Validating the Personality Inventory for DSM-5: A Trait-Based Model of Personality Disorders

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VALIDATING THE PERSONALITY INVENTORY FOR DSM-5:
A TRAIT-BASED MODEL OF PERSONALITY DISORDERS

By

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ABSTRACT

Categorically-based systems for assessing personality disorders (PDs) have been criticized on a number of grounds, including arbitrary cutoffs for diagnosis, heterogeneity among presentations of the same PD, overuse of PD not otherwise specified, and high comorbidity, both among different PDs, and between PDs and other types of mental disorders. The present study sought to validate the Personality Disorder for DSM-5 (PID-5), a trait-based model for assessing personality disorders. The sample consisted of 212 undergraduates and community members recruited to over-represent individuals with high and low trait fear as well as high and low trait disinhibition. Self-reported PID-5 trait scores were correlated with clinician-rated interview-based personality disorder symptoms. Personality traits specified in Section III of the DSM-5 provided excellent representation of Antisocial PD, Borderline PD, and Avoidant PD interview-based symptoms, moderate representation of Obsessive-Compulsive PD symptoms, and minimal representation of Narcissistic PD symptoms. Further traits were identified as relevant to PDs without representation in the DSM. Additionally, results indicated that the recruitment strategy augmented the base rates of Cluster B and Cluster C PDs in the sample.
CHAPTER ONE

INTRODUCTION

Personality disorders have been part of the American Psychiatric Association’s official nosology for mental disorders since the first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM; APA, 1952). This category of disorders was first introduced in order to account for extreme characterological variations associated with significant distress or impairment for the affected individuals. Movements against psychoanalytic psychology in the 1970s and 1980s, led by “neo-Kraepelinian” thinkers, led to categorical diagnoses of personality disorders (Rogler, 1997). Meanwhile, the field of personality psychology endeavored to operationalize variations in temperament and character in dimensional terms. The latest, fifth edition of the DSM (DSM-5; American Psychological Association, 2013) contains a new system formulated to unite the categorical system for conceptualizing extreme variants of personality with dimensional approaches to quantifying character and temperament. The primary aim of the current study is to empirically delineate relationships between the personality traits laid out in the Alternative Model for Personality Disorders in DSM-5 and diagnoses and symptoms of DSM-IV personality disorders (PDs) as assessed by clinical interview.

DSM-5 and Dimensional Conceptions of Personality Pathology

The possibility of taking a dimensional approach to classifying psychopathology was a major point of discussion in the development of DSM-5, beginning with very early stages of its formulation (e.g., Rounsaville et al., 2002). Dissatisfaction with the categorical system of personality pathology, together with a desire to incorporate many decades of research on maladaptive personality traits into the diagnostic nosology, helped lead to this push. Thus, while calls for an alternative categorical conceptualization of psychopathology were by no means
limited to personality pathology, efforts along these lines came to center upon personality pathology.

The categorical system for defining personality pathology, as exemplified in DSM-III and DSM-IV (APA, 1980; 2000), has been criticized on a number of grounds, including arbitrary and empirically meaningless symptom thresholds, widespread dissimilarities among individuals meeting diagnostic criteria for the same PD, high levels of comorbidity between personality disorders, and overuse of “Personality Disorder Not Otherwise Specified” (PD, NOS) to categorize individuals who do not fall within the nosology but who nonetheless present with significant distress or impairment in self and interpersonal functioning (Ofrat, Krueger, and Clark, in press). Furthermore, there is significant empirical evidence that characterizing personality within a trait-based (i.e. dimensional) framework has predictive validity for clinical factors such as therapeutic treatment selection, duration and frequency of therapeutic treatment, and even which medications are indicated (Harkness & Lilienfeld, 1997; Harkness, 2007).

The DSM-5 Workgroup for Personality and Personality Disorders (PPD Work Group, hereafter) reviewed and worked to incorporate existing conceptions of trait-based personality, including maladaptive personality. Comprehensive models of personality generally fit under the broad umbrella of the five-factor model of personality (FFM), either conceptually or empirically (i.e., through factor analyses). Although the Five-Factor Model, which describes personality in terms of Extraversion-Introversion (E), Neuroticism-Stability (N), Agreeableness-Disagreeableness (A), Conscientiousness-Impulsivity (C), and Openness to Experience-Closed to Experience (O), was developed to describe the normal range of personality, recent studies have shown that many existing models of maladaptive personality traits and interpersonal styles, including the Personality Assessment Schedule (PAS; Tyrer & Alexander, 1979) the
Dimensional Assessment of Personality Pathology (DAPP-BQ; Livesly & Jackson, 2010), and the PSY-5 (Harkness & McNulty, 1994) also map closely onto the FFM as extreme versions of the personality traits contained therein (see Widiger & Simonsen, 2005).

However, existing operationalizations of the FFM, such as the widely used NEO-PI-R (Costa & McCrae, 1992), are inappropriate for use clinically because they do not provide sufficient coverage at the extreme ends of the traits they capture and thus do not adequately cover maladaptive versions of personality. Several groups have developed models which capture the spectra of normal through abnormal personality pathology. Three such models are the Multidimensional Personality Questionnaire (MPQ; Tellegen & Waller, 2008), the Temperament and Character Inventory (TCI-R; Cloninger, 2000) and the Schedule for Nonadaptive and Adaptive Personality (SNAP; Clark, 1993). Each of these models also maps onto at least a subset of the FFM scales. These models formed the empirical basis for the model proposed by the DSM-5 PPD Work Group.

Although trait-based conceptions of normal and maladaptive personality traits alike exhibit a five-factor structure, there is significant debate surrounding the content and framing of one of these factors: Openness to Experience. Personality psychopathology generally does not show significant relations to FFM-defined Openness to Experience. In part, this appears to be because this domain has two distinct subfacets: schizotypy/unconventionality, and intellect/lack of curiosity (DeYoung, Grazioplene, & Peterson, 2012).

With these considerations in mind, the PPD Work Group for DSM-5 proposed a trait-based model that characterizes personality using five dimensions encompassing 25 maladaptive traits (Skodol et al., 2012). The model was formulated with the goal of capturing empirically-based maladaptive personality traits within a model that could be tied empirically to the existing
DSM-IV conceptions of personality pathology, thus enabling researchers and clinicians to operate with some continuity. They did so by proposing five broad trait domains: Detachment, Negative Affectivity, Disinhibition, Antagonism, and Psychoticism, each with underlying traits or subfacets representing specific maladaptive personality traits. Four of these domains were modeled after FFM domains: Detachment maps to low Extraversion, Negative Affectivity to high Neuroticism, Disinhibition to low Conscientiousness, and Antagonism to low Agreeableness. For reasons discussed above, Openness to Experience was not fully represented in the model, which includes only facets relating to the odd/eccentric subfacet of this domain, in the form of Psychoticism.

This alternative dimensional model proposes a two-step system for diagnostic assessment of personality pathology. First, a determination is made as to whether significant impairment in personality functioning (i.e. identity, self-direction, empathy, or intimacy), considered the essence of personality pathology (Livesley, 2007), is present. A “Level of Personality Functioning” scale has been developed for making determinations of this kind (Morey et al., 2011). Next, individuals determined to have impairment in one of these areas of personality functioning are assessed for the various traits laid out by the model. The Personality Inventory for DSM-5 (PID-5), discussed in detail below, was developed by Krueger, Derringer, Markon, Watson, & Skodol (2012) to assess the PD-relevant traits included in this dimensional personality model through self-report. Although the present study used self-report ratings of the DSM-5 trait model, a framework for clinician ratings of these same traits has also been developed (Samuel, Lynam, Widiger, & Ball, 2012).

To help to bridge from DSM-IV to DSM-5, the Work Group made a series of conceptually-based predictions regarding the relations of these PD-relevant personality traits to
specific DSM-IV personality disorders. They predicted that Antisocial PD (ASPD) would be covered by the traits of Manipulativeness, Callousness, Deceitfulness, Hostility, Risk Taking, Impulsivity, and Irresponsibility; Avoidant PD (AVPD) to Anxiousness, Withdrawal, Anhedonia, and Intimacy Avoidance; Borderline PD (BPD) to Emotional Lability, Anxiousness, Separation Insecurity, Depressivity, Impulsivity, Risk taking, and Hostility; Narcissistic PD (NPD) to Grandiosity and Attention Seeking; and Schizotypal PD (STPD) to Cognitive and Perceptual Dysregulation, Unusual Beliefs and Experiences, Eccentricity, Restricted Affectivity, Withdrawal, and Suspiciousness. Prior to the publication of the DSM-5, Obsessive-Compulsive PD (OCPD) was hypothesized to be related to Rigid Perfectionism and Perseveration, which influenced early studies of its validity (e.g. Hopwood, Thomas, Markon, Wright, & Krueger, 2012); at the time of the publication of DSM-5, Intimacy Avoidance and Restricted Affectivity were also added as traits specified to be related to OCPD. Dependent, Passive-Aggressive, Depressive, Histrionic, Schizoid, and Paranoid Personality Disorders were originally slated to be dropped from DSM-5, and therefore the Work Group did not publish predictions about their relations to the traits in the model.

Due to “practical obstacles,” the DSM-IV categorical conceptualization of personality pathology was ultimately carried over to DSM-5 (Ofrat et al., 2013). However, the proposed dimensional PD model was included in Section III of DSM-5, which contains “Emerging Models and Measures” to be submitted to empirical study as a basis for implementation in clinical practice. This model, called the “Alternative DSM-5 Model for Personality Disorders,” represents an important first step toward transitioning from the existing categorical framework for personality pathology to an alternative dimensional system in future versions of the DSM.
The Personality Inventory for DSM-5

Krueger et al. (2012)’s PID-5, a 220-item self-report measure, was developed to assess the Alternative DSM-5 Model for Personality Disorders. Consistent with the model’s conceptual origins, recent studies have linked the PID-5 domains to the FFM personality factors (Thomas et al, 2012; Anderson et al., 2013). In a seminal study, Hopwood and colleagues (2012) provided initial empirical support for the PID-5 as valid measure of DSM-IV personality pathology as operationalized by the self-report based Personality Diagnostic Questionnaire-4+ (PDQ-4+). Hopwood et al. tested the Work Group’s predictions regarding the traits’ relations to DSM-IV personality pathology and found that, for the six disorders listed in DSM-5, traits hypothesized by the Workgroup provide effective coverage of self-reported symptoms of DSM-IV personality disorders to varying degrees. Borderline, Antisocial, and Schizotypal PDs were particularly well-represented by PID-5 traits. Narcissistic and Obsessive-Compulsive PDs, which, at the time of publication of Hopwood and colleagues’ study, each had only two Workgroup-specified traits, fared somewhat worse, necessitating additional traits to provide adequate coverage. Fossati, Krueger, Markon, Borroni, and Maffei (2013) replicated and extended these relations between the PID-5 and PDQ-4 in a sample of 710 Italian community adults. In the first study published with interview-based PD diagnoses, Miller, Few, Lynam, and MacKillop (2014) validated the trait-based approach within a sample of 109 treatment-seeking community adults, finding convergent validity ranging from $r = .43$ (OCPD) through $r = .81$ (ASPD, BPD). This study indexed DSM-5 trait scores as disorder-specific composites, taking the average of all DSM-specified traits within a particular disorder. A potential disadvantage of this approach is that it does not allow for non-specified traits to contribute to the prediction of each disorder, nor does it
identify those specified traits which do not contribute unique variance. A closer examination of the DSM-5 traits and their relations to personality pathology are needed.

The Present Study

The primary aim of the present study is to examine the relations between personality traits laid out in the Alternative Model for Personality Disorders with DSM-IV interview-based personality disorder diagnoses and symptom counts. The study utilizes a mixed sample of community and university students recruited for extreme scores on trait fear and trait disinhibition. This recruitment strategy, detailed below, is designed to increase the rates of symptom endorsement for fear- and disinhibition-related personality disorders (i.e., PDs grouped under Clusters B and C within DSM-IV-TR) in the sample. Major hypotheses, as follows, pertain to relations of traits specified in the DSM-5 with fear- and disinhibition-related PDs.

**Borderline PD.** As specified in the DSM-5, Borderline PD symptomatology will be related to each of the following individual PID-5 traits: Emotional Lability, Anxiousness, Separation Insecurity, and Hostility (from the domain of Negative Affect); Depressivity (from the domain of Detachment); and Impulsivity and Risk taking (from the domain of Disinhibition). Together, these traits will significantly and strongly predict Borderline PD symptoms.

**Antisocial PD.** As specified in the DSM-5, Antisocial PD symptoms will be predicted by each of the following individual PID-5 traits: Hostility (from the domain of Negative Affect); Manipulativeness, Deceitfulness, and Callousness (from the domain of Detachment); and Irresponsibility, Impulsivity, and Distractibility (from the domain of Disinhibition). Together, these traits will significantly predict Antisocial PD symptoms.

**Narcissistic PD.** As specified in DSM-5, Narcissistic PD will be related to DSM-5 specified traits Grandiosity and Attention seeking (from the domain of Antagonism). These two
traits together will predict Narcissistic PD symptoms to a significant, but small-to-moderate degree. Following the findings of Hopwood et al. (2012), it is predicted that the addition of the PID-5 traits of Deceitfulness and Manipulativeness (from the domain of Antagonism) will significantly augment prediction of Narcissistic PD symptomatology, although these traits are not specified by the DSM as relevant to Narcissistic PD.

**Avoidant PD.** As specified in DSM-5, Avoidant PD symptoms will be related to each of the following PID-5 traits individually: Anxiousness (from the domain of Negative Affect); Withdrawal, Intimacy Avoidance, and Anhedonia (from the domain of Detachment). Together, these traits will significantly and strongly predict symptoms of Avoidant PD.

**Obsessive-Compulsive PD.** The following DSM-5 specified traits will each relate significantly with Obsessive-Compulsive PD (OCPD) symptoms: Perseveration and Restricted Affectivity (from the domain of Negative Affect); Rigid Perfectionism (from the Domain of Disinhibition, on which Rigid Perfectionism loads negatively); and Intimacy Avoidance (from the domain of Detachment). Together, these traits will predict OCPD symptoms to a significant and moderate degree.

In addition to the foregoing major hypotheses, some additional predictions are advanced regarding Schizotypal PD symptoms. Although Schizotypal PD is represented in the DSM-5 Section III and thus has DSM-specified traits, the sampling strategy for the current study is not designed to systematically enhance levels of odd/eccentric (i.e., Cluster A) PDs, as it is for fearful and disinhibitory PDs. For this reason, predictions as follows for Schizotypical PD are more tentative:

**Schizotypal PD.** It is predicted that the following DSM-5 specified traits will predict Schizotypal PD: Eccentricity, Perceptual Dysregulation, and Unusual Beliefs and Experiences
(from the domain of Psychoticism), Suspiciousness, Withdrawal, and Restricted Affectivity, from the domain of Negative Affectivity.

The following additional hypotheses, predicated on the findings of Hopwood and colleagues (2013), pertain to DSM-IV-TR personality disorders not specifically referenced within Section III of the DSM-5, which therefore lack trait specifications—i.e., Dependent, Histrionic, Paranoid, and Schizoid PD:

**Dependent PD.** The following traits will predict symptoms of Dependent PD: Submissiveness, Separation Insecurity, and Anxiousness (from the domain of Negative Affect).

**Histrionic PD.** Among all PID-5 traits, the following will be the strongest predictors of Histrionic PD symptoms: Emotional Lability (from the domain of Negative Affect), Withdrawal, Intimacy Avoidance, and Anhedonia (from the domain of Detachment).

**Paranoid PD.** The following PID-5 traits will be the strongest predictors of Paranoid PD: Hostility (from the domain of Negative Affect), Suspiciousness, Intimacy Avoidance (from the domain of Detachment), and Unusual Beliefs and Experiences (from the domain of Psychoticism).

**Schizoid PD.** For Schizoid PD, the following traits will predict most strongly: Restricted Affectivity (from the domains of Negative Affect), Withdrawal, Intimacy Avoidance, and Anhedonia (from the domain of Detachment).

The remaining two study hypotheses, as follows, pertain to personality disorders from the supplement of DSM-IV-TR, Depressive PD and Passive-Aggressive PD, which are not carried forward into DSM-5 at all. These hypotheses are included for reasons of completeness, and to evaluate whether the PID-5 traits have relevance for PD variants outside the standard nosology.
**Depressive PD.** Among all PID-5 traits, the following will be the strongest predictors of Depressive PD symptoms: Anxiousness (from the domain of Negative Affect), Depressivity, and Anhedonia (from the domain of Detachment).

**Passive-Aggressive PD.** For Passive-Aggressive PD, the following traits will be most strongly predictive: Hostility (from the domain of Negative Affect) and Depressivity (from the domain of Hostility).

A final component of the study consists of exploratory analyses directed at identifying additional PID-5 traits beyond those specified in the above-noted hypotheses that contribute incrementally to prediction of the six PDs with trait specifications in the DSM-5. To maximize replicability of additional traits identified in these supplemental analyses, a split-sample cross validation approach (as described below under Data Analysis section) will be used: potential traits will be identified in the first half of the sample, and the predictive contributions of these traits will be confirmed in the second half of the sample.
CHAPTER TWO

METHODS

Participants

The study sample was composed of 212 (107 female, 103 male, 2 declined to report gender) adults (age $M = 20.83, SD = 4.25$, with $61.8\% \ (N = 131)$ consisting of participants recruited from the Florida State University Psychology Department’s undergraduate research pool, and the remaining $38.2\% \ (N = 81)$ consisting of adults from the community recruited using Craigslist advertisements. The sample’s racial composition was as follows: $78.8\%$ White, $12.3\%$ Black/African American, $8.6\%$ Asian, $1.4\%$ some other race, $1.4\%$ declined to report race. All participants were recruited based on their scores on two brief scale measures of trait disinhibition and trait fear, resulting in over-representation of individuals scoring in the top and bottom quartiles on the two trait variables, with some representation of scorers in the middle $50\%$ of the distribution. The purpose of this recruitment strategy is to increase base rates of Cluster B and Cluster C personality pathology within the sample (Nelson, Strickland, Krueger, Arbisi, & Patrick, 2014).

Procedures

The questionnaire and interview measures used in current study analyses are part of a larger testing protocol that includes multiple questionnaire inventories, a physiological testing session, and SCID-I and SCID-II interviews. The parts of the protocol relevant to the current study are described in detail below. Undergraduate participants completed the brief trait fear and trait disinhibition scales as part of a mass screening protocol. Community participants were recruited based on their trait fear and disinhibition scores from an online, questionnaire-only study, in which they complete the PID-5, trait fear inventory, trait disinhibition inventory, and
other questionnaires as part of a larger protocol, for which they are paid $15 by mail. Following completion of these screening measures, undergraduate and community participants were recruited for the in-person portion of the current study based on their scores on the aforementioned trait measures, with study interviewers and experimenters kept blind to trait scores during testing. Undergraduate participants recruited for the in-person study completed the PID-5 online in advance of their participation in the in-person portion, and received research participation credit or $15 for this survey.

During the in-person session, all participants completed the Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997). Interviews were administered by clinical psychology graduate students under the supervision of a trained clinical psychologist. The interview was the final component of the larger protocol, which (as mentioned above) also included paper-and-pencil questionnaires, a physiological testing session, and an interview assessment of DSM-IV Axis I symptomatology. Community participants received $10 per hour as compensation for their participation in the in-person testing sessions, and undergraduates received their choice of research participation credit, $10 per hour, or a combination of the two. All participants provided written informed consent for both the online questionnaire-based portion of the study and for the in-person procedures.

Materials

**Personality Inventory for DSM-5.** The PID-5 (Krueger et al., 2012) is a questionnaire developed to assess personality traits specified within the Alternative Model for Personality Disorders in the DSM-5. The PID-5 consists of 220 items which measure 25 maladaptive traits across five broad domains: Negative Affect, Detachment, Antagonism, Disinhibition, and Psychoticism. The full PID-5 questionnaire is publicly available online as a supplement to
Krueger et al. (2012). Responses on the PID-5 are a 4-point Likert scale; potential responses are *Very False or Often False, Sometimes or Somewhat False, Sometimes or Somewhat True,* and *Very True or Often True.* Responses were scored zero to three, coded in the keyed direction; facet-level scores were computed by averaging all items within a facet. Domain-level scores were computed by averaging together scores for all items in a given domain (such that items, but not necessarily their parent facets, were given equal weighting within the Domain score). Thus, PID-5 yields 25 trait scores and 5 domain scores, each on a scale from 0 to 3. In the initial scale development sample (Krueger et al., 2012), and in community samples (Strickland, Drislane, Lucy, Krueger, & Patrick, 2013), reliability for all trait scores were at or above $\alpha = .71$, where domain-level reliabilities ranged from $.91 \leq \alpha \leq .96$.

**Semistructured Clinical Interview for DSM-IV Axis II Personality Disorders.** The SCID-II (First et. al., 1997) is a semi-structured clinical interview developed to assess DSM-IV personality disorders. The interview is organized by disorder, beginning with Cluster C (Avoidant, Dependent, Obsessive-Compulsive, Passive-Aggressive, and Depressive Personality Disorders), and moving through Cluster A (Paranoid, Schizotypal, and Schizoid PDs), and finally, Cluster B (Histrionic, Narcissistic, Borderline, and Antisocial PDs). The SCID-II interview contains questions designed to assess individual criteria for a given disorder, with each rated as present, subthreshhold, or absent by the interviewer. Each personality disorder, except Antisocial Personality Disorder, contains between seven and nine symptoms. These disorders are determined to be present if interviewers rate participants as fully meeting criteria for more than half of the personality disorder symptoms. A diagnosis of Antisocial Personality Disorder requires that some evidence of conduct disorder existed before age 15 (2 symptoms present in
childhood); therefore, the SCID-II also contains an assessment for conduct disorder, as well as three of seven additional items.

Therefore, the SCID-II yields categorical diagnoses (present/absent) for each of the twelve personality disorders in the DSM-IV. However, for purposes of comparison with the trait-based PID-5, which conceptualizes personality pathology as a confluence of continuous traits accompanied by significant distress or impairment, the current study also used symptom counts for each individual disorder (i.e., the number of symptoms fully endorsed by a participant on that disorder) as the main unit of analysis for each SCID-II personality disorder.

**Data Analysis Strategy**

**Zero-order Correlations.** In order to test hypotheses regarding Section III-specified traits as predictors of Section II PDs, zero-order (Pearson’s) correlations were computed, associating the score for each specified PID-5 trait with the symptom count for the relevant disorder. To test for unspecified traits’ relevance as predictors of PD symptoms, zero-order correlations were also computed for each PID-5 trait’s association with each PD, again operationalized as the number of items endorsed on the SCID-II interview. Due to the large number of correlations computed, an alpha level of .005 was used for all zero-order analyses.

The zero-order correlations were used for two purposes: 1) to test whether hypothesized traits were related to the given PDs, and 2) to identify additional traits for further testing. For the PDs listed in DSM-5 Section III (with the exception of Schizotypal PD, which had limited representation within the sample, as discussed below), these traits were further tested using a split-half cross-validation approach.

**Hierarchical Regression Analyses with Split-half Cross Validation.** To further test the additional traits identified by the zero-order correlations to determine whether the traits
contribute incrementally to prediction over the specified traits, exploratory analyses were conducted using a split-half cross-validation approach. First, each participant was randomized into one of two equally-sized subgroups, constraining such that an equal number of male and female participants would be assigned to each subgroup; next, the hierarchical multiple regression models were run in the first half of the sample; finally, those traits identified in the first half of the sample as unique predictors of symptoms of each PD were validated by repeating the hierarchical models in the second half of the sample.

Traits were considered for inclusion in the specifier for a target PD only if they were significantly correlated with the target PD symptom count at the zero-order level in the sample as a whole. In the first half of the sample, a hierarchical regression analyses was run corresponding to each of the study hypotheses. In the first step of each analysis, the traits which: 1) were hypothesized to be associated with a given PD and 2) were significantly associated with that PD in the first half of the sample, were entered as predictors into a model predicting the relevant PD symptom count. Those traits which were not significantly correlated with the relevant PD at the zero-order level were dropped. In the second step, PID-5 traits which: 1) were significantly associated with a given PD at the zero-order level, and 2) were not specified by the DSM as relevant to that PD, were further tested for their ability to uniquely predict the symptoms of that PD using hierarchical multiple regression models. Traits identified as relevant to the given PD by the zero-order correlations described above were entered one-by-one in subsequent steps. Those traits which contributed significantly to prediction in the second step of the hierarchical model, above and beyond the traits specified by the a-priori hypotheses, were advanced to the second half of the sample, where the same process was repeated. Traits which significantly contributed
predictive variance above-and-beyond specified traits in both halves of the sample were advanced as potential added predictors for future study.
CHAPTER THREE
RESULTS AND DISCUSSION

Results

Personality Disorder Base Rates. Base rates for each PD in the present sample are presented in Table 1. Because PDs were conceptualized as continuous for the purposes of the present study, the percentage of participants who endorsed at least one symptom of each disorder are also presented. Impulsive/Antisocial PDs were well-represented in the sample: 11.3% of the sample met full criteria for at least one Cluster B PD. Anxious/Fearful PDs were, similarly, well-represented in the sample: 13.7% of the sample met full criteria for at least one Cluster C PD. Odd PDs, by contrast, were not well-represented within the sample; only 2.3% of the sample met full criteria for at least one Cluster A PD. The most prevalent personality disorders in the sample were Obsessive-Compulsive PD (8.5% of the sample met full criteria), Antisocial PD (7.5%),

Table 1. 
Prevalence of Personality Disorder Symptoms.

<table>
<thead>
<tr>
<th></th>
<th>Fully meet</th>
<th>Subthreshold or fully meet</th>
<th>Meet ≥ 1 symptom</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Any Cluster B PDs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult Antisocial Behaviors</td>
<td>12.3%</td>
<td>18.0%</td>
<td>38.2%</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>10.8%</td>
<td>15.0%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Antisocial PD</td>
<td>7.5%</td>
<td>10.3%</td>
<td>47.4%</td>
</tr>
<tr>
<td>Borderline PD</td>
<td>1.9%</td>
<td>5.2%</td>
<td>39.2%</td>
</tr>
<tr>
<td>Narcissistic PD</td>
<td>3.8%</td>
<td>5.2%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Histrionic PD</td>
<td>0.5%</td>
<td>1.5%</td>
<td>21.2%</td>
</tr>
<tr>
<td><strong>Any Cluster C PDs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidant PD</td>
<td>7.5%</td>
<td>13.6%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Dependent PD</td>
<td>0.5%</td>
<td>1.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Obsessive-Compulsive PD</td>
<td>8.5%</td>
<td>19.1%</td>
<td>53.3%</td>
</tr>
<tr>
<td><strong>Any Cluster A PDs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paranoid PD</td>
<td>1.4%</td>
<td>5.2%</td>
<td>29.3%</td>
</tr>
<tr>
<td>Schizoid PD</td>
<td>0.9%</td>
<td>3.3%</td>
<td>27.4%</td>
</tr>
<tr>
<td>Schizotypal PD</td>
<td>0.5%</td>
<td>1.4%</td>
<td>17.9%</td>
</tr>
<tr>
<td><strong>Other PDs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressive PD</td>
<td>4.4%</td>
<td>8.6%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Passive Aggressive PD</td>
<td>3.8%</td>
<td>6.6%</td>
<td>36.8%</td>
</tr>
<tr>
<td><strong>Any PDs</strong></td>
<td><strong>25.9%</strong></td>
<td><strong>53.3%</strong></td>
<td><strong>87.0%</strong></td>
</tr>
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</table>
and Avoidant PD (7.5%). The least prevalent PDs in the sample were Histrionic PD (0.5%), Schizotypal PD (0.5%), and Dependent PD (0.5%). Less than 25% of participants endorsed even a single symptom of these three least prevalent personality disorders; thus, results regarding these PDs should be interpreted with caution due to low prevalence.

**Zero-order Relations between PD Symptom Counts and PID-5 Traits**

**Borderline PD.** Six of the seven traits specified within the DSM-5 Section III as relevant to BPD (Emotional Lability, Anxiousness, Separation Insecurity, Hostility, Depressivity, and Impulsivity) were significantly associated with Borderline PD at the zero-order level (Hypothesis 1a; \( r_s = .27 -.43, ps < .005 \); see Table 2); Risk Taking’s association with BPD did not rise to the level of significance as set in the current study \( (r = .17, p = .02) \). In addition to these specified traits, many PID-5 traits not specified by the DSM-5 Section III (Anhedonia, Suspiciousness, Perseveration, Distractibility, Irresponsibility, Attention Seeking, Deceitfulness, Manipulativeness, Callousness, Eccentricity, and Perceptual Dysregulation) were also significantly associated with BPD (see Table 2 for specific values). These additional traits, along with the initial DSM-specified traits, were further tested for their ability to uniquely predict BPD symptoms using hierarchical multiple regression models, described below.

**Antisocial PD.** All traits specified within Section III of the DSM-5 as relevant to ASPD (Hostility, Manipulativeness, Deceitfulness, Callousness, Impulsivity, Irresponsibility, and Risk Taking) were significantly associated with Antisocial PD at the zero-order level (Hypothesis 2a; \( r_s = .29 -.49, ps < .005 \); see Table 2 for values). In addition to these specified traits, eight traits in addition to those specified in the DSM-5 Section III (Perseveration, Restricted Affectivity, Distractibility, Attention Seeking, Grandiosity, Eccentricity, Perceptual Dysregulation, and Unusual Beliefs and Experiences, \( r_s = .21 -.30, ps < .005 \)) were also significantly associated with
Table 2. Pearson’s Correlations of PID-5 Traits and Symptom Counts for Specified PDs.

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<td>.06</td>
<td>-.01</td>
<td>.18</td>
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</tbody>
</table>

* p < .01 (two-tailed). ** p < .005 (two-tailed).

**Bold** indicates traits specified by DSM-5 Section III as relevant for each PD.
ASPD (see Table 2 for specific values). These additional traits were further tested, along with the specified traits, using hierarchical multiple regression models (described below).

**Narcissistic PD.** Both traits specified by DSM-5 Section III as relevant to NPD (Attention Seeking and Grandiosity) were significantly correlated with NPD at the zero-order level (Hypothesis 3a \( r_s = .28, .26 \) respectively; \( ps < .005 \)). The additional traits proposed by Hopwood and colleagues (2012; Deceitfulness and Manipulativeness) were also both significantly associated with NPD at the zero-order level (Hypothesis 3b \( r_s = .28, .28 \) respectively, \( ps < .005 \)). Additionally, three other traits were significantly associated with Narcissistic PD (Hostility, Callousness, and Perceptual Dysregulation, \( rs = .22, .35, \) and \( .21 \), respectively, \( ps < .005 \)). Table 2 contains values for all Pearson’s correlations. All traits which rose to the level of significance at the zero-order level were further tested using hierarchical multiple regression models (described below).

**Obsessive-Compulsive PD.** Of the four Section III traits specified in the DSM-5 as relevant to OCPD, two were significantly associated with OCPD symptoms (Perseveration and Rigid Perfectionism, \( rs = .26 \) and \( .33 \) respectively, \( ps < .005 \)), and two were not significantly associated with symptoms of OCPD (Intimacy Avoidance \( r = .09, p = .22 \); Restricted Affectivity \( r = .07, p = .31 \)). In addition to these, six further traits were all associated with symptoms of OCPD at the \( p < .005 \) level. (Anhedonia, Depressivity, Anxiousness, Emotional Lability, Hostility, and Perceptual Dysregulation; \( rs = .22 \) - \( .37 \), \( ps < .005 \)). These six additional traits were tested further using hierarchical multiple regression models (described below). All significant traits were further tested using hierarchical multiple regression models (described below).
**Avoidant PD.** Three of the four traits specified within Section III of the DSM-5 as relevant to AVPD were significantly associated with AVPD symptoms in Pearson’s correlations (Anhedonia, Withdrawal, and Anxiousness, $r = .41, .37, \text{ and } .42$, respectively, $ps < .001$). Although specified within Section III of the DSM, Intimacy Avoidance was not significantly related to AVPD symptoms ($r = -.02, p = .75$). In addition to specified traits, seven additional traits were all significantly related to AVPD symptoms at the zero-order level (Depressivity, Emotional Lability, Perseveration, Submissiveness, Separation Insecurity, Distractibility, and Risk Taking, $rs = .22 - .40; ps < .005$).

**Schizotypal PD.** Of the six traits specified within DSM-5 Section III as relevant to STPD, only Perceptual Dysregulation was significantly associated with STPD symptoms at the zero-order level within this sample ($r = .20, p = .004$). DSM-specified traits Suspiciousness, Withdrawal, Eccentricity, and Unusual Beliefs and Experiences were weakly, but not significantly, associated with STPD symptoms ($rs = .14 - .18, ps = .011 - .057$); and specified trait Restricted Affectivity was uncorrelated with STPD symptoms ($r = -.01, p = .93$). Although not specified by the DSM-5 as relevant to Schizotypal PD, Perseveration was significantly associated with STPD symptoms ($r = .25, p < .001$).

**Histrionic PD.** PID-5 traits Perseveration, Impulsivity, Attention Seeking, Manipulativeness, Eccentricity, and Perceptual Dysregulation were each significantly associated with HPD symptoms at the zero-order level ($rs = .21 - .33, ps < .005$, see Table 3 for specific values). Notably, none of the traits found empirically by Hopwood et al. (2013) to be significantly associated with HPD symptoms assessed via self-report were replicated as significantly associated with HPD symptoms assessed via interview in this study (Anhedonia $r = $
.11, $p = .13$; Intimacy Avoidance $r = -.10$, $p = .15$; Withdrawal $r = -.08$, $p = .24$; and Emotional Lability $r = .17$, $p = .02$).

**Dependent PD.** Seven PID-5 traits were significantly associated with DNPD symptoms at the zero-order level (Anhedonia, Depressivity, Anxiousness, Emotional Lability, Perseveration, Submissiveness, and Separation Insecurity; $rs = .22 - .34$, $ps < .005$). See Table 3 for all PID-5 traits’ zero-order associations with DNPD symptoms.

**Schizoid PD.** Four PID-5 traits were significantly associated with SCPD symptoms at the zero-order level (Intimacy Avoidance, Withdrawal, Restricted Affectivity, and Callousness, $rs = .26 - .31$, $ps < .005$). See Table 3 for all specific values.

**Paranoid PD.** Eleven PID-5 traits had significant zero-order associations with PPD symptoms (Anhedonia, Depressivity, Suspiciousness, Withdrawal, Anxiousness, Emotional Lability, Hostility, Perseveration, Deceitfulness, Manipulativeness, Callousness, and Eccentricity; $rs = .21 - .42$, $ps < .005$). See Table 3 for specific values.

**Depressive PD.** Sixteen PID-5 traits were significantly associated with DRPD symptoms (Anhedonia, Depressivity, Intimacy Avoidance, Withdrawal, Anxiousness, Emotional Lability, Hostility, Perseveration, Submissiveness, Separation Insecurity, Rigid Perfectionism, Distractibility, Irresponsibility, Deceitfulness, Eccentricity, and Perceptual Dysregulation, $rs = .20 - .57$, $ps < .005$). See Table 3 for specific values.

**Passive-Aggressive PD.** Fifteen PID-5 traits were significantly associated with PAPD symptoms at the zero-order level (Anhedonia, Depressivity, Anxiousness, Emotional Lability, Hostility, Perseveration, Separation Insecurity, Distractibility, Irresponsibility, Deceitfulness, Manipulativeness, Callousness, Eccentricity, and Perceptual Dysregulation, $rs = .20 - .40$, $ps < .005$). See Table 3 for specific values.
Table 3. 
Pearson’s Correlations of PID-5 Traits and Symptom Counts for Unspecified PDs.

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<tr>
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<th>PPD</th>
<th>DVPD</th>
<th>PAPD</th>
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* p < .01 (two-tailed). ** p < .005 (two-tailed).
Cross-Validation using Hierarchical Multiple Regression Models

Borderline PD. As a first step of a hierarchical model, DSM-5 specified traits (with the exception of Risk Taking, which did not not rise to the level of significance in the sample as a whole and thus was not included as a predictor in the first half of the model). Together, these traits predicted 31.9% of the variance in BPD symptoms (Multiple R = .565). In the second step, a single PID-5 trait was entered to test that trait’s ability to uniquely predict symptoms of BPD. In the first half of the sample, the eleven traits identified as relevant by zero-order correlation were each entered into separate regression models at the second step. Of these, PID-5 traits Anhedonia, Suspiciousness, Distractibility, Irresponsibility, Eccentricity, and Perceptual Dysregulation did not predict significant additional variance in this first half of the sample (ps > .05), and were therefore dropped as potential additional predictors of BPD. PID-5 traits Perseveration (R² change = .065, p = .004), Attention Seeking (R² change = .038, p = .029), Deceitfulness (R² change = .045, p = .016), Manipulativeness, (R² change = .041, p = .023), and Callousness (R² change = .040, p = .024) each contributed significant added variance when entered separately as predictors of BPD symptoms in the first half of the sample; therefore, for these traits, the process was repeated in the second half of the sample. In the second half of the sample, Perseveration, Attention Seeking, Deceitfulness, and Callousness did not contribute significant variance above-and-beyond the specified traits. Only Manipulativeness (R² change = .040, p = .022) was confirmed as a significant predictor of unique added variance for BPD symptoms.

Antisocial PD. In the first half of the sample, the six DSM-specified were entered at the first step as predictors of symptoms of Antisocial PD. Together, these traits predicted 37.6% (Multiple R = .613) of the variance associated with Antisocial PD. The eight additional traits,
which had been found to be associated with ASPD at the zero-order level, were entered one at a
time in the second step of the models to test their unique incremental predictive validity. In the
first half of the sample, none of these additional traits added a significant amount of variance to
prediction of Antisocial PD (\( p > .05 \)), and therefore none were tested in the second half of the
sample.

**Narcissistic PD.** In the first step, DSM-specified traits Manipulativeness and
Grandiosity, together with empirically-driven (Hopwood et al., 2012) hypothesized traits
Attention Seeking and Deceitfulness, were entered in the first step as predictors of Narcissistic
PD. Together, these traits predicted a significant but weak 12% (Multiple \( R = .349 \)) of the
variance in NPD symptomatology. Next, the three additional traits associated with NPD at the
zero-order level in the full sample were added one at a time as the second step of the models to
test for unique additive predictive validity. Of these, Hostility and Perceptual Dysregulation did
not significantly augment the original traits’ predictive power. However, Callousness
significantly increased the prediction of NPD symptoms (\( R^2 \text{ change} = .08, p = .003 \)) in the first
half of the sample, and so was further tested in the second half of the sample. In the second half
of the sample, this finding failed to replicate (\( R^2 \text{ change} = .002, p = .636 \)), and ultimately, no
additional traits were identified to improve prediction of Narcissistic PD.

**Obsessive-Compulsive PD.** In the first half of the sample, DSM-specified traits
Perseveration and Rigid Perfectionism were entered at the first step as predictors of symptoms of
Antisocial PD (Intimacy Avoidance and Restricted Affectivity were not related at the zero-order
level and so were not included in this set). Together, these traits predicted 23.9% (Multiple \( R =
.489 \)) of the variance associated with OCPD. Six additional traits, which had been found to be
associated with OCPD at the zero-order level, were entered one at a time in the second step of
the models to test their unique incremental predictive validity: Anhedonia, Depressivity, Anxiousness, Emotional Lability, Hostility, and Perceptual Dysregulation. None of these additional traits added a significant amount of variance to prediction of OCPD (\(p_s > .05\)), and therefore none were tested in the second half of the sample.

**Avoidant PD.** In the first half of the sample, the DSM-specified traits (with the exception of Intimacy Avoidance, which was not related at the zero-order level) were entered as predictors of Avoidant PD symptoms in the first step of an hierarchical regression model. Together, these traits predicted 32.4% (\(\text{Multiple } R = .570\)) of the variance associated with Avoidant PD. Seven traits, which had been found to be associated with Avoidant PD at the zero-order level, were entered one at a time in the second step of the models to test their unique incremental predictive validity. Of these, Depressivity, Emotional Lability, Perseveration, Separation Insecurity, and Distractibility did not add unique variance to the traits specified. Submissiveness significantly augmented the traits’ predictive power in the first half of the sample, \(R^2\) change = .045, \(p = .013\) but this finding failed to replicate \(R^2\) change = .013, \(p = .216\). Similarly, Risk Taking added variance to the prediction of the traits at a trend-level in the first half of the sample, \(R^2\) change = .028, \(p = .051\), but a non-significant amount in the second half of the sample \(R^2\) change = .021, \(p = .122\).

**Discussion**

Consistent with previous findings (Hopwood et al., 2012; Fossati et al., 2013; Miller et al., 2014), the present study provides evidence that DSM-5 Section III traits can be used to characterize personality disorders. While previous studies have focused on either self-report traits and self-reported personality disorder symptoms (Hopwood et al., 2012; Fossati et al., 2013) or clinician-rated personality traits and clinician-related symptoms, the present study uses
a cross-method approach, relating self-report traits to clinician-rated personality disorder
symptoms. This explains the somewhat more modest level of prediction in the current study
(8.3% - 38% of variance explained, compared with 18.5% - 66.1% in Miller et al., 2012), as
method variance related to the discrepancy between self- and clinician- report introduces noise
into the model. Nonetheless, this demonstration that self-reported personality is still relevant to
personality disorder symptomatology is important in that it is clinically useful: the self-reported
PID-5 traits can be useful clinical indicators of personality disorders that may be present.
Additionally, the multi-method approach helps to further bridge the literature of personality trait
research, which is typically conducted using self-report, to clinical research, where clinician
ratings are the norm.

**Specified Symptoms.** The present study demonstrates that, by and large, the DSM-
specified personality traits tend to perform well as predictors of personality disorder
symptomatology. In some cases, such as of ASPD and NPD, each specified trait was
significantly correlated with personality disorder symptomatology and the addition of other traits
did not improve their predictive power. However, there were several PDs with DSM-specified
traits which are not empirically relevant. For example, in Borderline PD, DSM-specified trait
Risk Taking is not empirically related to Borderline PD. While risky behaviors (e.g. substance
use, sexual behaviors, driving recklessly) are viewed as an important clinical feature of
Borderline PD (Lieb, Zanarini, Schmal, Linehan, & Bohus, 2004), our findings suggests that
these behaviors stem not from a bold, risk-taking temperament (as indexed by the items of the
PID-5’s Risk Taking scale), but more likely from personality traits relevant to lack of behavioral
control such as impulsivity, which is also empirically related to BPD. Additionally, our findings
indicate that self-reported manipulativeness is an empirically useful correlate of BPD. This may
be a function, or manifestation, of interpersonal problems that individuals with BPD commonly experience.

**Sampling Strategy.** The selection strategy for the present study, which employed a mixture of community and undergraduate participants, and in which participants were recruited to over-represent extreme scores on trait fear and trait disinhibition, successfully bolstered rates of Cluster B and C, but not Cluster A psychopathology. For example, 11.3% of the present sample met criteria for at least one Cluster B personality disorder, whereas estimates of Cluster B psychopathology in the general population are estimated to be 1.5% (Lenzenweger, Lane, Loranger, & Kessler, 2007); furthermore, Cluster C psychopathology in the current sample was 13.7%, compared with a community base rate of only 6.0%. It is notable and relevant (though perhaps unsurprising) that oversampling for extreme scores on trait fear and trait disinhibition can boost levels of symptom endorsement for a broad range of personality disorders; this suggests that the personality disorders themselves are already reflections of broad, underlying traits, either because these traits serve as vulnerabilities for the development of the personality disorders or because the disease process of the personality disorders pulls these traits to the extreme ends of the continua. This is quite relevant as the field works to place personality disorders within the concept of a more precise trait-based system. Comorbidity across personality disorders, though often maligned as a weakness of the current diagnostic system, is more defensible when viewed through this lens. Additionally, this recruitment strategy may prove useful for other researchers who are looking to study the continuum of personality from non-problematic or “normal” through the maladaptive extremes.
Limitations & Future Directions. Although the current study provides valuable data on relations between PD conceptions represented in Sections II and III of DSM-5, further research is needed on individuals with more severe presentations of personality pathology. If the trait system is to be adopted alongside current diagnostic systems for personality pathology, then clinical samples will clearly be needed to ensure that findings such as our own are also useful in clinical settings. Additionally, for PDs without DSM-specified traits, the present study was able to identify preliminary traits for further study, but in many cases identified a large number of traits (up to 13) as relevant to given PDs, with many traits recurring as indicators of multiple PDs. This is less than ideal if the current system is to be used as a diagnostic tool for DSM-5 Section II PDs. Future studies with larger samples may use the traits identified here as empirically-validated trait indicators of Section II PDs, and use a similar strategy to refine the traits. Samples large enough to discriminate between disorder groups using Structural Equation Modeling would also vastly increase the validity and feasibility of this system.

Ultimately, the utility of having such a trait system lies not only in its effectiveness in capturing existing personality disorder diagnoses, but also in its ability to broaden and restructure these constructs as well. Thus, findings such as those of the current study, which demonstrate that the trait system is clinically relevant, also open the way for further study of individual DSM Section III traits’ utility as transdiagnostic indicators of broad outcomes such as criminal behavior, treatment adherence, and response to interventions.
APPENDIX A

IRB APPROVAL FORMS

Office of the Vice President For Research
Human Subjects Committee

APPROVAL MEMORANDUM (for change in research protocol)

Date: 07/27/2012

To: Christopher Patrick

Address: 4301

Dept: PSYCHOLOGY DEPARTMENT

From: Thomas L. Jacobson, Chair

Re: Use of Human subjects in Research
Project entitled: Cognition, Emotion, and Personality

The application that you submitted to this office in regard to the requested change/amendment to your research protocol for the above-referenced project has been reviewed and approved.

Please be reminded that if the project has not been completed by 06/12/2013, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Janet Kistner

HSC NO. 2012-8763
Office of the Vice President For Research
Human Subjects Committee

RE-APPROVAL MEMORANDUM

Date: 05/08/2014
To: Christopher Patrick
Address: 4301
Dept.: PSYCHOLOGY DEPARTMENT
From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research:
   Cognition, Emotion, and Personality

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 05/07/2014, you must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc: HSC No. 2013-10289

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RE-APPROVAL MEMORANDUM

Date: 05/16/2014

To: Christopher Parish

Address: 4301

Dept.: PSYCHOLOGY DEPARTMENT

From: Thomas L. Jacobson, Chair

Re: Re-approval of Use of Human subjects in Research: Cognition, Emotion, and Personality

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 05/13/2015, you are must request renewed approval by the Committee.

If you submitted a proposed consent form with your renewal request, the approved stamped consent form is attached to this re-approval notice. Only the stamped version of the consent form may be used in recruiting of research subjects. You are reminded that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report in writing, any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc:
HSC No. 2014.12685
APPENDIX B

SAMPLE CONSENT FORM

Title of Research: Cognition, Emotion, and Personality

Principal Investigator: Christopher J. Patrick, Ph.D., Department of Psychology, Florida State University

You are being invited to participate in the on-line portion of a research study. This study involves the assessment of attitudes and life experiences. The purpose of this form is to provide you with information about the study. We ask that you thoroughly read this form.

Purpose of the Research: This study is designed to investigate relations between personality characteristics and problems of differing kinds that many people experience in their lives. The broader goal of this research is to understand factors that contribute to the development of problems such as anxiety, depression, substance-related problems, and delinquent behavior.

Procedures for the Research: If you agree to be in this study, we will ask you to complete a questionnaire survey that asks about your attitudes, behaviors, and life experiences. Some of these questions concern matters that some individuals may find sensitive—such as lying, aggression, feelings of dysphoria, and thoughts of self-harm. Please complete as many of the questions as possible. However, you may skip any question if you feel uncomfortable about answering it. It will take approximately 1.5 hours to complete.

Risks and Benefits of Being in the Study: The survey includes questions about sensitive topics that some people may feel uncomfortable answering. As mentioned above, you may skip any question you feel uncomfortable answering. There are no direct benefits of this research to participants.

Compensation: As compensation for your participation in this study, you will receive a check for $15 in the mail. A separate form at the end of the survey questionnaire will ask for your current
contact information so we can send your payment out.

Confidentiality: Your name will not appear on the survey form that you complete. The records of this study are coded by number only, and will be kept private. Your survey results will be accessible only to researchers on this study; they will not be disclosed to you or anyone else. In any sort of report we might publish, we will not include any information that will make it possible to identify a participant. Research records will be kept in a locked file; only the researchers will have access to the records. The collected data will be stored for 5 years after data analysis is complete, and then destroyed at that time.

Voluntary Nature of the Study: Your decision whether or not to participate will not affect your current or future relations with Florida State University. If you decide to participate, you may end the survey at any time or choose not to answer any question. If you do not complete the entire survey, compensation will be prorated based on time spent with, a minimum of $2 for signing on and consenting. By agreeing to participate in this survey, you are also agreeing to be contacted about a follow-up study for which consent would be sought separately. Owing to project aims and constraints on available resources, not all survey respondents will be contacted for the follow-up study.

Contacts and Questions: The principal investigator for this study is Dr. Chris Patrick. If you have questions about any of the above, you may contact Dr. Patrick at (***-****) or by email at ********@psy.fsu.edu. If you have questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact FSU Institutional Review Board by phone at (***-****) or by email at ********@magnet.fsu.edu. In the event you wish to talk further about points arising in the questionnaires, either in the near term or at some point in the future, we have listed the contact information for a couple of on-campus resources at the end of the survey.

Statement of Consent: I have read the above information. I consent to participate in the study.
REFERENCES


BIOGRAPHICAL SKETCH

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Education

Aug 2011 Graduate Student in Clinical Psychology
– present Florida State University
Advisor: Christopher J. Patrick, PhD

May 2008 B. A. Psychology and Music, cum laude
Trinity University, San Antonio TX

Research Experience

Aug 2011 Research Assistant
– present Florida State University
Advisor: Christopher Patrick, PhD

Oct 2008 Research Coordinator
– June 2011 Transcranial Magnetic Stimulation (TMS) Lab
Research Imaging Institute, UT Health Science Center San Antonio
Supervisor: Shalini Narayana, PhD

Apr 2008 Research Assistant
– Oct 2008 Event-Related Potential (ERP) Lab, University of Texas at San Antonio
Supervisor: Nicole Y. Y. Wicha, PhD

Aug 2007 Undergraduate Lab Assistant
– May 2008 Memory & Cognition Lab, Trinity University
Supervisor: Paula Hertel, PhD