

A MULTI-METHOD APPROACH FOR ASSESSING  
THE ALTERNATIVE DSM-5 MODEL FOR  
PERSONALITY DISORDERS

By

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A MULTI-METHOD APPROACH FOR ASSESSING  
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The current conceptualization of personality disorders (PDs) includes a categorical model with ten PDs. This approach has many documented limitations including diagnostic co-occurrence, arbitrary boundaries, heterogeneity of diagnoses, and inadequate coverage. Efforts to mend these limitations have included a call for a dimensional model of PDs. The Five-Factor Model (FFM) is a viable approach to diagnosing PDs. An alternative, hybrid categorical-dimensional model is included in Section III of the DSM-5 (Emerging Models and Measures). This model is considered to be an extension of the FFM and research has demonstrated similarities between the two models using self-report measures of the FFM. A self-report measure, the Personality Inventory for DSM-5, was designed to assess the traits of the alternative model. The current study utilized a multi-method approach to examine the relationship between the two models. The Structured Interview for the FFM (SIFFM) can assess more maladaptive aspects of personality, while the NEO Personality Inventory (NEO PI-R) assesses more adaptive variants of the traits. The SIFFM, NEO PI-R and the PID-5 were administered to participants. It was hypothesized that the models would be related on respective domains (e.g., PID-5 negative affectivity and FFM neuroticism). It was also hypothesized that the SIFFM would predict respective PID-5 domains above and beyond the self-report NEO PI-R based on the maladaptive aspects of the SIFFM. The two models converged as predicted when using the SIFFM or the NEO PI-R. The SIFFM did not predict the PID-5 domains above and beyond the NEO PI-R. The NEO PI-R predicted above and beyond the SIFFM for four of the five PID-5 domains. Both FFM measures were significant independent predictors of the PID-5 and taken together they predicted a large amount of variance in the PID-5 domains. This study provides support for the relationship between two measures of the FFM and the alternative model for PDs. The method variance between the self-report measures in the study is a limitation and should be considered when interpreting the results. Clinical implications from this study include the application of multiple methods of FFM assessment to capture the most variance in alternative model personality domains.

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## CHAPTER I

### INTRODUCTION

Recently, alternative models of classification are being sought for personality disorders and personality pathology. Due to a number of concerns with the categorical approach, professionals in the fields of psychiatry and psychology have called for a dramatic shift in the way personality disorders are classified (Clark, Livesley, & Morey, 1997; Samuel & Widiger, 2008; Widiger & Simonsen, 2005a; Widiger & Trull, 2007). These concerns include diagnostic co-occurrence, inadequate coverage, and heterogeneity of diagnoses (Clark, 2007; Widiger & Trull, 2007). There has been controversy regarding which model would best address the current problems yet adequately describe personality traits. This controversy has been present throughout the process of developing a new framework for personality disorders for the most recent edition of the DSM (DSM-5; American Psychiatric Association, 2013) and dimensional models of personality pathology have received increasing support. Many clinicians and personality disorder researchers support a shift toward a dimensional model of classification (Bernstein, Iscan, & Maser, 2007). Further, research has indicated that dimensional models can adequately describe DSM-IV-TR personality disorders (Clark, 2007; Lynam & Widiger, 2001; Miller, Morse, Nolf, Stepp, & Pilkonis, 2012; Morey et al., 2003; Widiger, Trull, Clarkin, Sanderson, & Costa, 2002).

One leading dimensional model, the five-factor model of personality (FFM; Costa & McCrae, 1992) is empirically supported and applicable cross-culturally (McCrae & John, 1992; McCrae & Costa, 1997). The FFM is a reasonable option for revisions of the DSM as it can examine and address both adaptive and maladaptive variants of an individual's personality. Research has indicated the FFM can be highly beneficial in diagnoses, treatment approaches, and identifying problems in daily living.

The alternative model for personality disorder proposed for DSM-5 was a hybrid categorical-dimensional model that is an extension of the FFM (APA, 2012). However, this model was not accepted for inclusion in the revision for DSM-5 (APA, 2013), but was included in Section III (Emerging Models and Measures). A self-report measure, the Personality Inventory for DSM-5 (PID-5) was developed to assess the five domains and 25 traits included in the hybrid model (Krueger, Derringer, Markon, Watson, & Skodol, 2012). Research has examined the ability of the PID-5 to capture personality traits relevant to personality disorder diagnoses and concluded that the PID-5 can adequately represent DSM-IV personality disorders (e.g., Hopwood, Thomas, Markon, Wright, & Krueger, 2012). There are empirically supported measures of FFM traits (that are similar to those assessed by the PID-5), including self-report and interview measures, which are useful in assessing and diagnosing personality pathology (Costa & McCrae, 1992; Trull & Widiger, 1997).

The current study aims to examine the relationship between the PID-5 and measures of the FFM. A commonly used self-report measure of the FFM, the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992), the Structured Interview for the Five Factor Model of Personality (SIFFM; Trull & Widiger, 1997), and



the PID-5 were administered to participants. These three measures were included to determine if existing measures of the FFM can account for the traits outlined in the alternative hybrid model. Research has indicated that the SIFFM captures more of the maladaptive aspects of personality traits in comparison to the NEO PI-R; therefore, it was hypothesized that the interview measure would relate to various aspects of the PID-5 and would explain personality pathology above and beyond the NEO PI-R. This study has clinical implications, as the findings can provide evidence on the ability of existing measures to provide adequate measures of relevant personality traits. Therefore, it may be beneficial to utilize a well-validated measure with established empirical support to assess maladaptive personality traits in clinical and research settings.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### **Personality Disorder Classification**

Personality disorders are defined as distinct clinical syndromes, and are diagnosed using the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (5<sup>th</sup> ed., DSM-5; American Psychiatric Association, 2013), which includes a categorical classification system for ten personality disorders. Categorical classification of personality disorders has many well-documented limitations including: high levels of diagnostic co-occurrence, inadequate coverage, arbitrary and inconsistent diagnostic boundaries, and heterogeneity of possible presentations within each disorder (Clark, 2007; First et al., 2002; Livesley, 2003; Trull & Durrett, 2005; Widiger & Trull, 2007; Zimmerman, Rothschild, & Chelminski, 2005).

Diagnosis of any personality disorder includes general criteria for personality disorder and specific criteria within each disorder. To be diagnosed with any personality disorder, individuals must meet certain criteria thresholds that differ by disorder. Within the current classification system, individuals may be diagnosed with more than one personality disorder (APA, 2013), when the person exhibits behaviors and endorses symptoms that meet criteria for more than one disorder. When this occurs, all personality disorders for which criteria are met are listed as a diagnosis in the order of significance

for that individual (APA, 2000). Research has demonstrated that diagnostic co-occurrence of personality disorders is very common, with most individuals meeting criteria for two or more personality disorders, especially within treatment-seeking populations (APA, 2000; Bornstein, 1998; McGlashan et al., 2000; Widiger & Trull, 1998; Zimmerman et al., 2005). The comorbidity amongst personality disorders is present both within and between clusters of personality disorders (Grant, Stinson, Dawson, Chou, & Ruan, 2005). The evidence concerning diagnostic co-occurrence raises questions about the similarities of disorders and related implications, such that the current system may not be the best way to conceptualize an individual's personality pathology.

Another limitation is inadequate coverage of personality pathology; such that individuals may have significant impairment related to personality pathology, yet do not fit within one of the ten existing diagnoses. This concern is evidenced by research that has indicated that personality disorder not otherwise specified (PDNOS) was the most commonly diagnosed personality disorder (Verheul & Widiger, 2004; Zimmerman et al., 2005). PDNOS may be diagnosed when an individual's behaviors meet the general criteria for a personality disorder but the person either has specific traits/symptoms that fit within various personality disorder categories—or—the traits align to explain a personality disorder that is not one of the current disorders (e.g., passive-aggressive personality, depressive personality disorder; APA, 2000). PDNOS may also be used for individuals who do not meet the criterion cutoffs within the current categorical classification, yet still have significant impairment or have a unique case presentation that does not fit into one of the ten personality disorder categories. The common occurrence

of PDNOS diagnoses provides further support for the argument of inadequate coverage within the current diagnostic classification for personality disorders.

In addition to inadequate coverage of the current ten categories, the heterogeneity within each diagnosis is concerning (Widiger & Trull, 2007). The case presentation of two individuals with the same personality disorder can be drastically different, especially if they have a few or no symptoms in common. For instance, there are 256 different possible symptom combinations for borderline personality disorder (Johansen, Karterud, Pedersen, Gude, & Falkum, 2004), which leads to difficulties with diagnosis, treatment planning/implementation, and research. With the current classification system, each person with borderline personality disorder may present to treatment with different concerns and impairments in daily living that may be best treated with approaches more specific to symptoms endorsed. Therefore, heterogeneity within diagnostic categories may further impact treatment decisions and impede optimal outcomes for that individual. The wide array of symptomology for each disorder makes it difficult to categorically conceptualize personality disorders while still capturing the important symptoms. Additionally, clinical and research personality disorder experts are not satisfied with the categorical classification of personality disorders, as found by a large, diverse survey (Bernstein et al., 2007). The majority (75%) of experts surveyed agreed that the categorical approach to diagnosing personality disorders should be replaced with a dimensional model (Bernstein et al., 2007). This speaks to the clinical utility of the approaches, which is a crucial priority for our diagnostic system (APA, 2013).

Similarly, some researchers and experts in the field have called for a transition to a dimensional model of personality disorder classification as these models have empirical

and conceptual support, strong validity, and clinical utility (Clark et al., 1997; Samuel & Widiger, 2008; Widiger & Simonsen, 2005a; Widiger & Trull, 2007). These strengths of dimensional models utility make them useful for future versions of the DSM.

Workgroups were formed to direct the research toward the best model for personality disorders for DSM revisions. The DSM-V Research Planning Conference convened to determine specific research agendas to guide revisions. One of the primary areas that needed addressing was the utility and limitations of a dimensional approach to classification for the DSM, beginning with personality disorders. The result was numerous APA sponsored studies (white papers) that demonstrated a great deal of support for dimensional models of personality disorders (Widiger & Simonsen, 2005a). The focus on research toward a dimensional model provided support over the existing categorical model, as stated by Skodol et al. (2005), “dimensions convey more clinically relevant descriptive information about the maladaptive personality traits of patients than do categories” (p. 1923).

Dimensional models would not only address the problems within the current system (e.g., heterogeneity within disorders, diagnostic co-occurrence, inadequate coverage) but would also address clinical utility, conceptualization, and may reduce stigmatization for individuals who are placed within a disordered category rather than on a dimension of normal to maladaptive traits (Widiger & Trull, 2007). Dimensional models can address the problem of diagnostic co-occurrence with a more inclusive and concise approach that covers a wider range of important domains of maladaptive personality. A dimensional approach would address this concern by accounting for a

variety of maladaptive and adaptive aspects of personality within one continuous description rather than many overlapping categories.

Research has supported the use of dimensional trait models for diagnosing DSM-IV-TR personality disorders effectively (Clark, 2007; Lynam & Widiger, 2001; Miller et al., 2012; Morey et al., 2003; Widiger, Costa, & McCrae, 2002). However, even with support for dimensional representations of personality disorders, the task of determining which model would be best is difficult, especially considering there have been 18 proposals as outlined by Widiger and Simonsen (2005b). One proposal is to integrate personality pathology with general models of personality. One popular and well-supported general model of personality is the Five Factor Model of personality (FFM; Costa & McCrae, 1992).

### **Five-Factor Model of Personality**

The FFM of personality has five broad domains with six more specific facets within each domain. The five domains include: neuroticism (emotional instability or negative affectivity) versus emotional stability; extraversion (surgency or positive affectivity) versus introversion; openness (intellect or unconventionality) versus closedness to experience; agreeableness versus antagonism; and conscientiousness (constraint) versus disinhibition. The FFM is a leading model of personality that has adequate empirical support and has been replicated across various cultures (McCrae & Costa, 1997). The presence of the same traits across cultures provides further evidence for the utility of the FFM in research and clinical situations (McCrae & John, 1992). The FFM model of personality functioning was originally developed as a measure of general

personality, but has also been applied to maladaptive aspects of personality, specifically personality disorders within the DSM-IV-TR (Wiggins & Pincus, 1989).

The FFM is typically assessed using self-report measures that assess the five domains and related facets. One commonly used measure is the Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992). Although originally developed to assess “normal” personality traits, there is a substantial body of literature that has examined personality pathology by focusing on extreme and maladaptive variants of the FFM’s broad domains and facets (Clark, 2007; Mullins-Sweatt & Widiger, 2006; Samuel & Widiger, 2008; Saulsman & Page, 2004). Research has supported the FFM as being representative of both adaptive and maladaptive aspects of personality functioning (Clark, 2007; Livesley, 2001), which is considered to be a benefit of the model. For example, the FFM can identify both extremely low and maladaptive levels of a trait, as well as extremely high and maladaptive levels (e.g., both high and low agreeableness can be problematic).

Additionally, the traits of the FFM are related to current personality disorder classification. Saulsman and Page (2004) conducted a meta-analysis that provided support for the utilization of FFM domains to explain each of the 10 existing personality disorders. Samuel and Widiger (2008) extended these findings to provide further evidence for the relationship between the FFM facets and DSM-IV-TR personality disorders. The FFM is beneficial in that it can utilize information about general personality and extend that to understanding personality disorders. This can be accomplished by focusing on the maladaptive variants of the established traits, making the FFM an efficient and comprehensive model with multiple uses. Further, research has

indicated that appropriate implementation of the FFM at the facet level, in comparison to domain level analyses only, can provide additional relevant information related to personality disorder pathology/symptomology (Bagby, Costa, Widiger, Ryder, & Marshall, 2005).

Researchers have suggested consideration of the FFM as a useful diagnostic tool as it is a comprehensive and robust model of personality functioning. McCrae, Löckenhoff, and Costa (2005) list compelling reasons to utilize the FFM in personality disorder diagnoses, including: the comprehensiveness of the model, the known and well-established developmental course and origins, universality, and availability of assessment methods. Specific recommendations have also been made for diagnosing personality disorders with the FFM using a four-step procedure outlined by Widiger and colleagues (2002).

The first step of this procedure is to assess the individual's traits at the domain and facet level, which provides a description of both adaptive and maladaptive traits. This step can be completed with the use of a self-report or interview measure of FFM traits. The second step includes determining the related impairment in social and/or occupational functioning and the level of distress related to extreme trait scores on the FFM. During step two of the procedure, it is useful to consider problems associated with the five domains and corresponding facets. Widiger et al. (2002) and Trull and Widiger (1997) list problems associated with each domain and facet and provide descriptions of high/low levels for each facet. For example, domain level impairment related to maladaptively high neuroticism might include chronic negative affect, unfounded somatic complaints, or hopelessness and guilt (Widiger et al., 2002). The facet related



impairments are included to determine more specific areas that may be problematic to that individual and useful for treatment planning. For example, a high level of the neuroticism facet angry hostility can provide important details about the individual's personality and functioning in that they may have intense rage and anger, provoke arguments, and overreact about minor problems (Widiger et al., 2002).

The third step of the procedure is to further evaluate impairment and distress to determine if it is severe enough to warrant a personality disorder diagnosis. Assessing the degree of impairment that the symptoms/traits have on everyday life can fulfill this step, though there are no concrete guidelines on how to determine associated impairment (McCrae et al., 2005). Finally, the fourth step of the procedure may be utilized if there is interest in matching the dimensional FFM traits to a diagnostic category (e.g., a specific personality disorder). This may be beneficial in some cases, but is not necessary, especially if the individual's personality traits do not closely match one of the ten categorical disorders.

The first step (assessing the personality traits) in evaluating personality disorders from the FFM perspective can be accomplished via self-report or interview measures. The NEO PI-R is a commonly used self-report measure of the FFM, which would be appropriate to use for this purpose. However, research has indicated the NEO PI-R has more items that assess adaptive aspects of the personality domains rather than the maladaptive and problematic characteristics (Haigler & Widiger, 2001). The Structured Interview for the Five Factor Model of Personality (SIFFM; Trull & Widiger, 1997) is a measure of the FFM that may address this limitation. This semi-structured interview is used to gather information about both normal and maladaptive personality traits from the

FFM perspective, and can be useful in diagnosing personality disorders (Bagby et al., 2005; Stepp, Trull, Burr, Wolfenstein, & Vieth, 2005; Trull & Widiger, 1997).

While self-report measures are convenient, interview measures provide clinicians the opportunity to ask valuable follow-up questions and gather more in-depth information about the individual. Additionally, utilizing interview questions allows the interviewer to inquire about impairment or distress and assess if certain items are due to situational factors or underlying personality traits (Trull, Widiger, & Burr, 2001). These particular reasons provide support for the use of the SIFFM in diagnosis of personality disorders, above and beyond self-report measures. Additionally, there is empirical support for the incremental validity of the SIFFM. Research has indicated the SIFFM provides information that is not necessarily obtained via other personality measures as it not only assesses the level of each personality trait, but it also can distinguish the related impairment and dysfunction of maladaptive traits (Stepp et al., 2005). Further, facet level traits of the SIFFM adequately predict DSM-IV-TR personality disorder symptoms in the manner expected (Trull & Widiger, 1997; Trull et al., 2001). For example, the SIFFM provided information about domains relationship to certain disorders, such as the association of neuroticism with dependent and avoidant personality disorder (Trull et al., 2001). Further examination of the facets of the SIFFM indicated that dependent personality disorder was associated with different facets of neuroticism (i.e., depressiveness, vulnerability) than avoidant personality disorder (i.e., self-consciousness). This suggests the SIFFM is related to personality disorders in meaningful ways and can help distinguish personality disorders from one another.

Along with providing incremental validity to other assessments, the SIFFM has demonstrated good predictive validity (Stepp et al., 2005; Trull et al., 2001). Research has indicated that there is utility in using both an interview measure (SIFFM) and self-report measure (NEO PI-R) of the FFM to predict DSM-IV-TR personality disorder diagnoses (Bagby et al., 2005). Further, using both instruments provided larger effect sizes than using one instrument alone (Bagby et al., 2005). The current study is part of a larger research initiative that aims to validate new items for a revised version of the SIFFM; however, the current study will only utilize original SIFFM items.

### **DSM-5 Proposal**

Although the personality disorder section in DSM-5 retained the ten DSM-IV-TR disorders and criteria, a hybrid categorical-dimensional model has been included in Section III, Emerging Models and Measures (equivalent to the DSM-IV appendix). The model is referred to as the alternative model for personality disorder. Research has focused on examining the proposed trait model and related measures, as they may be utilized in future revisions of the DSM. The alternative model and proposed related assessments will be described below.

The alternative hybrid model includes a series of steps. The first is to determine if the person experiences impairment in self- or interpersonal-functioning. Difficulties with self-functioning may include problems with identity or self-direction and interpersonal-functioning difficulties may include empathy and intimacy with others (Skodol, 2012). Self- and interpersonal-functioning are rated on a scale ranging from healthy functioning to extreme impairment. The second step includes examining the individual's pathological personality traits in five domains (negative affectivity, detachment, psychoticism,

antagonism, and disinhibition). This step is assessed in the current study. Based on the pathological traits, individuals may fit into six personality disorder types (antisocial, borderline, avoidant, obsessive-compulsive, narcissistic, or schizotypal) or they may be diagnosed with personality disorder trait specified (PDTS). The PDTS diagnosis is similar to the previous PDNOS category (DSM-IV-TR; APA, 2000) in which the individuals' problems with functioning are best explained by his/her specific maladaptive traits from the five domains. Therefore, individuals who fit within the PDNOS category or whose symptoms do not fit into one of the six remaining diagnoses would fall into the new PDTS category. Other steps in the model include assessment of pervasiveness and stability of the individuals' functioning and traits, as well as ruling out other potential disorders (APA, 2013).

The alternative model has aspects that are modeled from the FFM (Skodol, 2012), and American Psychiatric Association has stated that the "proposed model represents an extension of the Five Factor Model" (APA, 2012, p. 7). Therefore, the diagnostic steps in the alternative model (assessing traits and impairment level) are similar to the proposed steps to diagnosing personality disorder from the FFM approach. The alternative model includes five higher-order unipolar domains and 25 lower-order maladaptive personality traits as evidenced by preliminary factor analytic studies (Krueger et al., 2012). Of importance to the current study, research has indicated the alternative DSM-5 model traits loaded with expected FFM traits (e.g., DSM-5 antagonism with FFM low agreeableness) when using a brief measure of the FFM, the Five-Factor Model Rating Form (FFMRF; Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006; Thomas et al., 2012). Thomas and colleagues (2012) indicated the

FFMRF can be a useful brief measure that can identify maladaptive traits important to personality disorder diagnoses, yet further research is needed with multi-method assessment procedures for the FFM. These studies confirm the similarity between the DSM-5 and FFM traits and demonstrate the inclusion of maladaptive personality traits in general personality trait models. Other studies that have examined the DSM-5 alternative trait model in relation to the FFM, did not find evidence for anticipated loadings (i.e., PID-5 submissiveness onto FFM agreeableness; Griffin & Samuel, 2014; Thomas et al., 2012). However, it is important to note that these relationships were examined using the NEO PI-R and FFMRF. The NEO PI-R, as mentioned previously, does not measure the maladaptive levels of the traits as well as it does adaptive levels (Haigler & Widiger, 2001).

### **Personality Inventory for DSM-5**

The Personality Inventory for DSM-5 (PID-5; Krueger et al., 2012) was created as a self-report measure to accompany the proposed diagnostic system for DSM-5. The PID-5 is a 220-item questionnaire that identifies the individual's maladaptive personality traits and aids the process of diagnosis using the hybrid model. Through an exploratory factor analysis, the PID-5 exhibited a five-factor structure, which included negative affect, detachment, antagonism, disinhibition, and psychoticism (Krueger et al., 2012). Wright and colleagues (2012) also found support for the five-factor structure and replication of the PID-5 across various samples. The PID-5 measure has shown good fit with other established personality instruments including measures of the FFM (Griffin & Samuel, 2014; Thomas et al., 2012; Wright et al., 2012) and the PSY-5 scales of the MMPI-2-RF (Anderson et al., 2013; De Fruyt et al., 2013). De Fruyt et al. (2013) replicated this factor

structure by examining the joint factor structure of the FFM, PSY-5 and PID-5 traits and determined they can best be understood as a five or six factor model. When including the FFM and PID-5, the five factors have a mixture of maladaptive and adaptive traits. The FFM generally accounted for the adaptive or socially positive traits, while the PID-5 accounted for the maladaptive, or more negatively evaluated traits (De Fruyt et al., 2013). There is also evidence for PID-5's ability to adequately measure and account for aspects of the DSM-IV-TR personality disorders (Hopwood et al., 2012). Overall, the research indicates that the alternative model, as measured by the PID-5, is very similar to the structure of the FFM.

Though the research has generally been supportive regarding the anticipated relationships between FFM and PID-5 domains, the specific loadings of the PID-5 personality traits onto respective factors has been inconclusive between studies (De Fruyt et al., 2013; Thomas et al., 2012). For example, the restricted affectivity trait (proposed to be subsumed under the detachment domain) loaded on detachment in Thomas et al. (2012). However, cross-loadings were present with an almost equal split between the detachment and negative affectivity domains in DeFruyt et al. (2013). Watson, Stasik, Ro and Clark (2013) found the expected relationships between four of the domains of the FFM and PID-5 (with the exception of openness to experience/psychoticism). Other researchers (e.g., De Fruyt et al., 2013; Gore & Widiger, 2013; Griffin & Samuel, 2014; Thomas et al., 2012) have also sought to identify the relationship between certain PID-5 traits and the respective PID-5 or FFM domain to which they may belong.

While there is evidence for support of the PID-5's relationship to self-report measures of personality, including the FFM, there has not yet been empirical support for

its relation to an interview measure of the FFM (i.e., SIFFM). The research assessing the PID-5 in relation to the NEO PI-R and has found support for proposed trait model's ability to measure maladaptive variants of personality (Gore & Widiger, 2013). However, results using self-report measures of the FFM suggested some traits might be more appropriately placed in different domains of the model than their current location (e.g., DeFruyt et al., 2013; Thomas et al., 2012; Watson et al., 2013). Since the SIFFM may be a more adequate measure of maladaptive variants of personality in comparison to the NEO PI-R, it is expected that the SIFFM will relate more closely to the PID-5 trait measure and will contribute to the efforts to clarify these relationships.

The current study examined the relationship between the SIFFM and PID-5. Utilizing the SIFFM to aid in diagnosis of personality disorders can be effective, and may be useful for future versions of the DSM. The SIFFM may be a better measure of a more broad range of personality traits (both adaptive and maladaptive), and account for the domains and traits of the PID-5. If the SIFFM is adequately describing personality disorders as an existing interview measure, above and beyond self-report measures, it may be beneficial to recommend this approach for future assessment of personality disorders.

### **Hypotheses**

Hypothesis 1: The PID-5 domains will be related to certain FFM domains, as measured by the SIFFM and NEO PI-R. The PID-5 negative affectivity domain will be positively related to FFM neuroticism. PID-5 detachment will be negatively related to FFM extraversion. PID-5 antagonism will be negatively related to FFM agreeableness. PID-5 disinhibition will be negatively related to FFM conscientiousness. PID-5

psychoticism will be positively related to FFM openness to experience. Additionally, hypothesized relationships will be present at the trait-facet level. See Table 2 for hypothesized relationships of the PID-5 traits with the FFM domains.

Hypothesis 2: Due to its inclusion of more maladaptive aspects of personality functioning, the SIFFM will account for more of the variance in the PID-5 domains than the NEO PI-R.



## CHAPTER III

### METHODOLOGY

#### **Participants**

Participants were enrolled in classes within the Psychology Department at Oklahoma State University and were registered with the subject pool system (SONA). Ninety students responded to the solicitation, two were excluded due to language barriers, and seven were excluded because of incomplete measures related to time constraints. The analyses include 81 participants. Of those participants, 56.8% were female, 42% were male, and 1.2% selected prefer not to respond. Participants' identification of race/ethnicity were as follows: 72.8% Caucasian, 8.6% African American, 7.4% Hispanic, 6.2% Native American, 3.7% Asian/Pacific Islander, and 1.2% selected prefer not to respond. Participant's ages ranged from 18 to 25 ( $M = 19.81$ ,  $SD = 1.80$ ). A number of participants ( $N = 63$ ) were presented with a question regarding their treatment-seeking behaviors. Of those, 19% were currently in treatment or had sought treatment in the past, 79.4% denied a history of treatment, and 1.6% selected prefer not to respond. The Institutional Review Board at Oklahoma State University approved the study (see Appendix A).

## Measures

*Demographic Form.* The following demographic information was collected via self-report: age, gender, ethnicity, relationship status, year in school, religious affiliation, income level, and current/past treatment seeking behaviors.

*Structured Interview for the Five-Factor Model of Personality (SIFFM; Trull & Widiger, 1997).* The SIFFM is a 120-item semi-structured interview that assesses personality traits from the FFM model. The interview lasts approximately one hour. All participants were administered the initial items and follow-up questions, if necessary, to determine appropriate scoring. The follow-up questions are included within the interview items. This assessment provides domain and facet scores for all aspects of the FFM. The SIFFM has established validity and reliability. Internal consistency coefficients range from 0.90 to 0.99 in an undergraduate sample and 0.80 to 1.0 in a clinical sample and test-retest reliability over a two-week period ranges from 0.82 to 0.93. The SIFFM also has established validity as it consistent with other personality measures (NEO PI-R and PDQ-R; Trull et al., 1998). As a part of a larger research project validating new SIFFM items, 85 additional new/revised items also were administered to all participants; however, those items were not included in the present study analyses. Cronbach's alpha coefficients for the original SIFFM items in the current study ranged from 0.74 to 0.86 for the five domains.

*Personality Inventory for DSM-5 (PID-5; Krueger, Derringer, Markon, Watson, & Skodol, 2012).* The PID-5 is a 220-item self-report measure that is used to assess the 25 maladaptive traits included in the potential DSM-5 model of personality disorders. The PID-5 was developed as a self-report measure to aid in diagnosis with the proposed

system. It takes approximately 15 minutes to complete. Internal consistencies for the maladaptive traits included in the PID-5 range from 0.72 to 0.96 (mean = 0.86) in a sample who had sought treatment from a psychologist or psychiatrist (Krueger et al., 2012). Cronbach's alpha coefficients in the current study ranged from 0.89 to 0.95 for the five domains.

*Revised NEO Personality Inventory (NEO PI-R; Costa & McCrae, 1992).* The NEO PI-R is a 240-item standardized, self-report measure designed to assess an individual's general personality functioning. Participants may respond to each question on a Likert scale ranging from 1 (disagree strongly) to 5 (agree strongly). The measure is composed of five domains (neuroticism, extraversion, agreeableness, conscientious, and openness to experience) with six facets each. Internal consistency coefficients for the five domains have ranged from 0.86 to 0.92 (Costa & McCrae, 1992). Cronbach's alpha coefficients in the current study ranged from 0.87 to 0.91 for the five domains.

## **Procedure**

Participants were recruited through Oklahoma State University's SONA system. Participants provided written consent to participate in the study after the study's purpose, procedure, risks, and benefits were presented in verbal and written form. The order of administration of the self-report and interview measures was randomized such that some participants completed the interview first, while others completed the self-report measures first. The self-report measures section began with demographics, followed by the NEO PI-R and PID-5 (randomized order). All self-report and interview measures were collected via Qualtrics, a secure, online data collection program. Upon completion

of the study, participants received credits on the SONA system to apply to the course of their choosing.

### **Power Analyses**

A power analysis using GPower3.1, with power set at .80 and alpha at .05, for a two-tailed linear multiple regression, fixed model test, 81 participants were needed to obtain a medium to large effects with 12 predictors (6 possible domain facets for each respective measure).

## CHAPTER IV

### RESULTS

The normality of the data was assessed by examining the skewness and kurtosis statistics at the domain and facet/trait scale level. The domain scores for the PID-5, NEO PI-R, and SIFFM were all within the acceptable limits (skew  $< 2.0$ , kurtosis  $< 4.0$ ). Two trait/facet scales exhibited values outside of the acceptable limits (SIFFM depression,  $s = 1.94$ ,  $k = 4.33$ ; PID-5 depressivity,  $s = 2.43$ ,  $k = 7.86$ )

Pearson  $r$  correlational analyses were conducted to address the first hypothesis and hierarchical regression analyses were conducted to address the second hypothesis. As predicted, the PID-5 domains were significantly related to the respective SIFFM and NEO PI-R domains (See Table 1). Predictions were also made at the facet level of the PID-5 in relation to the FFM domains. Table 2 includes the predicted significant positive and negative relationships between the PID-5 traits and FFM domains, from the perspective of the NEO PI-R and the SIFFM. Most of the predicted relationships were significant, with the exception of a few (e.g., SIFFM conscientiousness was not significantly related to PID-5 trait perseverance,  $r = -.07$ ,  $p = .58$ ). There were other PID-5 traits that were significantly related to FFM domains that were not predicted. For example, PID-5 trait cognitive and perceptual dysregulation was significantly related to NEO PI-R neuroticism ( $r = .51$ ,  $p < .01$ ) and SIFFM neuroticism ( $r = .38$ ,  $p < .01$ ).

Additional analyses provided evidence for convergent and discriminant validity among the domains and traits of the alternative model and FFM. Domains of the FFM and alternative model are related in ways that are consistent with the description of the domains, providing evidence for convergent validity. For example, as expected, NEO PI-R extraversion and SIFFM extraversion are negatively related to PID-5 detachment,  $r = -.71, p < .01$  and  $r = -.66, p < .01$ , respectively. This is the case for the NEO PI-R and the SIFFM for all five of the domains of the PID-5 (see Table 1). At the trait level, the relationships also provide evidence for convergent validity between the FFM domains and the PID-5 traits. For example, the risk-taking trait of the PID-5 is related to NEO and SIFFM extraversion domain,  $r = .48, p < .01$  and  $r = .40, p < .01$ , respectively (see Table 2). Convergent validity between the two models is also evident when examining the relationships between the FFM facets and PID-5 domains (see Tables 3 and 4). While there are some facets that were not related as predicted (e.g., SIFFM angry hostility and PID-5 negative affectivity,  $r = .11, p = .37$ ), most of the relationships demonstrate good convergent validity.

In regard to discriminant validity, many of the relationships that would not be predicted based on theory were not significant in this study (see Tables 1 through 4). However, there were also many relationships between the two models that demonstrate a lack of discriminant validity. For example, PID-5 restricted affectivity is significantly related to the extraversion domain on the NEO PI-R ( $r = -.34, p < .01$ ) and SIFFM ( $r = -.42, p < .01$ ) as predicted, and to the antagonism domain of the NEO PI-R ( $r = -.40, p < .01$ ) and SIFFM ( $r = -.37, p < .01$ ; see Table 2), which was not predicted. Similar findings are present among the PID-5 domains and FFM facets, such that the trust facet of the

NEO PI-R is expected to be related to the Antagonism domain of the PID-5 ( $r = -.40, p < .01$ ), but is also significantly related to the negative affectivity ( $r = -.42, p < .01$ ), detachment ( $r = -.46, p < .01$ ), and psychoticism ( $r = -.39, p < .01$ ) domains of the PID-5 (see Table 3). More examples of the convergent and discriminant validity between the measures can be seen in tables 1 through 4.

Hierarchical regression analyses were conducted to address the second hypothesis concerning the individual and incremental prediction of the PID-5 domains with respective and correlated NEO PI-R and SIFFM. Tables 3 and 4 indicate the significantly correlated facets of each FFM measure with the PID-5. The facets that correlated with the respective domain were entered into the regression equation. For instance, for the PID-5 Negative Affectivity domain, all six of the NEO PI-R facets were significantly related, thus they were all entered into the regression model in the first step. Additionally, four of the six SIFFM facets (anxiousness, depressiveness, self-consciousness, vulnerability) were significantly related to the PID-5 domain, and were entered into the second step of the model to determine the unique prediction of the SIFFM above and beyond the NEO PI-R. Another hierarchical regression was performed with the same facets and same predictor; however, the steps were reversed to determine unique prediction of the SIFFM and prediction of the NEO PI-R above and beyond that of the SIFFM. More specifically, the SIFFM facets were entered into step one and the SIFFM and NEO PI-R facets were entered into step two. The NEO PI-R and the SIFFM did predict a significant amount of the variance in all five alternative model domains when each was an independent predictor. The NEO PI-R provided incremental prediction above and beyond the SIFFM

for four of the PID-5 domains (excluding psychoticism). However, the SIFFM did not provide incremental prediction above and beyond the NEO for any of the PID-5 domains.

For the negative affectivity domain of the PID-5 (see Table 5), the results indicate that the both the NEO PI-R ( $R^2 = .60, p < .01$ ) and SIFFM ( $R^2 = .35, p < .01$ ) neuroticism facets individually predicted a significant amount of variance. The following SIFFM facets were included in the regression equation: anxiousness, depressiveness, self-consciousness, and vulnerability; and the following NEO PI-R facets were included: anxiousness, depressiveness, angry hostility, self-consciousness, and vulnerability. Taken together, SIFFM and NEO PI-R neuroticism predict 63% of the variance in the PID-5 negative affectivity domain. The NEO PI-R facets predicted above and beyond the SIFFM,  $\Delta R^2 = .29, p < .01$ . However, SIFFM neuroticism did not incrementally predict the PID-5 domains above and beyond the NEO PI-R,  $\Delta R^2 = .03, p = .30$ . In regards to the detachment domain of the PID-5 (see Table 6), the NEO PI-R ( $R^2 = .64, p < .01$ ) and SIFFM ( $R^2 = .48, p < .01$ ) facets individually predicted a significant amount of variance. See tables 7 through 9 for the other three PID-5 domains.

For all of the PID-5 domains, the two measures (NEO PI-R and SIFFM) taken together predicted 31% to 77% of the variance in the PID-5 domains (see Tables 5-9). Looking across all PID-5 domains, the SIFFM predicted 22% to 65% of the variance independently and the NEO PI-R predicted 24% to 74% of the variance in the PID-5 domains. The SIFFM incrementally predicted 3% to 7% of the variance over the NEO PI-R across the domains of the PID-5. The NEO PI-R incrementally predicted 23% to 39% of the variance over the SIFFM for the PID-5 domains. These results indicate that the NEO PI-R and SIFFM are each significant predictors of the respective PID-5 domains



and together predict a significant amount of variance in each PID-5 domain. However, only the NEO PI-R provided significant incremental prediction above and beyond the SIFFM. The SIFFM did not provide additional prediction above and beyond the NEO PI-R in predicting the specific PID-5 domains.

## CHAPTER V

### DISCUSSION

Overall, the results of the current study indicate that the alternative model for personality disorders and the Five-Factor Model (FFM) of general personality are related in meaningful ways and that multiple methods of assessment can be used in the measurement of the alternative model personality traits. Correlational analyses indicate that the FFM is related to the PID-5 as predicted based on the current literature regarding the two models. The domains of the FFM, as measured by an interview and self-report measure, are significantly related in the expected direction to the PID-5 self-report assessment. Specifically, FFM neuroticism is positively and significantly related to PID-5 negative affectivity, FFM extraversion is negatively and significantly related to PID-5 detachment, FFM openness to experience is positively and significantly related to PID-5 psychoticism, FFM agreeableness is negatively and significantly related to PID-5 antagonism, and FFM conscientiousness is negatively and significantly related to PID-5 disinhibition. This is consistent with the literature comparing these two models (e.g., Gore & Widiger, 2013; Griffin & Samuel, 2014; Watson et al., 2013).

The other aim of the current study was to assess how well a self-report and an interview measure of the FFM could predict domains of the alternative model of personality disorders. The results of this study indicate that FFM self-report and

interview measures of personality are each significant predictors of the alternative model, as measured by the self-report measure, the Personality Inventory for DSM-5 (PID-5). This is the case in the prediction of the five PID-5 domains with the respective FFM facets from each measure, with both measures accounting for 31% to 77% of the variance. The lower prediction of the psychoticism domain by the FFM openness facets is consistent with other studies that have found more modest relationships between psychoticism and openness to experience (e.g., Watson et al., 2013). While both measures provide important information in the prediction of the alternative model domains, the hypothesis that the SIFFM interview facets would predict above and beyond the self-report NEO PI-R facets was not supported. The NEO PI-R predicted above and beyond the SIFFM for four of the PID-5 domains; but the SIFFM did not predict above and beyond the NEO PI-R for any domains. It is speculated that the lack of incremental validity of the interview measure may be due, in part, to method variance present in the study. The NEO PI-R and PID-5 are both self-report measures of personality traits that are similar in length; therefore, there is a likelihood of stronger associations due to method variance. Thus, the relationships between the NEO PI-R and PID-5 are likely inflated. Nonetheless, the data provides evidence for the utility of self-report and interview measures of the FFM in the ability to independently predict the PID-5 domains.

The current study demonstrates the utility of two formats of collecting information about the FFM that are related to the alternative model. While the current study does not provide evidence for the incremental validity of the SIFFM interview, the data supports the use of either measure alone to predict significant variance in the PID-5. The utility of the measures in the study are consistent with findings that suggest

diagnoses of PDs through self-report and/or structured interviews are more reliable sources of collecting information than clinicians' rating of prototypic diagnostic categories alone (Samuel et al., 2013). Further, the literature has indicated that combined methods of collecting information (self-report and interview) are preferred over a single method approach (Hopwood et al., 2008). However, while the self-report NEO PI-R did predict additional variance to the interview measure, the current study did not find evidence for the incremental validity of the SIFFM interview, which may be partially due to method variance.

### **Clinical Implications**

The current study provides evidence for utilization of the SIFFM or the NEO PI-R to assess the alternative model of personality disorders as they both provide useful information independently. The clinical implications of the present study are directly related to the assessment of personality traits within the framework of two models. The utility of multi-method assessment seems to be beneficial for capturing the most variance in the maladaptive trait domains of the alternative model. Future research should examine this idea with the use of brief measures of personality to determine what may be feasible and acceptable within clinical practice, while still obtaining information necessary for diagnosis and treatment planning.

### **Model Comparison**

The results provide evidence for convergent validity of the PID-5 measure when compared with an interview and self-report measure of the FFM. This is present at the domain and facet level of both measures. Specifically, the respective domains of the models (e.g., PID-5 negative affectivity and FFM neuroticism) were significantly related

in the predicted directions. However, in addition to the predicted relationships, there were many other significant relationships between the alternative model and FFM, which demonstrates a lack of discriminant validity of the PID-5. The relationships between these constructs are important to consider, especially during a time in which the alternative model is being heavily researched for future revisions to the DSM. At the domain level, three of the PID-5 domains (detachment, psychoticism, and disinhibition) are significantly related to the similar/expected FFM domains as well as one or two other FFM domains.

The lack of discriminant validity is also present at the facet level. For example, the results indicate that while the PID-5 detachment domain is negatively correlated with the extraversion facets (NEO PI-R) as predicted, there are also many significant relationships between the detachment domain and other facets of the FFM (e.g., positively related to neuroticism facet depressiveness, and negatively related to agreeableness facet trust). This is the case for the other PID-5 domains as well. For example, the disinhibition domain is related to two or more facets in every NEO PI-R domain with the exception of openness to experience. The SIFFM and PID-5 relationships demonstrate a similar pattern, especially with the detachment domain. The other PID-5 domains generally have fewer significant relationships with SIFFM facets outside of the respective domain in comparison to the NEO PI-R, suggesting that the SIFFM may provide more discriminant validity for the PID-5 in comparison with the NEO PI-R. This may also be evidence of the method variance between the NEO PI-R and the PID-5. These patterns of relationships may also be attributable to the ability of the

SIFFM to capture the PID-5 traits, or indicative of problems with accuracy of PID-5 trait placements.

The data relevant to convergent and discriminant validity is important when considering placement of the traits in relation to personality disorder classification and the alternative model in general. This study may contribute to information regarding the clinical utility of the traits and may suggest a lack of discriminant validity of the PID-5 traits among the well-validated domains of the FFM. The lack of discriminant validity in the current study is consistent with recent studies that have similar findings. For example, Thomas et al. (2012) and Griffin and Samuel (2014) found cross loadings of some PID-5 traits (e.g., hostility loaded positively onto neuroticism and negatively onto the agreeableness domain). The current study also found that the hostility trait was significantly related to both the agreeableness and neuroticism domains of the FFM. Similarly, another study indicated that a handful of traits loaded onto more than one factor (e.g., PID-5 risk-taking loaded onto negative affectivity-neuroticism, detachment-extraversion, psychoticism-openness, and disinhibition-conscientiousness; De Fruyt et al., 2013). The current study found risk-taking as significantly related to the extraversion and agreeableness domains of the FFM. Domain-domain relationships have shown significant associations between the PID-5 detachment domain and three FFM domains (neuroticism, extraversion, and agreeableness) in the current study, and are consistent with Watson and colleagues' (2013) study that used a community sample. Taken together, these results in combination with the current study suggest that the PID-5 structure and placement of facets within domains should be further evaluated to determine the optimal placement of traits within the domains. The loadings of the traits

within certain domains will impact the personality disorder categories derived from the traits in the alternative model; therefore, consistency and accurate placement is essential.

### **Limitations and Future Directions**

The conclusions of this study should be interpreted with consideration of certain limitations. First, the method variance present in this study influences the results regarding the contribution of each FFM measure in predicting the alternative model domains. Research including multiple formats of assessment (e.g., self-report, informant-report) along with utilizing the multi-trait multi-method matrix (e.g., Campbell & Fiske, 1959) should be considered for future studies. This may provide a clearer picture of the contribution of self-report versus interview measures in the prediction of models of personality pathology. The use of a student sample is a limitation as maladaptive or extreme personality traits may be restricted compared to a community or clinical sample. However, the FFM is a dimensional model of general (NEO PI-R) and maladaptive variants (SIFFM) of personality traits; therefore, a student sample is appropriate for these measures. Future directions should include community samples and treatment-seeking samples to address the utility of these instruments taken together in an applied setting. Obtaining information regarding client and clinician preferences regarding these specific methods and models can provide valuable information to contribute to the body of literature devoted to personality assessment and diagnostics.

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## APPENDICES



APPENDIX A  
IRB Approval Page

## Oklahoma State University Institutional Review Board

Date: Tuesday, March 05, 2013  
IRB Application No AS1318  
Proposal Title: Comparison of Self-Report and Interview Measures of Personality

Reviewed and Exempt  
Processed as:

**Status Recommended by Reviewer(s): Approved Protocol Expires: 3/4/2014**

Principal  
Investigator(s):

Ashley C. Helle	Stephanie Sweatt
116 N Murray	116 North Murray
Stillwater, OK 74078	Stillwater, OK 74078

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The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI, advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board

## APPENDIX B

### Tables

Table 1. Domain correlations between the PID-5 and FFM measures.

	FFM Domains									
	N		E		O		A		C	
	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM
Negative Affectivity	<b>.74**</b>	<b>.55**</b>	.00	.02	.11	.11	-.24	.15	-.20	.04
Detachment	.27*	.48**	<b>-.71**</b>	<b>-.66**</b>	-.14	.06	-.30*	-.12	-.02	.09
Psychoticism	.34**	.38**	.00	-.07	<b>.43**</b>	<b>.42**</b>	-.33**	-.03	-.18	-.01
Antagonism	.20	.18	-.01	.05	-.05	-.10	<b>-.71**</b>	<b>-.50**</b>	-.06	-.04
Disinhibition	.35**	.20	.15	.17	.08	.09	-.21	-.04	<b>-.73**</b>	<b>-.55**</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $N = 68-81$ . **Bold** values denote predicted significant relationships. N = neuroticism, E = extraversion, O = openness to experience, A = agreeableness, C = conscientiousness.

Table 2. Pearson *r* correlations between FFM domains and PID-5 traits.

	FFM Domains									
	N		E		O		A		C	
	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM	NEO	SIFFM
<b>Negative Affectivity</b>										
Emotional Lability	<b>.53**</b>	<b>.26*</b>	.14	.17	.13	.06	-.26*	.19	-.31*	-.11
Anxiousness	<b>.70**</b>	<b>.55**</b>	-.10	-.10	.07	.10	-.13	.18	-.03	.19
Separation Insecurity	<b>.42**</b>	<b>.29*</b>	-.03	.01	.04	.06	-.20	-.01	-.21	-.13
Depressivity	<b>.56**</b>	<b>.48**</b>	-.20	-.21	-.01	.17	-.13	.17	-.26**	-.07
Suspiciousness	<b>.55**</b>	<b>.43**</b>	-.02	-.01	-.07	.05	<u>-.62*</u>	<u>-.19</u>	.06	.21
Submissiveness	<b>.32**</b>	<b>.17</b>	-.05	-.08	.18	-.01	<b>.29*</b>	<b>.25*</b>	-.19	.01
Hostility	<b>.43**</b>	<b>.34**</b>	.24*	.03	-.11	-.09	<u>-.60**</u>	<u>-.36**</u>	-.03	.01
Perseveration	<b>.58**</b>	<b>.37**</b>	-.10	.00	.05	.02	-.21	-.06	<b>-.25*</b>	<b>-.07</b>
<b>Antagonism</b>										
Manipulativeness	.15	.10	.03	.09	-.16	-.09	<u>-.60**</u>	<u>-.41**</u>	-.13	-.15
Deceitfulness	.20	.19	-.08	-.01	.07	.03	<u>-.63**</u>	<u>-.45**</u>	-.19	-.14
Grandiosity	.14	.02	.03	.06	-.17	-.32**	<u>-.60**</u>	<u>-.36**</u>	.15	.10
Attention-Seeking	.12	-.09	<b>.51**</b>	<b>.57**</b>	.19	.05	<u>-.16</u>	<u>-.06</u>	-.13	-.11
Callousness	.13	.14	-.16	-.15	-.10	.01	<u>-.72**</u>	<u>-.63**</u>	.01	-.07
<b>Disinhibition</b>										
Irresponsibility	<b>.36**</b>	.14	-.04	.10	-.03	-.01	-.24*	-.09	<u>-.59**</u>	<u>-.41**</u>
Impulsivity	.15	.03	<b>.40**</b>	<b>.30**</b>	.08	.08	-.24	-.15	<u>-.49**</u>	<u>-.42**</u>
Distractibility	<b>.33**</b>	<b>.25*</b>	.00	.06	.14	.10	-.03	.12	<u>-.70**</u>	<u>-.43**</u>
Lack of Rigid Perfectionism	-.15	.01	-.05	-.05	.20	.28*	<b>.43**</b>	.18	<u>-.52**</u>	<u>-.49**</u>
Risk Taking	.01	-.13	<b>.48**</b>	<b>.40**</b>	.07	.02	-.51**	-.29*	-.17	-.21
<b>Psychoticism</b>										
Unusual Beliefs/ Experiences	.27*	<b>.31**</b>	-.03	-.01	<b>.29*</b>	<b>.33**</b>	<u>-.34**</u>	<u>-.08</u>	-.08	.01
Eccentricity	.22	<b>.32**</b>	-.03	-.13	<b>.42**</b>	<b>.43**</b>	-.21	-.11	-.15	.02
Cognitive/ Perceptual Dysregulation	<b>.51**</b>	<b>.38**</b>	.03	-.04	<b>.34**</b>	<b>.35**</b>	<u>-.34**</u>	<u>.04</u>	-.24*	-.06
<b>Detachment</b>										
Restricted Affectivity	.00	.22	<u>-.34**</u>	<u>-.42**</u>	-.11	-.05	-.40**	-.37**	.12	.06
Anhedonia	<b>.33**</b>	<b>.54**</b>	<u>-.68**</u>	<u>-.56**</u>	-.09	.11	-.16	-.07	-.25*	-.08
Withdrawal	.18	<b>.39**</b>	<u>-.69**</u>	<u>-.71**</u>	-.14	.03	-.29*	-.26*	.01	.08
Intimacy Avoidance	.13	.25*	<u>-.28*</u>	<u>-.31**</u>	-.10	.07	-.14	-.03	.00	.08

Note. \* $p < .05$ ; \*\* $p < .01$ .  $N = 68-81$ . **Bold** values denote predicted positive relationships and underlined values denote predicted negative relationships. N = neuroticism, E = extraversion, O = openness to experience, A = agreeableness, C = conscientiousness.

Table 3. Pearson *r* correlations between PID-5 domains and NEO PI-R facets

	PID-5 Domains				
	Negative Affectivity	Detachment	Psychoticism	Antagonism	Disinhibition
<b>Neuroticism</b>					
Anxiousness	<b>.67**</b>	.27*	.28*	-.03	.17
Angry Hostility	<b>.37**</b>	.02	.26*	.30*	.18
Depressiveness	<b>.65**</b>	.44**	.46**	.17	.33**
Self-consciousness	<b>.47**</b>	.45**	.25*	.14	.09
Impulsivity	<b>.41**</b>	-.05	.18	.19	.47**
Vulnerability	<b>.65**</b>	.19	.17	.16	.36**
<b>Extraversion</b>					
Warmth	-.10	<u>-.68**</u>	-.07	-.31**	-.03
Gregariousness	.11	<u>-.62**</u>	-.05	.08	.26*
Assertiveness	.01	<u>-.43**</u>	.00	.11	-.08
Activity	.05	<u>-.38**</u>	-.03	.14	.12
Excitement-seeking	.02	<u>-.20</u>	.12	.05	.25*
Positive emotions	-.15	<u>-.73**</u>	-.10	-.15	-.01
<b>Openness to Experience</b>					
Fantasy	.05	-.09	<b>.26*</b>	-.06	.21
Aesthetics	.18	-.06	<b>.41**</b>	-.01	.06
Feelings	.24*	-.42**	<b>.36**</b>	.06	.15
Actions	-.13	-.12	<b>.09</b>	-.11	.11
Ideas	.03	.12	<b>.29*</b>	.11	-.09
Values	-.06	.14	<b>.26*</b>	-.03	.06
<b>Agreeableness</b>					
Trust	-.42**	-.46**	-.39**	<u>-.40**</u>	-.22
Straightforwardness	-.15	-.22	-.30*	<u>-.81**</u>	-.26*
Altruism	-.05	-.34**	-.18	<u>-.38**</u>	-.10
Compliance	-.18	-.11	-.35**	<u>-.43**</u>	-.37**
Modesty	.06	.14	.03	<u>-.54**</u>	-.05
Tender-mindedness	.07	-.19	.04	<u>-.29*</u>	.04
<b>Conscientiousness</b>					
Competence	-.21	-.09	-.08	.10	<u>-.55**</u>
Order	-.01	.08	-.11	-.03	<u>-.39**</u>
Dutifulness	-.20	-.02	-.11	-.10	<u>-.60**</u>
Achievement-striving	-.01	-.08	.02	.04	<u>-.67**</u>
Self-discipline	-.21	-.12	-.13	.01	<u>-.55**</u>
Deliberation	-.17	.15	-.25*	-.24*	<u>-.70**</u>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $N = 72-81$ . **Bold** values denote predicted positive relationships and underlined values denote predicted negative relationships.

Table 4. Pearson *r* correlations between PID-5 domains and SIFFM facets

	PID-5 Domains				
	Negative Affectivity	Detachment	Psychoticism	Antagonism	Disinhibition
<b>Neuroticism</b>					
Anxiousness	<b>.45**</b>	.42**	.29*	.05	.03
Angry Hostility	<b>.11</b>	.10	.13	.16	.02
Depressiveness	<b>.43**</b>	.39**	.38**	.01	.04
Self-consciousness	<b>.28*</b>	.54**	.32**	.11	.02
Impulsivity	<b>.11</b>	-.10	.12	.29*	.47**
Vulnerability	<b>.45**</b>	.15	.00	-.04	.09
<b>Extraversion</b>					
Warmth	.10	<u>-.60**</u>	-.15	-.08	.07
Gregariousness	.11	<u>-.54**</u>	-.16	-.07	.19
Assertiveness	-.11	<u>-.53**</u>	-.10	.08	.02
Activity	.06	<u>-.48**</u>	-.03	.08	.05
Excitement-seeking	-.01	<u>-.24*</u>	.14	.30**	.30**
Positive emotions	-.03	<u>-.42**</u>	.00	-.15	.09
<b>Openness to Experience</b>					
Fantasy	.03	-.10	<b>.24*</b>	.01	.13
Aesthetics	.13	.10	<b>.35**</b>	-.04	-.02
Feelings	.42**	-.14	<b>.14</b>	-.01	.12
Actions	-.14	-.10	<b>.12</b>	-.15	.08
Ideas	.05	.35**	<b>.43**</b>	-.05	-.01
Values	-.01	.11	<b>.31**</b>	-.15	.10
<b>Agreeableness</b>					
Trust	-.05	-.35**	-.16	<u>-.26*</u>	-.03
Straightforwardness	-.05	-.15	-.13	<u>-.53*</u>	-.22
Altruism	.09	-.09	.12	<u>-.34**</u>	.01
Compliance	.25*	.12	-.10	<u>-.34**</u>	-.07
Modesty	.20	.43**	.22	<u>-.16</u>	.06
Tender mindedness	.20	-.28*	-.01	<u>-.26*</u>	.09
<b>Conscientiousness</b>					
Competence	-.04	-.07	-.11	-.02	<u>-.44**</u>
Order	.16	.24	.15	.09	<u>-.17</u>
Dutifulness	.07	-.04	-.05	-.16	<u>-.38**</u>
Achievement-striving	.10	.06	-.01	.04	<u>-.24*</u>
Self-discipline	-.17	-.11	-.05	.02	<u>-.44**</u>
Deliberation	.03	.20	-.03	-.15	<u>-.50**</u>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $N = 72-81$ . **Bold** values denote predicted positive relationships and underlined values denote predicted negative relationships.

Table 5. Hierarchical regression: NEO and SIFFM predicting PID-5 Negative Affectivity domain.

	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1:NEO; Step 2: NEO, SIFFM</b>			
Step 1		.60	.60**
NEO facets			
Anxiousness	.23		
Depressiveness	.35		
Angry Hostility	.19		
Self-consciousness	-.05		
Impulsivity	.11		
Vulnerability	.18		
Step 2		.63	.03
NEO facets			
Anxiousness	.21		
Depressiveness	.32		
Angry Hostility	.19		
Self-consciousness	-.09		
Impulsivity	.15		
Vulnerability	.07		
SIFFM facets			
Anxiousness	-.06		
Depressiveness	.07		
Self-consciousness	.10		
Vulnerability	.22		
	<b>Total <math>\Delta R^2</math></b>		<b>.63</b>
<b>Step 1:SIFFM; Step 2: SIFFM; NEO</b>			
Step 1		.35	.35**
SIFFM facets			
Anxiousness	.03		
Depressiveness	.26		
Self-consciousness	.09		
Vulnerability	.42		
Step 2		.63	.29**
SIFFM facets			
Anxiousness	-.06		
Depressiveness	.07		
Self-consciousness	.10		
Vulnerability	.22		
NEO facets			
Anxiousness	.21		
Depressiveness	.32		
Angry Hostility	.19		
Self-consciousness	-.09		
Impulsivity	.15		
Vulnerability	.07		
	<b>Total <math>\Delta R^2</math></b>		<b>.63</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $\beta$  = standardized beta coefficients.  $N = 65$ .



Table 6. Hierarchical regression: NEO and SIFFM predicting PID-5 Detachment domain.

	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1:NEO; Step 2: NEO, SIFFM</b>			
Step 1			
NEO facets		.64	.64**
Warmth	-.25		
Gregariousness	-.34		
Assertiveness	-.11		
Activity	.15		
Positive emotions	-.38		
Step 2		.71	.07
NEO facets			
Warmth	-.24		
Gregariousness	-.19		
Assertiveness	.09		
Activity	.06		
Positive emotions	-.52		
SIFFM facets			
Warmth	-.17		
Gregariousness	.05		
Assertiveness	-.17		
Activity	-.18		
Excitement seeking	.16		
Positive emotions	.22		
	<b>Total <math>\Delta R^2</math></b>		<b>.71</b>
<b>Step 1:SIFFM; Step 2: SIFFM; NEO</b>			
Step 1		.48	.48**
SIFFM facets			
Warmth	-.32		
Gregariousness	-.15		
Assertiveness	-.25		
Activity	-.12		
Excitement seeking	.10		
Positive emotions	-.15		
Step 2		.71	.23**
SIFFM facets			
Warmth	-.17		
Gregariousness	.05		
Assertiveness	-.17		
Activity	-.18		
Excitement seeking	.16		
Positive emotions	.22		
NEO facets			
Warmth	-.24		
Gregariousness	-.19		
Assertiveness	.09		
Activity	.06		
Positive emotions	-.52		
	<b>Total <math>\Delta R^2</math></b>		<b>.71</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $\beta$  = standardized beta coefficients.  $N = 69$ .

Table 7. Hierarchical regression: NEO and SIFFM predicting PID-5 Antagonism domain.

	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1:NEO; Step 2: NEO, SIFFM</b>			
Step 1		.74	.74**
NEO facets			
Trust	-.06		
Straightforwardness	-.73		
Altruism	-.10		
Compliance	-.02		
Modesty	-.14		
Tendermindedness	.08		
Step 2		.77	.03
NEO facets			
Trust	-.14		
Straightforwardness	-.64		
Altruism	-.11		
Compliance	-.01		
Modesty	-.14		
Tendermindedness	.07		
SIFFM facets			
Trust	.07		
Straightforwardness	-.17		
Altruism	.01		
Compliance	-.03		
Tendermindedness	.04		
	<b>Total <math>\Delta R^2</math></b>		<b>.77</b>
<b>Step 1:SIFFM; Step 2: SIFFM; NEO</b>			
Step 1		.38**	.38**
SIFFM facets			
Trust	-.24		
Straightforwardness	-.42		
Altruism	-.19		
Compliance	-.15		
Tendermindedness	.15		
Step 2		.77	.39**
SIFFM facets			
Trust	.07		
Straightforwardness	-.17		
Altruism	.01		
Compliance	-.03		
Tendermindedness	.04		
NEO facets			
Trust	-.14		
Straightforwardness	-.64		
Altruism	-.11		
Compliance	-.01		
Modesty	-.14		
Tendermindedness	.07		
	<b>Total <math>\Delta R^2</math></b>		<b>.77</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $\beta$  = standardized beta coefficients.  $N = 62$ .

Table 8. Hierarchical regression: NEO and SIFFM predicting PID-5 Disinhibition domain.

	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1:NEO; Step 2: NEO, SIFFM</b>			
Step 1		.68	.68**
NEO facets			
Competence	-.13		
Order	-.08		
Dutifulness	-.27		
Achievement striving	.13		
Self-discipline	-.20		
Deliberation	-.50		
Step 2		.71	.03
NEO facets			
Competence	-.10		
Order	-.08		
Dutifulness	-.20		
Achievement striving	.10		
Self-discipline	-.15		
Deliberation	-.54		
SIFFM facets			
Competence	-.02		
Dutifulness	-.13		
Achievement striving	.10		
Self-discipline	-.12		
Deliberation	.05		
	<b>Total <math>\Delta R^2</math></b>		<b>.71</b>
<b>Step 1:SIFFM; Step 2: SIFFM; NEO</b>			
Step 1		.65	.42**
SIFFM facets			
Competence	-.16		
Dutifulness	-.14		
Achievement striving	.02		
Self-discipline	-.29		
Deliberation	-.29		
Step 2		.71	.29**
SIFFM facets			
Competence	-.02		
Dutifulness	-.13		
Achievement striving	.10		
Self-discipline	-.12		
Deliberation	.05		
NEO facets			
Competence	-.10		
Order	-.08		
Dutifulness	-.20		
Achievement striving	.10		
Self-discipline	-.15		
Deliberation	-.54		
	<b>Total <math>\Delta R^2</math></b>		<b>.71</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $\beta$  = standardized beta coefficients.  $N = 72$ .

Table 9. Hierarchical regression: NEO and SIFFM predicting PID-5 Psychoticism domain.

	$\beta$	$R^2$	$\Delta R^2$
<b>Step 1:NEO; Step 2: NEO, SIFFM</b>			
Step 1		.24	.24**
NEO facets			
Fantasy	-.03		
Aesthetics	.24		
Feelings	.23		
Ideas	.09		
Values	.10		
Step 2		.31	.07
NEO facets			
Fantasy	-.13		
Aesthetics	.25		
Feelings	.21		
Ideas	.01		
Values	-.01		
SIFFM facets			
Fantasy	.05		
Aesthetics	-.16		
Ideas	.34		
Values	.17		
	<b>Total <math>\Delta R^2</math></b>		<b>.31</b>
<b>Step 1:SIFFM; Step 2: SIFFM; NEO</b>			
Step 1		.22	.22**
SIFFM facets			
Fantasy	.07		
Aesthetics	.06		
Ideas	.32		
Values	.19		
Step 2		.31	.09
SIFFM facets			
Fantasy	.05		
Aesthetics	-.16		
Ideas	.34		
Values	.17		
NEO facets			
Fantasy	-.13		
Aesthetics	.25		
Feelings	.21		
Ideas	.01		
Values	-.01		
	<b>Total <math>\Delta R^2</math></b>		<b>.31</b>

Note. \* $p < .05$ ; \*\* $p < .01$ .  $\beta$  = standardized beta coefficients.  $N = 63$ .

## VITA

Ashley Colleen Helle

Candidate for the Degree of Master of Science

Thesis: A MULTI-METHOD APPROACH FOR ASSESSING THE ALTERNATIVE  
DSM-5 MODEL FOR PERSONALITY DISORDERS

Major Field: Psychology

Biographical:

Education:

Completed requirements for the Master of Science in Clinical Psychology  
Oklahoma State University, Stillwater, Oklahoma in December, 2014.

Completed requirements for the Master of Arts in Psychology University  
of Northern Iowa, Cedar Falls, Iowa in May, 2012. Completed  
requirements for the Bachelor of Arts in Psychology at Mount Mercy  
University, Cedar Rapids, Iowa in February, 2010.

Experience:

Graduate Research Assistant to Dr. Stephanie N. Mullins-Sweatt,  
Department of Psychology, Oklahoma State University, August 2012-  
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University Psychological Services Center, August 2012-present; Instructor  
for Introductory Psychology, Oklahoma State University, August 2013-  
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University Alcohol and Substance Abuse Center, August 2014-present;  
Graduate Teaching Assistant for Cognitive Assessment, Oklahoma State  
University, August 2014-present.

Professional Publications:

Tucker, R. P., O'Keefe, V. M., Cole, A. B., Rhoades-Kerswill, S.,  
Hollingsworth, D. W., **Helle, A. C.**, DeShong, H. L., Mullins-Sweatt, S.  
N., & Wingate, L. R. (2014). Mindfulness tempers the impact of  
personality on suicidal ideation. *Personality and Individual Differences*,  
68, 229-233.

Professional Memberships:

Society for Personality Assessment, American Psychological Association,  
Association for Cognitive Behavioral Therapies, Society for Research in  
Personality, Society for the Study of Clinical Psychology.