprich, 2003; Livesley, 2001; Mullins-Sweatt & Widiger, 2007;

Saulsman & Page, 2004; Trull & Durrett, 2005; Widiger & Costa, 2002; Widiger & Lowe, 2007), the use of the FFM in clinical practice is yet to be comprehensively researched. Widiger, Costa, and McCrae (2002) and Trull (2005) propose a four-step process in diagnosing personality disorders using the FFM, which includes developing a FFM profile of the individual that could then be quantitatively matched to prototypic profiles of theoretically, socially, or clinically important constructs. Nonetheless, Shedler and Westen (2004) question the adequacy of using a list of adjectives (that the FFM would produce) to describe the "complexities of personality." They feel that this may be too superficial for a clinical description of personality and may not be differentiated enough for scientific and clinical purposes (Westen, 1995; Millon & Martinez, 1995).

Additionally, while there is substantial evidence supporting the convergence of higher-order personality dimensions (Widiger & Simonsen, 2005), there is still no consensus as to how many dimensions exist (Huprich & Bornstein, 2007). Although the FFM conceptualizes personality traits and PDs in terms of five major factors (or domains), various studies have supported two-factor, four-factor, and seven-factor models also (e.g. O'Connor & Dyce, 1998; Krueger, 2005; Markon, Krueger, & Watson, 2005). For example, a study by O'Connor and Dyce (1998) examined how different dimensional models correspond with self-reported personality pathology; they found strong support for both the five-factor model and for an empirically derived seven-factor model. However, the study also found that four factors were preferable and adequate. Huprich and Bornstein (2007) have also pointed out that Widiger, one of the main advocates of dimensional models, has acknowledged the strengths of five-factor (Costa &

Widiger, 2002), four-factor (Widiger & Simonsen, 2005), and two-factor (Widiger, Simonsen, Krueger, Livesley & Verheul, 2005) solutions.

Furthermore, there is concern that FFM assessment relies too heavily on self-report and focuses on behavioral tendencies and relatively obvious internal states but not on psychological processes (Huprich & Bornstein, 2007; Shedler & Westen, 2004).

However, the main apprehension continues to be the use of traits to describe personality. Shedler and Westen (2004) assert that the majority of dimensional alternatives focus on factor-analytically derived personality traits rather than what was historically connoted by the term "personality disorder," which included a "multifaceted constellation of traits," which they believe include aspects not simply assessed by self-report.

To retain the use of personality types while employing a dimensional model, Westen and Shedler (1999a, 1999b, 2004, 2007) suggest using a diagnostic prototype, a "richly detailed description of the personality disorder that reflects the clinical and theoretical understanding of many practicing clinicians" (Westen & Shedler, 1999a, p.263). It is believed that, regardless of theoretical orientation, clinicians have well-defined prototypes for personality disorders (Shedler & Westen, 1999a, 1999b, 2004). Thus, they believe that the easiest way to revise Axis II, while still maintaining its familiar format, would be to replace the current approach with a prototype matching procedure (Westen & Shedler, 1999b). One of the benefits of this proposed procedure is that it could generate both dimensional and categorical diagnoses. A study done by Westen, Shedler, and Bradley (2006) tested the use of a prototype matching system in which clinicians were presented with each personality disorder in its ideal or "pure" form written in a paragraph to be psychologically richer and more detailed than DSM criteria

sets. To make the diagnosis, clinicians rated the overall similarity or match between the patient and the prototype using a 5-point rating scale (5 = very good match – patient exemplifies this disorder, prototypical case, diagnosis; 4 = good match – patient has this disorder, diagnosis applies; 3 = significant match – patient has significant features of if this disorder; 2 = slight match – patient has minor features of this disorder; 1 = little or no match – description does not apply to this patient), considering the prototype as a whole. The results from this system provide both a categorical and dimensional diagnosis because subthreshold psychopathology is included in the rating. This study found that 70% of clinicians preferred the prototype matching system to the DSM system, and the data suggest that prototype diagnosis in everyday practice minimizes findings of comorbidity without offsetting validity (Westen et al., 2006).

Huprich and Bornstein (2007) suggested that another model to consider as an alternative approach to describe and classify personality pathology is the Cognitive-Affective Personality System (CAPS) as conceptualized by Mischel and Shoda (1995). CAPS integrates the dispositional (trait) and processing (social cognitive-affective-dynamic) approaches within a unitary framework of personality (Mischel & Shoda, 1999). By themselves, trait and social cognitive-affective-dynamic approaches have their own weaknesses. Trait theories, such as the FFM, are criticized for not considering or addressing psychological processes and dynamics that underlie behavioral dispositions (Mischel & Shoda, 1999). The processing approach is criticized for containing lists of seemingly disconnected personality processes and simply not explaining the functioning of the whole person in general terms (Mischel & Shoda, 1999). For these reasons, Mischel and Shoda (1995) purport that both personality dispositions and the

psychological processes that underlie them should be aspects of the same personality system and that this system should have its foundation in a processing model of the personality system at the level of the individual. Therefore, Mischel and Shoda (1999) argue that a comprehensive personality theory needs to attain two goals: identify the stable qualities and behavior patterns that characterize individuals and clarify the intraindividual dynamics and psychological processes and structures that underlie these patterns.

CAPS incorporates two fundamental assumptions as part of its theory. The first is that people differ in the chronic accessibility of cognitions and affects that are available to them (Mischel & Shoda, 1999). Stated differently, this means that the ease with which people access cognitive and affective mental representations or units (CAUs) varies from person to person. As part of this assumption, the idea that the CAUs "interact dynamically" and influence each other reciprocally is also included (Mischel & Shoda, 1999) The second fundamental assumption of CAPS theory is that individual differences among people reflect not only the accessibility of certain CAUs but also the distinctive "organization of relationships" among them. It is this organization that forms the basic stable structure of the personality system and underlies the behavioral expressions that characterize the individual. This organization guides and constrains the activation of the particular CAUs that are available within the system. Thus, when someone perceives a situation, there is a certain characteristic pattern of CAUs that become activated in relation to some situation feature. In addition to these two assumptions, CAPS is also a system that suggests the person (and his/her personality) constantly and dynamically interacts with the social world. Therefore, one person's behaviors have an impact on the

social world, which partly shapes interpersonal situations that the person faces and that, in turn, influences the person.

CAPS theory includes four levels of personality analysis: 1) the psychological processing system; 2) expressions and manifestations of the system that are visible at the level of the individual's characteristic behavior as it unfolds in vivo across situations and over time; 3) perceptions of personality and the person's behavior including selfperception; and 4) how individuals' characteristics and behaviors influence the environments or situations that they subsequently experience (Mischel & Shoda, 1999). It is the second level of analysis that gains attention, because it includes situations as part of the conception of the personality processing dynamics. Each situation activates an individual's processing dynamics. However, unlike a stimulus-behavior interaction, the personality system is what is sensitized to particular features of situations (Shoda, Mischel & Wright, 1994). "People differ characteristically in the particular situational features that are the salient active ingredients for them" (Mischel & Shoda, 1995, p. 203). It is these particular situational features that then activate characteristic and reasonably predictable patterns of cognitions and affects in those situations. What becomes important in understanding CAPS is that an individual's personality system remains relatively stable, while his personality state -- the pattern of activation among cognitions and affects that exists at a given time -- is dependent upon context and the situations experienced by the individual at that given moment (Mischel & Shoda, 1999). Thus, the personality state can easily change when situational features are changed; however, this change is guided by the personality system.

"Personality is construed as a relatively stable system of social cognitive-affective mediating processes whose expressions are manifested in predictable patterns of situation-behavior relations" (Mischel & Shoda, 1999, p. 206). Consequently, Mischel and Shoda (1999) believe that the conception and analysis of personality must include the situation for accurate assessment. So the everyday expressions of personality are simply the interactive effects between dispositions and situations (Mischel, 2004; Mischel & Shoda, 1995). Because the personality system, as conceptualized in CAPS, is expressed at the level of behavior patterns that vary over situations, assessment can go beyond an overall averaging of a person's general behavior. By using *if...then...* behavior profiles, a precise level of contextualized specific behavior prediction is possible (Mischel & Shoda, 1999). At the behavioral level, individual differences can be expressed in stable intraindividual "patterns of variability" that show a distinctive profile of *if...then...* situation-behavior relationships (e.g., "Jane is friendlier than others if A, but less friendly than others if B"; Shoda & LeeTiernan, 2002; Shoda et al., 1994).

Stable situation-behavior profiles generated by the system can be identified by finding common *if...then...* situation-behavior patterns of a person's variability across situations (Mischel & Shoda, 1999). In addition, these "signatures of personality" provide a way for observers (professional or lay perceivers) to infer the individual's underlying processing dynamics: the person's goals, values, motives, and beliefs, which are "all interconnected in an associative network whose activation is guided and constrained by features of the situation" (Kammrath, Mendoza-Denton, & Mischel, 2005, p. 605). So judgments by observers of how well individuals fit particular "dispositional prototypes"

or traits like "friendly," "withdrawn," or "aggressive" are related to the observed situation-behavior prototype or profiles (Mischel & Shoda, 1999).

In fact, research in person perception has demonstrated that for different traits, such as friendliness or aggressiveness, perceivers can easily interpret interactive effects between dispositions and situations (Cantor & Mischel, 1979; Shoda & Mischel, 1993; Vonk, 1998). Perceivers have been found to suspend judgment while they gather information about how the actor responds to different types of situations (Hilton, Fein, & Miller, 1993), and they intuitively hedge their trait statements with situational qualifiers (Wright & Mischel, 1988). Thus, there is the belief that if...then...signatures are implicitly encoded in many of the trait terms and concepts perceivers use to describe personality (Kammrath et al., 2005). So when perceivers associate a trait with a set of specific underlying motives, they will expect it to be manifested in a stable pattern of differential responses to situations: an *if...then...* profile. In three studies done by Kammarath et al. (2005), it was found that perceivers adopted a complex, interactionist perspective when predicting a target's behavior and when inferring the target's dispositions from characteristic patterns of situation-behavior variation. Thus, in a task in which perceivers are asked to make inferences about a person's personality from a single behavior, they are faced with the task of deciding whether that certain behavior will generalize to a new situation. A variety of research shows empirical evidence that perceivers usually assume that behavior will generalize (Fiedler, Semin, & Bolten, 1989; Jones & Harris, 1967; Ross, 1977).

In other words, these profiles may provide a nomothetic route to characterize people by specific dispositions or traits based on their specific behaviors within a certain

situation. Consequently, one could most likely identify certain personality types by finding the common *if...then...* patterns of behavior variation they share, and, conversely, identifying similarities among people in their underlying dynamics should allow for prediction of common *if...then...* patterns they would manifest behaviorally (Mischel & Shoda, 1999).

Based on this program of research, it is reasonable to propose that clinicians may use this same process to assess a patient's personality and even perhaps to arrive at a personality disorder diagnosis. In the case of a clinician assessing a patient's personality, the disposition that they would be assessing is the personality disorder construct, which is formulated from a series of situationally-specific behavior exemplars of personality traits. Thus, in initial assessment and therapy sessions, a patient describes certain behavioral patterns that occurred in response to specific situations. The clinician would then begin to gather information about how the patient responded in consistent and inconsistent ways across various situations in order to determine the underlying disposition – which is related to his goals, motives, values, and beliefs. The clinician might also begin to look for major themes or consistencies across situations. Clinicians then use this collection of information to then compare it to the behaviors and qualities that represent a personality disorder within a particular framework such as the DSM-IV TR. By doing this, the clinician should be able to identify the personality disorder construct.

In the past, studies have investigated perceivers' intuitive understanding of dispositions and their associated situational triggers in the form of *if...then...* profiles by using lay perceivers to judge personality dispositions based on vignettes (e.g. Kammrath, et al., 2005). However, none of these studies tested the use of *if...then...* profiles with

professionals. Because these past studies have revealed that lay perceivers take account of person-situation interactions in everyday explanations of social behavior and personality disposition, it would be reasonable to expect that professionals are likely to employ the same strategies. Furthermore, this study will be asking licensed psychologists to assign diagnoses, so it is believed that these past findings can be taken one step further by applying these *if...then...* profiles to diagnosis. This has never been tested before, and the utility of *if...then...* profiles in personality diagnosis remains unexplored.

Based on these assumptions, this study sets out to study two specific aims and the following hypotheses.

Aim 1. Assess whether the clinicians can diagnose a personality disorder within a vignette that is written to capture the CAPS understanding of personality disorder at a rate greater than chance.

Aim 2. Evaluate whether clinicians are more successful in correctly diagnosing the patients described in the CAPS vignettes than vignettes written with FFM traits.

Based on past studies that have successfully and accurately used situationally-specific behaviors as a way for lay perceivers to make personality judgments (e.g. Kammrath, et al., 2005), this study hypothesizes the following:

- Participants will diagnose the CAPS vignettes more accurately than the FFM trait vignettes.
- Participants will report higher confidence ratings of their diagnoses based on CAPS vignettes than the FFM vignettes.
- 3. Participants will report higher ratings of prototypicality for the CAPS vignettes than the FFM vignettes.

Method

Participants

A mass mailing was sent out to the approximately 792 fully and limited licensed members of the Michigan Psychological Association (MPA). The mailing addresses of the MPA members were purchased through the MPA, and email addresses were obtained by gaining member access to the MPA online server. The mass mailing consisted of either a one-page letter, which included an address for an electronic link that the clinician would follow to complete the survey online, or an email invitation with the direct link to the survey online. To encourage participation, the letter notified members that upon completion of the survey, they would have the opportunity to enter a drawing to win 1 of 6 gift cards that would be awarded to participants. Reminder postcards were sent once to participants who did not have an email address, while participants who could be reached by email were sent a total of three follow-up reminders by email. Approximately 26% of the clinicians agreed to participate (n = 202).

Materials

Participants completed a survey online, which was created using SurveyMonkey.com©, a survey software subscription service. Each survey asked participants for demographic information such as sex, age, race/ethnicity, years of practice, and theoretical orientation. It also asked them for the percentage of their work week they spend in the provision of direct clinical services.

The survey also included vignettes written in the form of short paragraphs that described fictional patients with personality disorders. The vignettes described one of the three chosen representative personality disorder diagnoses. The disorders selected represent each of the DSM-IV personality clusters: Schizoid (Cluster A), Narcissistic (Cluster B), and Obsessive-Compulsive (Cluster C). In addition, there is not much overlap of characteristically high or low NEO-PI-R facets (Costa & McCrae, 1992) believed to characterize each of these three personality disorders. The only overlapping facet was high Achievement Striving for both Narcissistic and Obsessive-Compulsive personality disorder. Thus, the PDs seem to represent different personality configurations based on the facet-level predictions made by Widiger, Trull, Clarkin, Sanderson, and Costa (2002).

Each personality disorder was written with situationally-specific behavioral descriptions of the DSM-IV TR (APA, 2000) diagnostic criteria for that personality disorder (subsequently referred to as CAPS vignettes), items from the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992) that represent facets of the FFM associated with each personality disorder, and with statements from either the *DSM-IV-TR Casebook* (Spitzer, Gibbon, Skodol, Williams, & First, 2002) or the *DSM-III-R Casebook* (Spitzer, Gibbon, Skodol, Williams, & First, 1989). One vignette was created that was a random collection of 6 items from the NEO-PI-R that is not representative of any particular personality disorder, which served as a control case.

Each survey included 2 vignettes: either 1 situationally-specific description, 1 FFM description, or 1 DSM casebook description, and the control case. The vignettes were followed by a forced choice question asking the respondent to diagnose the patient

described in the vignette from a checklist of the DSM-IV PDs and then two 6-point rating scales asking the respondent how confident s/he was about the diagnosis and how prototypical the case was for the diagnosis. The order of the vignettes was randomized by the SurveyMonkey© software. (See Appendix A for these questionnaires and the vignettes that were used.) Thus, nine conditions were created and a potential subject was randomly assigned to one.

The CAPS vignettes were written in a collaborative effort by a research team of masters and doctoral students, supervised by a senior, licensed psychologist with expertise on the assessment and treatment of personality disorders. The patients described in the vignettes were all male, and the name was kept the same for each PD. For each disorder in the DSM-IV-TR (APA, 2000), there is a list of seven to nine criteria describing that disorder, and the individual must meet a certain number of the criteria to be diagnosed with a personality disorder. For each vignette, a sentence was written describing a situationally-specific behavior corresponding to one of these DSM-IV-TR (APA, 2000) criteria. Each vignette included the minimum number of criteria required for a DSM-IV TR diagnosis of that particular personality disorder plus one extra criterion. For example, for a diagnosis of Schizoid Personality Disorder, four or more of the DSM-IV-TR (APA, 2000) criteria must be met, so the Schizoid CAPS vignette included a description of five, situationally-specific behaviors that represent the criterion. The specific DSM-IV TR (APA, 2000) criteria used in the vignettes were chosen at random.

The FFM trait vignettes were written with items from the NEO PI-R (Costa & McCrae, 1992). Widiger et al. (2002) proposed that each PD would be characteristically low and high scores on specific facets. For example, Schizoid Personality Disorder is

Emotions, and Feelings facets of the NEO-PI-R (Widiger et al., 2002). In the present study, each case was written as a short vignette. The content of the vignette was created based upon items on the NEO PI-R (Costa & McCrae, 1992), in which one item was selected from each facet hypothesized to be related to the respective PD. For example, in writing the Schizoid Personality Disorder vignette, a list was created of each item from the NEO-PI-R (Costa & McCrae, 1992) that corresponded with each of the specific facets (warmth, gregariousness, positive emotions, and feelings) related to Schizoid Personality Disorder. (See Appendix B for the lists that were created for each personality disorder used.) One NEO-PI-R item was randomly chosen to represent each facet. Thus, depending on whether the PD had characteristically high or low scores for that facet, an item that described either a high or low score was chosen. Minimal changes were made to the wording of the specific item when these items were then included in the vignette.

In order to compare CAPS vignettes with FFM vignettes, each FFM vignette consisted of the minimal number of items that correspond to the minimal number of DSM-IV TR (APA, 2000) criteria required for a diagnosis plus one additional item. In this way, we used a situationally-specific behavior or a FFM facet item to correspond with one DSM-IV TR (APA, 2000) PD criterion. This strategy is represented in Figure 1. However, the number of FFM facets associated with each PD does not match the number of DSM-IV diagnostic criteria. Therefore, to keep the number of items equal to the number of diagnostic criteria used, some of the facets proposed in the Widiger et al. (2002) study were not included in the written vignette. If there were fewer facets than DSM-IV criteria included in the case, some of the facets were randomly chosen to be

represented twice (with different items from the NEO-PI R) such that the number of items in the case equaled the number of diagnostic criteria required for a diagnosis plus one. For example, in the Schizoid PD vignette, Gregariousness was represented twice with two different items from the NEO-PI R, because five statements were needed to meet the minimum criteria for DSM-IV TR (APA, 2000) plus one, and only four facets were proposed to be related to Schizoid PD in the Widiger et al. (2002) study.

Conversely, in the Narcissistic PD vignette, six facets were represented to correspond to the number of statements needed to meet the minimum criteria for DSM-IV TR(APA, 2000) plus one, even though there are seven facets that were proposed to be related to Narcissistic PD in the Widiger et al. (2002) study.

The vignettes based solely on DSM criteria were written using statements taken verbatim from the *DSM-IV-TR Casebook: A Learning Companion to the Diagnostic and Statistical Manual of Mental Disorders Fourth Edition, Text Revision* (Spitzer et al., 2002) and the *DSM-III-R Casebook: A Learning Companion to the Diagnostic and Statistical Manual of Mental Disorders Third edition Revised* (Spitzer et al., 1989) since no Schizoid case is included in the DSM-IV TR casebook. From the *DSM-IV-TR Casebook* (Spitzer et al., 2002), the case entitled "False Rumors" was used in writing the Narcisstic PD vignette, and "The Workaholic" was used to write the Obsessive Compulsive PD vignette. The case entitled "Man's Best Friend" in the *DSM-III-R Casebook* was used in writing the Schizoid PD vignette (Spitzer et al., 1989). To form these vignettes, a number of statements were chosen at random to be included. The number of statements chosen corresponds with the number of DSM-IV TR (APA, 2000) diagnostic criteria needed to warrant a diagnosis plus one. This kept the number of

statements used for each DSM-IV TR (APA, 2000) PD vignette equal to the number of CAPS statements and NEO-PI-R (Costa & McCrae, 1992) items used in the other vignettes. The only changes that were made to these statements were the names of the patients, and minimal transitional phrases were added.

The SurveyMonkey© software requires responses to every question, randomizes the order of the vignettes and the subsequent rating scale following the vignettes.

Additionally, the software organizes the data into a SPSS© file for further analysis.

Design and Procedure

This study design was a 3 x 3 (personality disorder x vignette type) between groups experimental design. The participants in the study were randomly assigned to one of nine possible conditions at the moment that they connected to the online link. Each condition included 2 vignettes: the control vignette and one of the 9 possible vignette personality disorder combinations. (See Figure 2 for a table containing the possible vignette combinations.) Each participant read the two vignettes to which they were randomly assigned and selected a diagnosis for each fictional patient in the vignette and then rated the diagnoses that they selected.

Online Survey Completion. Participants were first asked to read an informed consent statement, which was the initial web page viewed. They were asked to type in the words "I Agree" in a box at the end of the informed consent statement, if they agreed to participate. Agreement on this page was required before the participant could go any further with the survey. The next information that was obtained concerned demographics of the participant (e.g., sex, age, race/ethnicity, years of practice, theoretical orientation, etc.). After this, the participant was presented with the first of two vignettes. Following

the vignette, the participant was asked to assign one personality diagnosis, if warranted, from a list of the ten DSM-IV Axis II diagnoses along with the option of no diagnosis. Next, the survey asked the participant to rate the confidence of the diagnosis that s/he has made using a Likert-type scale ranging from 1 (*Not at all confident*) to 6 (*Very confident*). The participant was then asked to rate how prototypical this case is of the given diagnosis using another 6-point scale ($I = Not \ at \ all \ prototypic$, $6 = Highly \ prototypic$). Each participant followed this same sequence of questions on the survey for both of the vignettes presented.

Follow-up. Upon completion of the survey, the participants were automatically directed to a web page that thanked them for their participation and explained where they can obtain future study results if they wish to see them. In addition, the participants were given the opportunity to enter a drawing for a gift card to a local store as a reward for their participation. The first place winner of the drawing received a \$100 gift card, second place received a \$50 gift card, and four people received a \$25 gift card for third place. Thus, a total of \$250 in gift cards was given to six people as an incentive for participation.

Results

Table 1 summarizes the clinician characteristics. Sixty percent of the clinicians were female. Approximately 30% reported their theoretical orientation as cognitive behavioral and 30% as psychoanalytic/psychodynamic. The remainder identified their orientation as either eclectic or as another orientation, such as existential, humanistic, or neuropsychology. The majority of clinicians reported spending more than 50% of their day in direct clinical services. Although this study included both limited and fully

licensed clinicians, 63.9% of the participants reported at least 16 years in clinical practice, while only 9.4% reported less than 5 years of experience.

To examine the first hypothesis, two analyses were conducted. First, a 3 x 3 (method x diagnosis) chi-square test for independence was used to examine the frequencies of correct diagnoses by each method of vignette presentation and vignette diagnosis. The results were significant for the frequency of incorrect diagnoses by method and diagnosis, $\chi^2(4, n = 187) = 11.87$, p = 0.018 but not significant for the frequency of correct diagnoses by method and diagnosis, $\chi^2(4, n = 187) = 2.09, p = 0.72$. To further explore the significant results for incorrect diagnoses by method and diagnosis, two one-way chi square tests for independence were conducted. The first was used to examine the frequencies of incorrect diagnoses by method of presentation. This analysis did not produce a statistically significant result, $\chi^2(2, n = 187) = 3.67$, p = 0.153. The second one-way chi square evaluated the frequencies of incorrect diagnoses by vignette diagnosis type. These results revealed that the frequencies of incorrect diagnoses by diagnosis type were significantly different, $\chi^2(2, n = 187) = 9.96$, p = 0.007. As seen in Table 3, the frequency of correct diagnoses was lowest for the Schizoid vignettes, and 31% of the subjects presented with a Schizoid vignette assigned a diagnosis of Avoidant Personality Disorder. Partially notable was that 74.6% of incorrect responses by the subjects presented with the CAPS/Schizoid vignettes assigned an Avoidant Personality Disorder diagnosis.

The data were then analyzed using a 3 x 3 (method x diagnosis) between-groups ANOVA on the proportion of correct diagnoses to explore interactions between diagnosis type and presentation method of the vignettes. A main effect for diagnosis type, F(2, 187)

= 5.34, p < .01, as well as a significant interaction of method by diagnosis, F(4, 187) = 2.70, p < .05, were found. LSD post hoc tests revealed that the proportion of correct diagnoses for clinicians who diagnosed the Schizoid vignettes was significantly lower than the proportion of correct diagnoses of clinicians who diagnosed both the Narcissistic and Obsessive-Compulsive vignettes (See Table 4). The proportion of correct diagnoses of the Narcissistic and Obsessive Compulsive vignettes did not significantly differ. Thus, clinicians diagnosing vignettes describing a fictional client with either Narcissistic or Obsessive Compulsive PD appear to have been more successful than clinicians who were asked to diagnose a vignette describing a fictional client with Schizoid PD. Additionally, post hoc analyses also revealed that the proportion of correct diagnoses was lowest for clinicians who were presented CAPS vignettes with the Schizoid PD, which is commensurate with the chi square findings above.

This pattern of responses, in contrast to the much higher rates of correct diagnoses of the other two PDs, indicates that possible weaknesses in the wording of the CAPS/Schizoid vignettes may have contributed strongly to the high number of incorrect diagnoses. In light of this finding, cases containing a Schizoid PD vignette were excluded, and the same analyses were performed. The first hypothesis was again explored by analyzing this modified data set using a 2 x 3 (diagnosis x method) chi square test of independence. When the Schizoid PD cases were excluded, the frequency of both incorrect and correct diagnoses by method and diagnosis did not significantly differ. Thus, no further one-way chi square analyses were done.

These modified data were then analyzed using a 2 x 3 (diagnosis x method) between groups ANOVA to explore if there were any further interactions between

diagnosis type and presentation method of the vignettes. A main effect for method of vignette description was found, F(1, 124) = 5.82, p = 0.004; however, the interaction of description type and diagnosis was no longer significant. LSD post hoc tests revealed that the proportion of correct diagnoses for CAPS vignettes was significantly higher than the proportion of correct diagnoses for FFM vignettes. However, the proportion of correct diagnoses for CAPS vignettes was not significantly different from the proportion of correct diagnose for DSM vignettes. Thus, when the Schizoid vignettes were excluded from the analysis, clinicians diagnosed the CAPS vignettes more accurately than the FFM trait vignettes, as was initially predicted. Furthermore, clinicians' diagnostic accuracy with the CAPS vignettes was equivalent to their accuracy using DSM casebook vignettes.

Finally, to address the second and third hypotheses, the data were analyzed using 3 x 3 (method by diagnosis) between-groups ANOVA to compare the confidence ratings and prototypicality ratings based on each type of vignette. Tables 5 presents the mean confidence and prototypicality ratings by method of vignette presentation and vignette daiagnosis. Contrary to expectations, there were no significant differences between the confidence or protypicality ratings based on the presentation method of each vignette. Thus, it appears that the clinicians' level of confidence in their diagnosis or estimate of prototypically was not related to the type of vignette with which they were presented.

Discussion

In general, the practicing psychologists in this sample were able to diagnose a personality disorder within a vignette that was written to capture the CAPS understanding of personality disorder both at a rate greater than chance and with equivalent diagnostic

accuracy to vignettes based solely on DSM criteria taken directly from the *DSM-IV-TR Casebook* (Spitzer et al., 2002). Thus, preliminary support for the major hypothesis of this study was found. However, contrary to initial hypotheses, clinicians did not report higher levels of confidence in their diagnoses when presented with a CAPS vignette, nor did they rate the CAPS vignettes as being more prototypical of the given personality disorder diagnosis.

Based on these initial findings, it appears that clinicians may be able to judge personality disorders better with situationally-specific, or context-dependent, information than just simple trait descriptions. According to Mischel & Shoda (1999), situationally-specific information about behavior provides assessors the opportunity to formulate "ifthen" hypotheses about an individual's underlying processing dynamics (i.e. goals, values, motives, and beliefs). In this study, the present evidence suggests that clinicians benefited from having the material presented this way, such that they were able to make inferences about a patient's personality, which in turn increased their ability to accurately arrive at a personality disorder diagnosis. This supports past research studies that have revealed that lay perceivers have an intuitive understanding of dispositions and their associated situational triggers and can successfully judge personality dispositions by taking account of person-situation interactions (e.g. Kammrath, et al., 2005); however, it takes this research one step further in applying this process to professionals and to diagnosis.

Clinical Utility of CAPS

The clinical utility of PD diagnosis has always been and will continue to be an important concern. While prior editions of the diagnostic manual have focused heavily on

matters of reliability and validity, one of the main goals of the DSM revision process has been to improve its clinical utility (First et al., 2004). Although there has been a substantial amount of research supporting both the reliability and validity of FFM (e.g. Mullins-Sweatt & Widiger, 2007), this is one of just a few studies to date that has examined the ability of practicing clinicians to use the FFM to assign a personality disorder diagonsis (e.g., Blais, 1997; Samuel & Widiger, 2004; Sprock, 2003). These previous studies have provided documentation that clinicians are able to conceptualize PDs in terms of the FFM; however, only Sprock (2003) explored whether FFM descriptions were clinically useful in personality disorder diagnosis. Sprock (2003) surveyed two national samples of practicing psychologists using six brief case vignettes that described prototypic and nonprototypic personality disorders. The first sample was asked to provide both categorical and dimensional ratings using the current DSM-IV personality disorder constructs, while the second sample was asked to provide ratings using the five broad traits of the FFM. Sprock (2003) found that clinicians rated the DSM-IV cases significantly higher than the FFM cases on all three measures of clinical utility (professional communication, case conceptualization, and treatment planning) and also reported that diagnostic confidence was higher for the DSM-IV diagnostic categories.

Sprock's (2003) results were criticized as simply reflecting the fact that clinicians had been trained with, and were much more familiar with, the DSM-IV diagnostic categories (Widiger, 2005). However, the results from this study would suggest that both the CAPS and DSM-IV models may have greater utility when it comes to assigning a personality disorder diagnosis than current FFM conceptualizations. That is, results

suggest that providing a context in which to evaluate personality disorder vignettes has just as much utility as does a case that is written from DSM-IV diagnostic criteria.

Moreover, clinicians reported equivalent confidence and protoypicality ratings when using CAPS, FFM, and the DSM-IV criteria, suggesting that their familiarity with DSM-IV Axis II diagnostic categories was not related to their ability to assign an accurate diagnosis.

Moreover, the vignettes written based on the DSM used statements taken directly from either the DSM-IV-TR Casebook (Spitzer et al., 2002) or the DSM-III-R Casebook (Spitzer et al., 1989). These cases are written to help both clinicians and students translate the concepts from the DSM to actual clinical situations by providing clinical vignettes. These vignettes are exceptionally comprehensive to clearly illustrate the personality disorder construct they are trying to portray. Accordingly, they are written using information from multiple informants and include statements that provide information about the client in trait terms, with behavior examples of the DSM criteria and with situationally-specific behavior examples. Because the statements used in the vignettes in this study were chosen at random, the type of information provided in the vignettes was not controlled for. Therefore, the DSM vignettes may have included statements with multiple informants and situationally-specific behavior examples. The FFM and CAPS vignettes were written using only statements that the client would report in a therapy session and did not combine trait and behavioral examples within the same vignette. Taking this into consideration, it is notable that the clinicians diagnosing the CAPS vignettes performed with equivalent diagnostic accuracy to those diagnosing the DSM vignettes. This provides tentative, though compelling, evidence that the CAPS model

should be further evaluated for its clinical utility and use in personality disorder diagnosis.

Limitations and Future Research

One of the main limitations of the current study was that the assessment of diagnostic accuracy was confined to only three personality disorders: Narcissistic, Obsessive-Compulsive, and Schizoid. Moreover, the Schizoid cases proved to be problematic across all of the ways in which the cases were written, and clinicians in all conditions had trouble assigning a correct diagnosis. In particular, the Schizoid vignette written to represent CAPS situationally-specific behaviors was misdiagnosed more than any of the other vignettes. Because the large majority of incorrect responses (76.4%) by the subjects presented with the CAPS/Schizoid vignettes assigned an Avoidant Personality Disorder diagnosis, it is possible that the way in which the case was written was too similar to characteristics and behaviors of Avoidant Personality Disorder. Past research has pointed out the difficulty in distinguishing between Avoidant Personality Disorder and Schizoid Personality Disorder (Livesley & West, 1986; Trull, Widiger, & Frances, 1987). In fact, when Avoidant Personality Disorder first appeared in the DSM-III, it was problematic to differentiate the two PDs because of item overlap in the diagnostic criteria (Ganellan, 2006). The item overlap was corrected in the DSM-IV; however, this could be problematic in this study because the DSM Schizoid vignette was taken from the DSM-III-R criteria and thus based on criteria that were not written with enough diagnostic discrimination. In addition, from the perspective of the FFM, both Schizoid and Avoidant Personality Disorders involve a significant amount of social

introversion (Ganellan, 2006). Although the FFM predicts that the two PDs differ in the nature of their introversion, it is plausible that this shared characteristic led to difficulty in diagnosis. Further research in this area may benefit from including all of the DSM-IV personality disorder diagnoses in the assessment. In this way, further exploration of the interaction of diagnosis type and method of vignette presentation could be explored. Also, if one vignette happened to be poorly written, the impact it would have on the overall results would not be quite as detrimental as it was in the current study.

The current study randomly selected the DSM criteria, the situations, and FFM items that were included in each vignette. Although all were selected randomly, it is possible that the specific arrangement and combinations of these statements impacted the results. Thus, the generalizability of the results may be somewhat questionable. Further studies utilizing various combinations of DSM criteria, situations, and FFM items will need to be done to explore if the same results are obtained.

Finally, the use of formulated case vignettes, as opposed to those based on real individuals, does not necessarily emulate the in vivo clinical experience of assessing a client. The case vignettes were composed of sentences confined largely to behavioral descriptions or illustrations of DSM personality disorders, a situationally-specific behavior corresponding to one of these DSM-IV criteria or items on the NEO PI-R (Costa & McCrae, 1992). Each vignette was brief (approximately one paragraph in length), with sentences confined largely to specific behaviors that would illustrate individual personality disorder diagnostic criteria. A more ecologically valid approach would be to use case histories of actual clients described using CAPS, FFM, or DSM-IV criteria. However, it should be noted that of the three methods used in the current study, the way

in which the CAPS vignettes were written, describing situationally-specific behaviors, seems most similar to the type of information that is gathered during a therapy session. For example, during a typical assessment or therapy session, a patient describes his or her behaviors that occurred in response to specific situations. A study by Westen (1997) supports the notion that the process of diagnosing personality disorders entails far more than using a checklist of DSM criteria. Westen (1997) found that while direct questions derived from DSM-IV may be useful in assessing Axis I diagnoses, experienced psychologists and psychiatrists make Axis II diagnoses by listening to patients' narratives describing interpersonal interactions, observing their behaviors with the interviewer, and drawing inferences about their characteristic behavior and cognitive patterns. This process described by Westen (1997) seems to correspond to the way in which CAPS can be utilized in personality diagnosis. Thus, it could be that CAPS may best reflect what occurs in real life experience.

Conclusions

With the DSM-V revision process underway, clinicians and researchers are examining alternative models for diagnosing and conceptualizing personality disorders. The present findings provide the groundwork for beginning to explore the use of CAPS in personality disorder diagnosis. The data suggest that using CAPS descriptions in personality diagnosis yields more accurate diagnoses than does using FFM trait descriptions and equivalent diagnostic accuracy when using the DSM-IV Axis II criteria. The need now is to examine with increasing depth how CAPS might be used in personality diagnosis and conceptualization in order to improve both clinical utility and diagnostic accuracy.

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Table 1 Characteristics of Michigan Psychological Association Clinician Participants Sample

Characteristic	Valu	Value		
	N	%		
Sex				
Female	119	60.1		
Male	79	39.9		
Age Group				
26 – 35	21	10.6		
36 - 45	31	15.7		
46 - 55	59	29.8		
56 - 65	70	35.4		
66 - 75	15	7.6		
75+	2	1.0		
Race/Ethnicity				
White/Caucasian	185	93.9		
Black/African American	3	1.5		
Hispanic/Latino	1	0.5		
Asian	1	0.5		
Other	7	3.6		
Years in Clinical Practice				
1–5	18	9.4		
6-10	24	12.6		
11–15	27	14.1		
16-20	29	15.2		
21-25	31	16.2		
26-30	30	15.7		
30+	32	16.8		
Percent of Day in Direct Clinical Services				
0-25	32	16.2		
26-50	25	12.6		
51-75	42	21.2		
76-100	99	50.0		
Theoretical Orientation				
Eclectic/Integrative	35	17.7		
Psychodynamic/Psychoanalytic	63	31.8		
Cognitive Behavioral	66	33.3		
Other	34	17.2		
Existential				
Humanist				
Interpersonal				
Neuronsychology				

Neuropsychology

Table 2

Frequency of Correct (Incorrect) Diagnoses by Method of Vignette Presentation and Diagnosis

	Diagnosis				
Method	NAR	OBC	SZD	Total	
CAPS	19(4)	16(2)	8(16)	43(22)	
FFM	12(9)	11(11)	9(8)	32(28)	
DSM	14(7)	16(3)	13(9)	43(19)	
Total	45(20)	43(16)	30(33)	118(69)	

OBC = Obsessive-Compulsive PD

SZD = Schizoid PD

Table 3

Frequency of DSM-IV Axis II Diagnoses Assigned by Vignette Diagnosis Type

		Vignette Type			
	NAR	OBC	SZD	Control	
DSM-IV Axis II Diagnosis					
Paranoid	0	0	0	1	
Schizoid	2	0	29*	0	
Schizotypal	1	0	3	1	
Antisocial	3	0	2	0	
Narcissistic	44*	2	0	0	
Borderline	0	0	0	0	
Histrionic	0	0	0	13	
Obsessive-Compulsive	1	43*	0	1	
Dependent	0	0	0	4	
Avoidant	0	0	19	9	
Not Otherwise Specified	4	0	1	18	
No Diagnosis	9	14	7	133*	

^{*} indicates correct diagnosis

OBC = Obsessive-Compulsive PD

SZD = Schizoid PD

Table 4

Proportion of Correct Diagnoses (Standard Deviation) by Method of Presentation and Diagnosis Type.

	Method				
Diagnosis	CAPS	FFM	DSM	Total	
NAR	.83(.39)	.57(.51)	.67(.48)	.69(.47)	
OBC	.89(.32)	.50(.51)	.84(.38)	.73(.45)	
SZD	.33(.48)	.53(.51)	.59(.50)	.48(.50)	
Total	.66(.48)	.53(.50)	.69(.47)	.63(.48)	

OBC = Obsessive-Compulsive PD

SZD = Schizoid PD

Table 5

Mean ConfidenceRatings (Standard Deviation) and Mean Prototypicality Ratings (Standard Deviation) by Method of Presentation and Diagnosis

	Method							
	CAPS		FFM		DSM		Total	
Diagnosis	Confidence	Prototypicality	Confidence	Confidence Prototypicality (Prototypicality	Confidence	Prototypicality
NAR	4.00(1.41)	4.05(1.40)	3.86(1.01)	4.25(1.21)	4.14(1.46)	3.74(1.37)	4.00(1.30)	4.02(1.32)
OBC	3.78(1.52)	3.82(1.19)	3.95(1.36)	3.33(0.90)	3.79(1.69)	4.00(1.41)	3.85(1.50)	3.74(1.21)
SZD	3.55(1.54)	3.95(1.02)	3.82(1.19)	3.75(0.76)	4.18(1.30)	4.20(1.28)	3.85(1.36)	3.98(1.06)
Total	3.78(1.48)	3.95(1.19)	3.88(1.18)	3.82(1.05)	4.05(1.47)	3.98(1.34)	3.90(1.38)	3.92(1.20)

OBC = Obsessive-Compulsive PD

SZD = Schizoid

Number of DSM Criteria	Unit of Representation
1	If-then description 1.
	FFM facet item 1.
	DSM casebook statement 1.
2	If-then description 2.
	FFM facet item 2.
	DSM casebook statement 2.
3	If-then description 3.
	FFM facet item 3.
	DSM casebook statement 3.
N	If-then description N.
	FFM description N.
	DSM casebook statement N.

Note. If this figure represented Schizoid PD, the case would be written accordingly:

Although there are 7 DSM-IV TR diagnostic criteria that correspond to Schizoid

PD, only 5 criteria will be used. This number represents the minimal number of

DSM IV TR criteria required for a Schizoid PD diagnosis (4), plus 1. Hence, the

Schizoid vignette consists of either 5 if-then statements, 5 FFM facet items or 5

DSM casebook statements.

Figure 1. Strategy used for writing situationally-specific, FFM, and DSM casebook vignettes.

FFM	FFM	FFM
SZD	NAR	OBC
CAPS	CAPS	CAPS
SZD	NAR	OBC
DSM	DSM	DSM
SZD	NAR	OBC

Note. FFM represents the vignettes written using facet items from the Revised NEO

Personality Inventory (NEO PI-R; Costa & McCrae, 1992). CAPS represents the

vignettes written using situationally-specific behavioral descriptions of the DSM
IV TR (APA, 2000) diagnostic criteria. DSM represents vignettes based solely on

DSM criteria were written using statements taken verbatim from the DSM

casebooks. SZD reflects Schizoid personality disorder. NAR represents

Narcissistic personality disorder. OBC indicates Obsessive Compulsive

personality disorder.

Figure 2. Possible combinations of presentation method and personality disorders for the vignettes.

Appendix A

Questionnaire and vignettes to be used in the Study

INSTRUCTIONS: Please read the following descriptions very carefully. After each description, complete the following ratings, thinking through the description thoroughly.

		•		_	•	
	The ca otherapy nsert Vig	y.	cribed be	elow is	of a pat	ient who has come to see you for outpatient
	RUCTION And the state of the st			mplete	each qu	estion carefully based upon the description
	h of the answer)		ng perso	onality	disorder	diagnoses is most likely? (Choose ONLY
Paranoid Schizoid Schizotypal Antisocial Borderline Not Otherwise Specified						Histrionic Narcissistic Avoidant Dependent Obsessive Compulsive No diagnosis
How	confider	nt are y	ou of thi	is diagn	osis?	
1 Not At All	2	3	4	5	6	7 Very Confident
How	prototyp	oical is	this case	e of the	given di	iagnosis?
1 Not At All	2	3	4	5	6	7 Very Prototypical

If... then... Vignettes

Narcissistic PD

Mark is the owner of a successful small business. When asked recently about what makes his company successful, Mark replied that, among other things, his leadership was the driving force. Currently though, he is having difficulty hiring a new assistant because he feels none of the applicants are bright enough to do the job right. Mark also commented that his employees went out for happy hour last Friday after work, but they did not invite him and added that they don't like that he makes more money than they do. However, he is puzzled by the fact that his friends did not seem interested in how he selected his recent automobile purchase.

Mark was asked to talk about his home life. In talking about his wife, he reports that when she did not answer the phone one day, he said, "I don't care if you are busy doing something." In talking about his relationship with his son, he said he told his 7-year old son not to cry after falling down, that it was just a scraped knee.

Obsessive-Compulsive PD

Brian reports that last weekend when his friends invited him to go out with them he declined, saying he had too much work to do. He added that he almost missed the deadline of his most recent project because he rewrote it several times. In talking about his job, he noted an incident in which he was asked to set up a meeting time with one of his colleagues, pulled out his planner and found that his earliest availability was several days later. As for his work habits, Brian reports he does not work in groups because he cannot trust his group members to do a good job.

Brian also described his home life. He stated that he recently convinced his wife that they did not need to purchase a new car, which would have been "giving in to her whims." He adds that he needs to get more storage space at home, since he keeps all his mail and later recycles it.

Schizoid PD

In his first meeting with you, Joel described various relationships. He noted that during a recent holiday when his mother invited him to spend the holidays with the family, he was unsure if he would go. At work a colleague complimented Joel on the way he handled a difficult situation; however, Joel walked away without responding. When he is not at work, Joel says he prefers to stay home to play video games in his apartment. In fact, his relationship with a girlfriend ended after she complained that he was more interested in his video games than being with her.

FFM Vignettes

Narcissistic PD

Mark reports that he often gets disgusted with people he has to deal with. He adds that in dealing with other people, he always dreads making a social blunder. Mark strives for excellence in everything he does and doesn't mind bragging about his talents and accomplishments. According to Mark, some people think of him as cold and calculating, but he describes himself as "hard-headed and tough-minded in my attitude".

Obsessive Compulsive PD

Brian likes to keep everything in its place so he knows just where it is. He describes himself as "hard-headed and stubborn" and reports that he has often been a

leader of groups he has belonged to. Brian prides himself on his sound judgment and noted that he adheres strictly to his ethical principles.

Schizoid PD

Joel reports that he usually prefers to do things alone. He adds that many people think of him as somewhat cold and distant. However, he finds that social gatherings are usually boring to him. Joel says he rarely expresses strong emotions. For instance, he stated that he has never literally jumped for joy like other people might.

DSM Casebook Vignettes

Narcissistic PD

Mark's manner is distant, but charming, and he obviously enjoys talking about a variety of intellectual subjects or current affairs. However, he assumes a condescending, cynical, and bemused manner toward his therapist. When talking with Mark's father, he recalled a series of conflicts between Mark and authority figures over rules and noted that Mark had expressed disdain for his peers at school and for his siblings. In fact, both of Mark's parents say that he always appeared to be a loner, though he did not complain of loneliness. Mark conceded that others viewed him as cold or insensitive. He went on to note that when others complained about these qualities in him, it was largely because of their own weakness.

Obsessive Compulsive PD

Brian is known as the hardest-driving member of a hard-driving law firm but lately, he finds himself increasingly unable to keep up. He is too proud to turn down a new case and too much of a perfectionist to be satisfied with the quality of work performed by his assistants. People at work complain that his attention to details and

inability to delegate responsibility are reducing his efficiency. No one can tolerate working for him for very long because he is so critical of any mistakes made by others.

He finds it difficult to be decisive now that his work has expanded beyond his own direct control.

Schizoid PD

Joel lives alone and has for many years had virtually no conversational contacts with other human beings beyond a "Hello" or "How are you?" He prefers to be by himself, finds talk a waste of time, and feels awkward when other people try to initiate a relationship. He considers himself different from other people, and regards emotionality in others with bewilderment. Joel believes that dogs are more sensitive and loving than people, and he can, in return, express toward them a tenderness and emotion not possible in his relationships with people. In fact he reports that the loss of his pets are the only events in his life that have caused him sadness.

FFM Control Vignette

Bill reports that his life is fast paced. He adds that as a result, sometimes he is not as dependable or reliable as he should be. Bill says that when everything seems to be going wrong, he can still make a good decision even though it's often hard for him to make up his mind. Bill finds that he is sometimes completely absorbed in music he is listening to. He also mentions that he tends to assume the best about people.

Appendix B

Lists created from items in the NEO-PI R (Costa & McCrae, 1992)

Narcissistic Personality Disorder

High on N2 (Angry Hostility)

- 6. I often get angry at the way people treat me.
- 36. I am an even-tempered person.
- 66. I am known as hot-blooded and quick-tempered.
- 96. I am not considered a touchy or temperamental person.
- 126. I often get disgusted with people I have to deal with.*
- 156. It takes a lot to get me mad.
- 186. At times I have felt bitter and resentful.
- 216. Even minor annoyances can be frustrating to me.

High on N4 (Self-Consciousness)

- 16. In dealing with other people, I always dread making a social blunder.*
- 46. I seldom feel self-conscious when I'm around people.
- 76. At times I have been so ashamed I just wanted to hide.
- 106. It doesn't embarrass me too much if people ridicule and tease me.
- 136. I often feel inferior to others.
- 166. I feel comfortable in the presence of my bosses or other authorities.
- 196. If I have said or done the wrong thing to someone, I can hardly bear to face them again.
- 226. When people I know do foolish things, I get embarrassed for them. .

High on 01 (Fantasy)

- 3. I have a very active imagination.
- 33. I try to keep all my thoughts directed along realistic lines and avoid flights of fancy.
- 63. I have an active fantasy life.
- 93. I don't like to waste my time daydreaming.
- 123. I enjoy concentrating on a fantasy or daydream and exploring all the possibilities, letting it grow and develop.
- 153. If I feel my mind starting to drift off into daydreams, I usually get busy and start concentrating on some work or activity instead.
- 183. As a child, I rarely enjoyed games of make believe.
- 213. I would have difficulty just letting my mind wander without control or guidance.

High on C4 (Achievement Striving)

- 20. I am easy-going and lackadaisical.
- 50. I have a clear set of goals and work toward them in an orderly fashion.
- 80. When I start a self-improvement program, I usually let it slide after a few days.
- 110. I work hard to accomplish my goals.
- 140. I don't feel like I'm driven to get ahead.
- 170. I strive to achieve all I can.

- 200. I strive for excellence in everything I do.*
- 230. I'm something of a "workaholic."

Low on A3 (Altruism)

- 14. Some people think I'm selfish and egotistical.
- 44. I try to be courteous to everyone I meet.
- 74. Some people think of me as cold and calculating.*
- 104. I generally try to be thoughtful and considerate.
- 134. I'm not known for my generosity.
- 164. Most people I know like me.
- 194. I think of myself as a charitable person.
- 224. I go out of my way to help others if I can.

Low on A5 (Modesty)

- 24. I don't mind bragging about my talents and accomplishments.*
- 54. I'd rather not talk about myself and my achievements.
- 84. I'm better than most people, and I know it.
- 114. I try to be humble.
- 144. I have a very high opinion of myself.
- 174. I feel that I am no better than others, no matter what their conditions.
- 204. I would rather praise others than be praised myself.
- 234. I'm a superior person.

Low on A6 (Tendermindedness)

- 29. Political leaders need to be more aware of the human side of their policies.
- 59. I'm hard-headed and tough-minded in my attitudes.*
- 89. We can never do too much for the poor and elderly.
- 119. I have no sympathy for panhandlers.
- 149. Human need should always take priority over economic considerations.
- 179. I believe all human beings are worthy of respect.
- 209. I have sympathy for others less fortunate than me.
- 239. I would rather be known as "merciful" than as "just".

Obsessive Compulsive Personality Disorder

High on E3 (Assertiveness)

- 12. I am dominant, forceful, and assertive.
- 42. I sometimes fail to assert myself as much as I should.
- 72. I have often been a leader of groups I have belonged to.*
- 102. In meetings, I usually let others do the talking.
- 132. Other people often look to me to make decisions.
- 162. I would rather go my own way than be a leader of others.
- 192. In conversations, I tend to do most of the talking.
- 222. I don't find it east to take charge of a situation.

High on C1 (Competence)

- 5. I'm known for my prudence and common sense.
- 35. I don't take civic duties like voting very seriously.
- 65. I keep myself informed and usually make intelligent decisions.
- 95. I often come into situations without being fully prepared.
- 125. I pride myself on my sound judgment.*
- 155. I don't seem to be completely successful at anything.
- 185. I'm a very competent person.
- 215. I am efficient and effective at my work.

High on C2 (Order)

- 10. I would rather keep my options open than plan everything in advance.
- 40. I keep my belongings neat and clean.
- 70. I am not a very methodical person.
- 100. I like to keep everything in its place so I know just where it is.*
- 130. I never seem to be able to get organized.
- 160. I tend to be somewhat fastidious or exacting.
- 190. I'm not compulsive about cleaning.
- 220. I spend a lot of time looking for things I've misplaced.

High on C3 (Dutifulness)

- 15. I try to perform all the tasks assigned to me conscientiously.
- 45. Sometimes I'm not as dependable or reliable as I should be.
- 75. I pay my debts promptly and in full.
- 105. Sometimes I cheat when I play solitaire.
- 135. When I make a commitment, I can always be counted on to follow through.
- 165. I adhere strictly to my ethical principles.*
- 195. I try to do jobs carefully, so they won't have to be done again.
- 225. I'd really have to be sick before I'd miss a day of work.

High on C4 (Achievement Striving)

- 20. I am easy-going and lackadaisical.
- 50. I have a clear set of goals and work toward them in an orderly fashion.
- 80. When I start a self-improvement program, I usually let it slide after a few days.
- 110. I work hard to accomplish my goals.
- 140. I don't feel like I'm driven to get ahead.
- 170. I strive to achieve all I can.
- 200. I strive for excellence in everything I do.
- 230. I'm something of a "workaholic."

Low on O6 (Values)

- 28. I believe letting students hear controversial speakers can only confuse and mislead them.
- 58. I believe that laws and social policies should change to reflect the needs of the changing world.
- 88. I believe we should look to out religious authorities for decisions on moral issues.

- 118. I believe that different ideas of right and wrong that people in other societies have may be valid for them.
- 148. I believe that loyalty to one's ideals and principles is more important than "open-mindedness."
- 178. I consider myself broad-minded and tolerant of other people's lifestyles.
- 208. I think that if people don't know what they believe in by the time they're 25, there's something wrong with them.
- 238. I believe that the "new morality" of permissiveness is no morality at all.

Low on A4 (Compliance)

- 19. I would rather cooperate with others than compete with them.
- 49. I can be sarcastic and cutting when I need to be.
- 79. I hesitate to express my anger even when it's justified.
- 109. If I don't like people, I let them know it.
- 139. When I've been insulted, I just try to forgive and forget.
- 169. If someone starts a fight, I'm ready to fight back.
- 199. I'm hard-headed and stubborn.*
- 229. I often get into arguments with my family and co-workers.

Schizoid Personality Disorder

Low on E1 (Warmth)

- 2. I really like most people I meet.
- 32. I don't get much pleasure from chatting with people.
- 62. I'm known as a warm and friendly person.
- 92. Many people think of me as somewhat cold and distant.*
- 122. I really enjoy talking to people.
- 152. I find it easy to smile and be outgoing with strangers.
- 182. I have strong emotional attachments to my friends.
- 212. I take personal interest in the people I work with.

Low on E2 (Gregariousness)

- 7. I shy away from crowds of people.
- 37. I like to have a lot of people around me.
- 67. I usually prefer to do things alone.*
- 97. I really feel the need for other people if I am by myself for long.
- 127. I prefer jobs that let me work alone without being bothered by other people.
- 157. I'd rather vacation at a popular beach than an isolated cabin in the woods.
- 187. Social gatherings are usually boring to me.*
- 217. I enjoy parties with lots of people.

Low on E6 (Positive Emotions)

- 27. I never literally jumped for joy.*
- 57. I have sometimes experienced intense joy or ecstasy.
- 87. I am not a cheerful optimist.
- 117. Sometimes I bubble with happiness.

- 147. I don't consider myself especially "light-hearted".
- 177. I am a cheerful, high-spirited person.
- 207. I rarely use words like "fantastic!" or "sensational!" to describe my experiences.
- 237. I laugh easily.

Low on 03 (Feelings)

- 13. Without strong emotions, life would be uninteresting to me.
- 43. I rarely express strong emotions.*
- 73. How I feel about things is important to me.
- 103. I seldom pay much attention to my feelings of the moment
- 133. I experience a wide range of emotions or feelings.
- 163. I seldom notice the moods or feelings that different environments produce.
- 193. I find it easy to empathize to feel myself what others are feeling.
- 223. Odd things like certain scents or the names of distant places can evoke strong moods in me.