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A Five-Factor Measure of Obsessive-Compulsive Personality Traits.

Douglas B. Samuel
Purdue University, dbsamuel@purdue.edu

Ashley D.B. Riddell

Donald R. Lynam
Purdue University, dlynam@purdue.edu

Joshua D. Miller

Thomas A. Widiger

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Author's Notes:

Douglas B. Samuel, Department of Psychological Sciences, Purdue University; Ashley D. B. Riddell, Department of Psychology, University of Kentucky; Donald R. Lynam, Department of Psychological Sciences, Purdue University; Joshua D. Miller, Department of Psychology, University of Georgia; Thomas A. Widiger, Department of Psychology, University of Kentucky.

Correspondence regarding this article should be directed to Douglas B. Samuel, Department of Psychological Sciences, Purdue University 703 Third St, West Lafayette, IN 47906.

Email: dbsamuel@purdue.edu

Abstract

The current study provides convergent, discriminant, and incremental validity data for the Five-Factor Obsessive-Compulsive Inventory (FFOCI), a newly-developed measure of traits relevant to obsessive-compulsive personality disorder (OCPD) from the perspective of the five-factor model (FFM). Twelve scales were constructed as maladaptive variants of specific FFM facets (e.g., Perfectionism as a maladaptive variant of FFM competence). On the basis of data from 407 undergraduates (oversampled for OCPD symptoms) these 12 scales demonstrated convergent correlations with established measures of OCPD and the FFM. Further, they obtained strong discriminant validity with respect to facets from other FFM domains. Most importantly, the individual scales and total score of the FFOCI obtained incremental validity beyond existing measures of the FFM and OCPD for predicting a composite measure of obsessive-compulsive symptomatology. The findings support the validity of the FFOCI as a measure of obsessive-compulsive personality traits, as well as of maladaptive variants of the FFM.

Keywords: five-factor model, obsessive-compulsive personality disorder, validation, maladaptive, perfectionism.

A Five-Factor Measure of Obsessive-Compulsive Personality Traits

Obsessive-compulsive personality disorder (OCPD) is a condition characterized by such features as perfectionism; devotion to work to the exclusion of other important activities; preoccupation with the details, order, and organization of activities and tasks; rigidity; and difficulty expressing warmth or affection. Obsessive-compulsive is the most prevalent personality disorder (PD) within community samples (Torgersen, 2009) and has a lengthy history within the clinical literature, having been included in all previous diagnostic manuals and tracing its roots to Freud's "anal character" (Pfohl & Blum, 1995; Costa, Samuels, Bagby, Daffin, & Norton, 2005).

The current nomenclature of the American Psychiatric Association (APA), however, has received considerable criticism for its assumption that PDs are categorically distinct entities (Clark, 2007; First et al., 2002; Livesley, 2003; Trull & Durrett, 2005; Widiger & Trull, 2007). The limitations of this categorical approach include excessive diagnostic co-occurrence, arbitrary and inconsistent diagnostic boundaries, and insufficient coverage. One additional difficulty is the provision of a single diagnostic term to describe a construct characterized by a heterogeneous constellation of maladaptive personality traits. For instance, in the *DSM-IV-TR* (APA, 2000), any four of eight criteria are required for the diagnosis of OCPD. Therefore, there are 163 different combinations of criteria that yield an OCPD diagnosis. Moreover, because only half of the criteria are required, it is possible that two individuals could both meet the diagnosis, yet not even share a single feature. This problematic heterogeneity has prompted some researchers to propose subtypes of OCPD in order to develop more specific treatment guidelines (Ansell et al., 2010).

The heterogeneity of OCPD has been further verified through factor analysis, which has supported the position that OCPD is more fruitfully considered a constellation of maladaptive personality traits (e.g., Baer, 1994; Grilo, 2004; Hummelen, Wilberg, Pedersen, & Karterud, 2008; Pinto, Ansell, Grilo, & Shea, 2007). This situation has created a number of difficulties in the assessment of OCPD. For

example, existing measures typically evince problematic levels of reliability (e.g., Cronbach's alpha values < .50; Samuel & Widiger, 2010). Furthermore, these same measures often obtain such weak convergence with one another that one might question if they are even assessing the same constructs (Widiger & Boyd, 2009). Given the limitations of the categorical approach, researchers have suggested that the *DSM-IV-TR* PDs, including OCPD, are best understood and assessed as maladaptive variants of the traits identified within existing dimensional models of personality (Clark, 2007; Krueger & Eaton, 2010; Widiger & Simonsen, 2005). What is needed is a measure that parses the construct of OCPD into components that would allow clinicians and researchers to more usefully assess, study, and treat those specific traits that have previously been lumped into the heterogeneous category of OCPD.

One such framework for identifying those components is the five-factor model (FFM; McCrae & Costa, 2003). The FFM consists of the broad domains of 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. Each of these five broad domains were further differentiated into six more specific facets by Costa and McCrae (1995) as they developed and conducted research with the NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992), the predominant measure of the FFM. For instance, the six facets of conscientiousness are competence, order, dutifulness, achievement-striving, self-discipline, and deliberation.

A considerable body of research has also indicated that the *DSM-IV-TR* PDs, including OCPD, can be understood as maladaptive variants of the domains and facets of the FFM (Clark & Livesley, 2002; O'Connor, 2005; Samuel & Widiger, 2008). Nonetheless, existing measures of the FFM, which were designed to assess normative personality traits, might be insufficient for assessing those pathological aspects of OCPD pathology (Haigler & Widiger, 2001; Reynolds & Clark, 2001). As such it would be useful to develop a FFM measure that focuses explicitly on the maladaptive aspects and levels of the

trait that are relevant to OCPD. A first step in developing such a measure is to determine the FFM traits that best define the core components of OCPD. The existing literature provides useful data for this decision in the form of expert opinions as well as empirical research.

Lynam and Widiger (2001) asked OCPD researchers to describe a prototypic case of OCPD in terms of the 30 facets of the FFM, using the Five-Factor Model Rating Form (FFMRF; Mullins-Sweatt, Jamerson, Samuel, Olson, & Widiger, 2006). These researchers suggested that an individual with a prototypic case of OCPD would be high in competence, order, dutifulness, achievement-striving, self-discipline, and deliberation from the conscientiousness domain; high in anxiety (from neuroticism); low in openness to feelings, actions, ideas, and values; low in warmth and excitement-seeking (from extraversion); and low in impulsivity (from neuroticism). This trait profile was quite consistent with a comparable survey of practicing clinicians by Samuel and Widiger (2004). The only notable difference was that the clinicians' description of OCPD did not include low impulsivity nor low openness to ideas and feelings (the 2.22 score for low openness to feelings fell just above the rationally derived 2.00 cut point for a low score). Finally, Widiger, Trull, Clarkin, Sanderson, and Costa (2002) coded each of the *DSM-IV-TR* diagnostic criteria (APA, 2000) in terms of the FFM. Their coding identified considerably fewer facets of the FFM (e.g., excluding high anxiousness, low excitement-seeking, and high self-discipline) due largely to being confined to the symptoms contained within the DSM-IV-TR criterion set.

Saulsman and Page (2004) meta-analyzed the correlations between measures of OCPD and the FFM and reached the surprising conclusion that OCPD was only weakly related to FFM conscientiousness, producing a weighted mean effect size of only .23 ($p < .0001$). However, they suggested that this effect size varied across OCPD measures such that the relationship between OCPD and conscientiousness was particularly strong when the Millon Clinical Multiaxial Inventory (MCMI; Millon, 1994) was used. ~~Furthermore, they suggested that this effect size varied across OCPD measures such that the~~

~~relationship between OCPD and conscientiousness was heavily influenced by a version of the Millon Clinical Multiaxial Inventory (MCMI-III; Millon, 1994).~~ The MCMI~~-III~~ obtained a weighted mean effect size of .52 with conscientiousness, whereas all other self-report PD scales showed an effect size of only .03; interview-based measures evinced an effect size of -.05. This difference is not surprising as the MCMI~~-III~~ often fails to converge with other measures of OCPD (Widiger & Boyd, 2009). However, an additional explanation for the effect size ~~noted by Saulsman and Page (2004)~~ was a potential limitation in the NEO Personality Inventory-Revised's (NEO PI-R; Costa & McCrae, 1992) assessment of maladaptively high conscientiousness. When Haigler and Widiger (2001) experimentally manipulated NEO PI-R items by inserting words to make them more excessive, extreme, or maladaptive variants of the same content, the correlations between conscientiousness and OCPD increased substantially.

Samuel and Widiger (2008) further investigated the relationship between OCPD and FFM conscientiousness when they replicated and extended the Saulsman and Page (2004) meta-analysis to consider the 30 FFM facets. They found positive relationships between OCPD and the conscientiousness facets of order, dutifulness, achievement striving, self-discipline, and deliberation. In addition, when they tested for moderation by instrument, they indicated that the high convergence with FFM conscientiousness noted previously for the MCMI-III was also evident with the Schedule for Nonadaptive and Adaptive Personality - 2 (SNAP-2; Clark, Simms, Wu, & Casillas, in press).

In the absence of a gold standard for the assessment of these constructs, Samuel and Widiger (2011) administered multiple measures of conscientiousness, OCPD, and specific components of OCPD. This multi-faceted approach allowed for an examination of the overall relationship rather than specific conceptualizations offered by individual instruments. Importantly, they reported that FFM conscientiousness was particularly strongly related with the more specific components of OCPD, such as the Compulsivity subscale from the Dimensional Assessment of Personality Pathology-Basic

Questionnaire (DAPP-BQ; Livesley & Jackson, 2009), and the Workaholism and Propriety subscales from the SNAP-2 (Clark et al., in press).

Based on the surveys of researchers (Lynam & Widiger, 2001), surveys of clinicians (Samuel & Widiger, 2004), and empirical research (Samuel & Widiger, 2008, 2011; Saulsman & Page, 2004) twelve facets of the FFM were identified as being particularly relevant for the assessment of OCPD from the perspective of the FFM. As discussed above, the six facets of conscientiousness have been the most frequently identified for describing OCPD. Nevertheless, the surveys and empirical research has also identified additional facets from the domains of extraversion, neuroticism, and openness domains. Specifically, an adequate FFM description of obsessive-compulsive personality traits (OCPT) should include low warmth and excitement-seeking from extraversion; high anxiety from neuroticism; and low openness to feelings, actions, and values, in addition to the facets of conscientiousness.

In order to assess these FFM obsessive-compulsive personality traits we developed brief scales, including Perfectionism (a variant of FFM competence), Fastidiousness (FFM order), Punctiliousness (FFM dutifulness), Workaholism (FFM achievement-striving), Doggedness (FFM self-discipline), Ruminative Deliberation (FFM deliberation), Detached Coldness (low FFM warmth), Risk Aversion (low FFM excitement-seeking), Excessive Worry (high FFM anxiety), Constricted (low FFM openness to feelings), Inflexibility (low FFM openness to actions), and Dogmatism (low FFM openness to values).

The purpose of the current study was to investigate these twelve FFM OCPT scales (collectively referred to as the Five-Factor Obsessive-Compulsive Inventory [FFOCI]), in terms of internal consistency, convergent and discriminant validity with existing measures, and incremental validity over the NEO PI-R and existing measures of OCPD.

Method

Procedures

The study's undergraduate participants were drawn from the introductory psychology student participant pool at the University of Kentucky. To ensure the inclusion of elevated levels of OCPD pathology in our sample we administered the OCPD scale from the Personality Diagnostic Questionnaire-4 (PDQ-4; Bagby & Farvolden, 2004) to a pool of over 1400 potential participants and selected the top-scoring 100 individuals (each endorsed at least five of the eight PDQ-4 items) over two consecutive semesters and invited them to participate in the study. Once a number of these participants had been sampled, the study was opened to the entire subject pool to expand the range.

All measures were administered via SurveyMonkey, a secure online survey service. Given the online format, individuals indicated their informed consent by selecting the appropriate box. After providing informed consent, participants completed selected scales from personality and PD instruments; the order of administration was standard across all participants. Participants were allowed as much time as necessary to complete the materials (which required approximately 2.5 hours), and could temporarily suspend participation whenever necessary. Upon completion, each participant received a debriefing document and research participation credits.

Participants

A total of 500 responses were obtained (including 1001 from the oversampled group). Of these, 51 (6 oversampled) were eliminated due to incomplete or missing data for a total of 449 participants (95 oversampled). Finally, 42 participants (6 oversampled) were excluded from the study due to elevated scores on the survey's validity scale (described below) yielding a useable sample of 407 participants of whom 89 were pre-screened for elevated OCPD scores.

The sample of participants was split such that 204 (45 oversampled) were included in the item selection process and 203 (44 oversampled) were utilized for the convergent, discriminant, and incremental validity analyses. These two groups did not differ significantly on any demographic variables. Any remaining missing data were assumed to be missing at random and were imputed using

the expectation maximization (EM) procedure. We chose EM because it has been shown to produce more accurate estimates of population parameters than other methods (Enders, 2006).

The entire sample was predominantly female (61%) and Caucasian (84%), but some participants did indicate their race as African American (5%), Asian (3%), multiracial (3%), or "other" (4%). In addition, (2%) identified their ethnicity as Hispanic. Finally, the mean age was 19.1 years (*sd* = 3.4).

The level of OCPD pathology in the validation sample was high according to the PDQ-4. The number of criteria endorsed ranged from zero to eight, with a mean of 3.3 (*sd* = 1.8). The oversampling strategy appeared to be successful in obtaining significant levels of OCPD pathology as evidenced by the mean values on other measures, as well. For example, the mean item-score on the WISPI-IV OCPD scale was 4.4 (*sd* = 1.5) in the current sample compared with 3.8 (*sd* = 1.3) among psychiatric inpatients in a validation sample (Smith, Klein, & Benjamin, 2003). In addition, the mean dimensional t-score on the SNAP-2 OCPD scale in the current sample was 52.4 (*sd* = 12.4), which is comparable to the mean (53.1, *sd* = 11.1) among a small sample of outpatients (*n* = 63) reported in the SNAP-2 manual (Clark et al., in press). Finally, the DAPP-BQ Compulsivity scale had a mean of 52.7 (*sd* = 12.0) in our sample, the norm for a clinical sample was 51.4 (*sd* = 12.3) in the manual (Livesley & Jackson, 2009).

Materials

The current study includes a number of psychometric measures; namely, the FFOCI, three alternative measures of the domain of conscientiousness, four alternative measures of OCPD, and two scales assessing specific components of OCPD.

Five-Factor Obsessive-Compulsive Inventory (FFOCI). The initial item pool for the FFOCI consisted of 298 items, with approximately 22 items per subscale (range of 20-24 items per FFM facet), answered on a 5-point scale ranging from *strongly disagree* to *strongly agree*. Items were written to assess obsessive-compulsive maladaptive variants of each respective FFM facet, modeled after the

development of the Elemental Psychopathy Assessment (Lynam et al., 2011). For example, the items for FFOCI did not concern simply deliberation but more specifically the ruminative deliberation that is characteristic of OCPD. Items were written so as to be maladaptive in nature (i.e., a positive response would be likely to impede general functioning) while remaining true to the spirit of the FFM facet description.

Specifically, six subscales in the item pool assess obsessive-compulsive variants of FFM Conscientiousness: Perfectionism (e.g., "People often think I work too long and hard to make things perfect" and "I like my work to be flawless and unblemished"), Fastidiousness (e.g., "I probably spend more time than is needed organizing and ordering things" and "I need to consider every little detail"), Punctiliousness (e.g., "Some persons suggest I can be excessive in my emphasis on being proper and moral" and "I have such a strong sense of duty that I sometimes become over-committed"), Workaholism (e.g., "My drive to succeed keeps me going when others have stopped" and "I get so caught up in my work that I lose time for other things"), Doggedness (e.g., "I have a strong, perhaps at times even excessive, single-minded determination" and "If I start something I work until it is complete"), and Ruminative Deliberation (e.g., "I think things over and over and over before I make a decision" and "I often dwell on every possible thing that might go wrong"). Two subscales assess OCPD facets of low Extraversion: Detached Coldness (e.g., "I often come across as formal and reserved" and "Warmth and intimacy are not my strengths"), and Risk Aversion (e.g., "I would always sacrifice fun and thrills for the security of my future" and, reverse-scored, "If it sounds exciting, I'd try anything once"). One subscale assesses an OCPD variant of Neuroticism: Excessive Worry (e.g., "I am often concerned, even nervous, about things going wrong" and "I am a worrier"). Three subscales assess OCPD facets of low Openness to Experience: Constricted (e.g., "I am a thinker, not a feeler" and "Strong emotions are not that important in my life"), Inflexibility (e.g., "I like to keep to the 'tried and true' rather than try new things" and "I much prefer predictability than exploring the unknown"), and

Dogmatism (e.g., "It troubles me how society is losing its strong moral core" and "I live my life by a set of tough, unyielding moral principles").

Validity Scale. In the current study, a five-item validity scale was used. Each item describes a behavior that was very unlikely to be true (e.g., "I am currently in the Guinness Book of World Records" and, reverse coded, "I have used a computer in the past 2 years"), thus an endorsement suggested the individual was not attending to the item's content. The items were rated on a five-point Likert scale whose values ranged from *strongly disagree* to *strongly agree*.

Conscientiousness-Related Scales.

NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992). The NEO PI-R is a 240-item self-report inventory designed to assess normal personality domains according to the FFM, including conscientiousness. It uses a 5-point Likert scale (ranging from *strongly disagree* to *strongly agree*). Alpha coefficients ranged from .47 (activity) to .87 (warmth) for the facets.

Experimentally Manipulated NEO PI-R (EXP-NEO; Haigler & Widiger, 2001). The EXP-NEO is an experimental version of the NEO PI-R in which items were altered to refer to extreme and/or maladaptive variants of the existing content. For example, the item "I am known for my prudence and common sense" was altered to "I have been told that I may at times display an excessive prudence and rigid common sense" and the item "I tend to be somewhat fastidious or exacting" became "I tend to be overly fastidious or exacting"). The EXP-NEO uses the same 5-point Likert scale as the NEO PI-R and the EXP-NEO Conscientiousness facet scales have evinced large, significant correlations with NEO PI-R Conscientiousness facet scales (Haigler & Widiger, 2001; Samuel & Widiger, 2011). Only the 48 conscientiousness items from the EXP-NEO were included in the present study. Cronbach's alpha for this domain was .90.

HEXACO Personality Inventory – Revised (HEXACO PI-R; Ashton & Lee, 2008). The HEXACO-PI-R is a 200-item self-report inventory designed to assess six domains of normal personality

functioning (Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness, and Openness to Experience). The broad domains are further subdivided into four facets, each of which is assessed using an 8-item subscale. The HEXACO PI-R uses a 5-point Likert scale (ranging from *strongly disagree* to *strongly agree*). Only the 32 items from the HEXACO-PI Conscientiousness scale were included in the present study. Alpha value for this domain was .91.

Obsessive-Compulsive Personality Disorder and OCPD Component Scales.

Dimensional Assessment of Personality Pathology-Basic Questionnaire (DAPP-BQ; Livesley & Jackson, 2009). The DAPP-BQ is a 290-item self-report inventory consisting of 18 scales designed to measure aspects of personality pathology (e.g., compulsivity and affective instability). Responses are given using a 5-point Likert-type scale ranging from *strongly disagree* to *strongly agree*. The present study included only the 16-item DAPP Compulsivity scale, which consists of items such as "I do jobs thoroughly even if no one will ever see them." The alpha value for the compulsivity scale was .94.

Millon Clinical Multiaxial Inventory-III (MCMI-III; Millon, 1994). The MCMI-III is a 175-item true-false self-report inventory designed to assess *DSM-IV-TR* (APA, 2000) PDs. The present study included only the 17 MCMI-III items pertaining to OCPD, as well as the seven Grossman facet items for OCPD. The alpha for the MCMI-III scale was .77.

Personality Diagnostic Questionnaire-4 (PDQ-4; Bagby & Farvolden, 2004). The PDQ-4 is a 99-item true-false self-report inventory intended to measure the 10 *DSM-IV-TR* (APA, 2000) PDs. The present study included only the eight items pertaining to OCPD. The alpha for the PDQ-4 OCPD scale was .54.

Schedule for Nonadaptive and Adaptive Personality -2 (SNAP-2; Clark et al., in press). The SNAP-2 is a 390-item factor analytically derived true-false, self-report inventory designed to measure both normal and abnormal personality functioning through dimensional scales. It includes 12 scales to measure maladaptive personality traits (e.g., manipulativeness), three scales to assess broad personality

temperaments (e.g., disinhibition), six validity scales, and diagnostic scales for *DSM-IV TR* (APA, 2000) PDs. The present study included only the 25 items pertaining to OCPD and the 35 items forming the Constraint trait scale. Although mostly independent, five items are scored for both of these scales, for a total of 55 unique items. The alphas were .79 and .87 for the OCPD and Constraint scales, respectively.

Wisconsin Personality Disorder Inventory (WISPI-IV; Klein et al., 1993). The WISPI-IV is a 204-item questionnaire designed to measure the *DSM-IV* PDs. Using a ten-point Likert scale (ranging from *not at all; never applies to me* to *extremely; always applies to me*) participants rate how often statements have applied to them in the past five years. The present study included only the 20 WISPI-IV items pertaining to OCPD. The alpha for the WISPI-IV was .93.

Results

FFOCI Item Selection

Using one half of the data set, the final item selections were made using a criterion-keying approach (Clark & Watson, 1995). Each potential FFOCI item was correlated with the OCPD scales, their respective NEO PI-R facet scales and, for FFOCI conscientiousness items, their respective facet scale of the EXP-NEO and the full HEXACO PI-R Conscientiousness scale. We selected items for each subscale that obtained the maximal correlations with these criterion measures. For example, the item “I like my work to be flawless and unblemished” was retained for the Perfectionism subscale (C1) as it evinced correlations with the nine criteria ranging from .18 (PDQ-4 OCPD) to .46 (HEXACO PI-R Perfectionism), with a median value of .31. Similarly, the item “People consider me a rather serious and reserved person” was retained for the Detached Coldness subscale (low E1) as it correlated significantly with the five relevant criteria including -.35 with NEO PI-R warmth and .39 with the WISPI-IV OCPD scale.

There was not a strict cutoff in terms of the magnitude of the relationships with the criteria as they

varied across the FFOCI subscales (e.g., not all measures of OCPD would be expected to include all 12 of the FFM components of OCPD). At times an item selection could be somewhat arbitrary, as multiple items would be expected to obtain comparably strong results. We also examined all candidate items to avoid explicitly redundant items. Finally, we aimed for approximately 30% of the items on the final scales to be reverse-scored, but this was not always possible. Indeed, reverse-scored items tended, on average, to function less effectively (Rodebaugh, Woods, & Heimberg, 2007) and nine of the twelve FFOCI scales include only two reverse-scored items, while the other scales had three.

Descriptive Properties of the FFOCI scales

The properties of each FFOCI scale are presented in Table 1. Cronbach's alpha values ranged from .77 to .87. The average corrected item-total correlations, which index the relationship between each individual item and all others in a given scale, ranged from .45 to .60. The minimum, maximum, and mean inter-item correlations for the items in each scale are also presented in Table 1. The means ranged from .28 to .42 and no inter-item correlations were above .80.

Table 2 presents the intercorrelations among the FFOCI scales. All but five of these correlations were significant at $p > .01$, with a majority of the effect sizes greater than $r = .40$. Not surprisingly, correlations were higher among scales within the same FFM domain (e.g., the correlation among the FFOCI conscientiousness scales ranged from .59 to .74, with a median of .67). However, there were also exceptions. For example, the Constricted (O3) scale related rather weakly with most other FFOCI scales (a correlation of .61 with Detached Coldness was the exception).

Convergence of FFOCI Scales with Related Personality Traits

Convergent validity, reported in Table 3, was examined by correlating each of the 12 FFOCI subscales with their corresponding NEO PI-R facets (e.g., FFOCI Perfectionism correlated with NEO PI-R Competence). Significant convergent validity correlations were obtained for all 12 FFOCI subscales with their respective NEO PI-R facet scales. In fact, all of these correlations are considered

large (i.e., $r > .50$) according to Cohen (1992), except for FFOCI Perfectionism, which obtained a correlation of .45. Some of these values are negative because the FFOCI scale is keyed in the opposite direction as the NEO PI-R facet. For example, FFOCI Detached Coldness correlated -.74 with the NEO PI-R facet of Warmth.

The FFOCI Conscientiousness scales were also correlated with their corresponding EXP-NEO Conscientiousness facets, as well as with HEXACO PI-R Conscientiousness and SNAP-2 Constraint scales. These convergent validity correlations were again significant in all instances as the FFOCI scales related strongly with the respective EXP-NEO facets (ranging from .52 for Perfectionism to .76 for Fastidiousness), HEXACO PI-R Conscientiousness (ranging from .66 for Perfectionism and Punctiliousness to .75 for Fastidiousness), and SNAP-2 Constraint (.41 for Perfectionism to .60 for Ruminative Deliberation).

Discriminant validity was investigated by analyzing the relationships between each of the 12 FFOCI subscales and all other, non-corresponding, NEO PI-R facet scales. The second row of Table 3 provides the mean of the discriminant correlations between the FFOCI subscale and the NEO PI-R facet scales within the same domain. The third row provides the mean correlation of the FFOCI subscale with the 24 NEO PI-R facet scales outside the domain. Consistent with expectations, the within-domain discriminant correlations were substantial, whereas those outside the domain were small. For example, the FFOCI Workaholism subscale obtained an average correlation of .51 with the five non-corresponding facets within the Conscientiousness domain and -.05 with the 24 facets from all other domains. Although the within-domain discriminant correlation was large, it was still typically lower than the convergent correlation between this FFOCI subscale and its parent NEO PI-R facet (i.e., $r = .69$). This pattern held for all but two of the FFOCI scales; the two exceptions being FFOCI Perfectionism and Punctiliousness, both from conscientiousness.

Convergent Validity of FFOCI with Measures of OCPD and its Components

Table 4 reports the correlations between the FFOCI total score and four measures of OCPD as well as the DAPP-BQ Compulsivity scale. The convergent correlations for the FFOCI were all significant and large, ranging from.50 (PDQ-4) to .71 (WISPI-IV). In fact, the relevant scores from the WISPI-IV, SNAP-2, MCMI-III, and DAPP-BQ correlated as highly, or higher, with the FFOCI as they did with any of the other measures of OCPD. This suggests that that the FFOCI captures the construct encoded in existing OCPD measures and can be considered a common ground among OCPD measures, which often have displayed problematic levels of convergence (Widiger & Boyd, 2009).

Next we correlated each of the individual 12 FFOCI subscales with these same five measures. The results in Table 5 indicate that the individual FFOCI subscales, like the combined FFOCI score, each converged significantly with the established OCPD measures. Nonetheless, the magnitude of these relationships varied across the FFOCI subscales. For example, FFOCI Perfectionism manifested correlations that ranged from .43 (MCMI-III) to .64 (SNAP-2), yet FFOCI Constricted evinced correlations ranging from .07 (MCMI-III) to .23 (SNAP-2). Overall, ten of the twelve subscales evinced significant correlations with all five of the OCPD scales.

Incremental Validity of the FFOCI

The incremental validity of the FFOCI subscales was examined by testing whether each scale could account for OCPD variance over and above that provided by its respective NEO PI-R facet scale. For these analyses we employed a composite of the four DSM-IV-TR OCPD scales as the criterion. After we standardized scores from the WISPI-IV, SNAP-2, PDQ-4, and MCMI-III to place them on the same metric, we then averaged across these measures to produce the criterion. We entered the NEO PI-R facet score in the first step of a hierarchical linear regression. These values are presented in the first columns of Table 6. All but one of the NEO PI-R facets (i.e., openness to feelings) predicted a significant portion of the variance in the criterion measure. We next added the relevant FFOCI subscale in a second step to determine the increment of prediction it offered. As can be seen in Table 6, 11

FFOCI subscales accounted for a notable portion of the variance in the criterion, with $R^2\Delta$ values ranging from .12 (Excessive Worry) to .39 (Perfectionism). Nonetheless, the magnitude was quite small for FFOCI Constricted ($R^2\Delta = .03$) suggesting it was not much better than the NEO PI-R facet of openness to feelings for assessing OCPD.

Finally, the incremental validity of the FFOCI total score was examined to test whether it would account for variance beyond established measures of OCPD. In order to avoid criterion overlap, separate criteria were computed for each of four comparisons by averaging the standardized scores from the other OCPD measures. For example, the criterion for the FFOCI comparison with the SNAP-2 was the mean of the standardized scores from the MCMI-III, WISPI-IV, and PDQ-4. Using these criteria, the selected OCPD scale (e.g., SNAP-2) was entered in the first step of a hierarchical linear regression with the FFOCI total score entered in the second step. Not surprisingly, the results in Table 7 indicate that each of the established OCPD measures accounted for significant portions of the variance in the composite of the remaining measures (although the value for the MCMI-III was quite small at .05). Most importantly, the FFOCI accounted for a significant increment over each of the OCPD measures with $R^2\Delta$ values ranging from .18 (beyond the WISPI-IV) to .52 (beyond the MCMI-III). In each case, the total R^2 was substantial and accounted for more than 50% of the variance in the criteria.

Discussion

The purpose of the present study was to examine the convergent, discriminant, and incremental validity of the FFOCI and the results yielded promising support for its validity. For instance, each of the twelve subscales displayed strong internal consistency, indicating they are homogenous in content. Additionally, the FFOCI subscales correlated significantly with the corresponding facet scales from the NEO PI-R, as well as with selected scales from other personality inventories. Importantly, these convergent correlations were, for the most part, large in size, demonstrating that the FFOCI subscales

remain true to the FFM traits from which they were derived, despite their emphasis on aspects and levels of the traits that are relevant to OCPD. In this regard, we suggest the FFOCI provides a "bridge" between the general personality traits assessed by the NEO PI-R and the maladaptive traits encoded within existing OCPD scales.

The relationship between FFM conscientiousness and OCPD has not always been substantial. The first version of the DSM-5 dimensional trait model proposal included a domain of compulsivity that Clark and Krueger (2010) and Krueger et al. (2011) suggested was distinct from FFM conscientiousness, citing the meta-analysis of Saulsman and Page (2004). Saulsman and Page did report correlations that were significant, but small. Nevertheless, a subsequent meta-analysis by Samuel and Widiger (2008) indicated that the failure to confirm the hypothesis may have reflected limitations of some existing measures of conscientiousness, not limitations within the conscientiousness construct itself. Samuel and Widiger (2011) indicated strong support when FFM conscientiousness was correlated with particular components of OCPD, such as Compulsivity as assessed by the DAPP-BQ; Livesley & Jackson, 2009), and Workaholism and Propriety assessed by the SNAP (Clark et al., in press). Support for the relationship of FFM conscientiousness and OCPD is also provided in the meta-analytic study of O'Connor (2005), as well as the factor analyses of Clark, Livelsey, and Schroeder (1996), Markon, Krueger, and Watson (2005), Shroeder, Wormworth, and Livesley (1992), and Watson, Clark, and Chmielewski (2008). In the current study, the FFOCI scales assessing maladaptive variants of FFM conscientiousness (i.e. Perfectionism, Fastidiousness, Punctiliousness, Workaholism, Doggedness, and Ruminative Deliberation) all correlated highly with DAPP-BQ Compulsivity, as well as with FFM conscientiousness as assessed by the NEO PI-R, the experimentally altered version of the NEO PI-R, SNAP-2 Constraint (Clark et al., in press), and with HEXACO-PI Conscientiousness (Ashton & Lee, 2008).

In addition to the convergent validity, each of the FFOCI subscales manifested significant

incremental validity over its corresponding facet scale from the NEO PI-R in accounting for variance in a sum of four measures of OCPD. This particular finding is not surprising as the FFOCI subscales were constructed to provide assessments of maladaptive variants of their respective NEO PI-R facets. In addition, this is consistent with prior studies that have reported incremental validity of measures of maladaptive personality functioning relative to the NEO PI-R's assessment of general personality functioning. For example, Reynolds and Clark (2001) reported that the maladaptive personality trait scales from the SNAP-2 (e.g., Workaholism and Propriety) obtain incremental validity over the scales from the NEO PI-R in accounting for PD symptomatology. As indicated by Reynolds and Clark, however, these findings do not necessarily suggest that the FFM, per se, lacks adequate coverage of the PD symptomatology. Instead, they merely suggest that the NEO PI-R lacks adequate coverage, which is to be expected given that it was designed to provide an assessment of the normal variants of personality functioning. They in fact suggested the development of new measures of the FFM that would provide better fidelity for the assessment of the maladaptive traits.

The total score on the FFOCI (i.e., the sum of all 12 FFOCI subscales) also correlated highly with and obtained incremental validity over each of the OCPD scales by accounting for additional variance in a composite of three other measures of OCPD. These findings indicate that the effort to develop a measure of obsessive-compulsive personality traits has, indeed, proven fruitful. Although each subscale is brief, the FFOCI has a large number of subscales. In this regard, the FFOCI has a particular advantage over existing OCPD scales in that it provides separate, homogenous subscales with which to assess each of the specific components of OCPD. This is similar to the approach taken by the SNAP-2 (Clark et al., in press), which includes two subscales to assess components of OCPD (i.e., Workaholism and Propriety). OCPD is a heterogeneous construct (Ansell et al., 2010) and without separate subscales it will not always be clear why or how OCPD relates to external validators (Smith & Combs, 2010). The FFOCI enables the disambiguation of the OCPD construct and allows researchers and clinicians to

assess specific traits of fastidiousness, workaholism, excessive worry, and/or Risk Aversion rather than a global match to a monolithic yet heterogeneous construct. Finally, another potential advantage of the FFOCI is its conceptual and empirical alignment with a broader dimensional model of general personality structure, providing thereby a connection with a considerable body of construct validity research (Widiger & Trull, 2007).

Areas for Future Study

The FFOCI Perfectionism subscale correlated less strongly with its corresponding NEO PI-R and EXP-NEO facet, Competence, than did other FFOCI conscientiousness subscales with their respective facets. Nevertheless, Perfectionism did correlate well with HEXACO PI-R Conscientiousness, suggesting that the lower convergent validity of Perfectionism with NEO and EXP-NEO Competence may reflect a limitation of the NEO PI-R itself, rather than of the FFOCI Perfectionism scale. It is possible that the NEO PI-R does not express the idea of "competence" in a manner that can easily be construed as perfectionism when taken to its maladaptive extreme. In fact, NEO PI-R Competence appears to center on the idea of successfully "getting things done" and, as a result, tends to assess an individual's *perceived ability* to get things done rather than his or her general concern with or orientation towards being competent and getting things done well. It may be that it is not competence itself, but rather the desire for competence that may become warped to create something as maladaptive as perfectionism. Similar distinctions have been made between the assessment of adaptive and maladaptive perfectionism (Bieling, Israeli, & Antony, 2004; Flett & Hewitt, 2006; Page, Bruch, & Haase, 2008). It will be of interest in future research to explore the relative relationship of the NEO PI-R Conscientiousness facet scales (such as Competence) and FFOCI obsessive-compulsive personality trait scales with measures of adaptive and maladaptive perfectionism, as well as additional measures of OCPD traits, such as the Pathological Obsessive-Compulsive Personality Scale (Pinto, 2011), that also aims to deconstruct OCPD into its components.

The FFOCI scales also varied in the extent of their correlation with measures of DSM-IV-TR OCPD, likely reflecting that some FFM traits are more central to the historical construct and conceptualization of OCPD than others (Samuel & Widiger, 2010). A scale that obtained somewhat weak findings in this regard was the FFOCI Constricted subscale that assessed a maladaptive, extreme variant of low Openness to Feelings. Although the Constricted subscale correlated strongly with the NEO PI-R facet (r = -.78), its relationships with OCPD scales, including other scales from the FFOCI, were mostly small and even non-significant in some cases. In addition, although the Constricted scale did obtain a significant increment over the NEO PI-R facet for predicting the OCPD composite, this effect size was also quite small. Taken together, it would appear that a trait defined by being closed to one's own feelings, whether assessed by the NEO PI-R or the FFOCI, is only moderately related to existing measures of OCPD or its components. This, of course, does not necessarily suggest that such a scale is not useful, but does indicate it is somewhat distinct from other aspects of the OCPD construct and is not encoded within existing OCPD instruments. This particular FFM facet was nominated as prototypic by the experts surveyed in Lynam and Widiger (2001) but only marginally identified as such by the clinicians in Samuel and Widiger (2004). It will be useful for future research to determine whether low openness to feelings is indeed a useful and/or valid component of a measure of obsessive-compulsive personality traits.

More generally, the FFOCI assesses 12 trait components of OCPD. It is possible that only a small subset of this list is really needed to provide a useful or valid assessment. For example, in the more recent proposal for DSM-5, the diagnosis of OCPD includes only two traits: rigid perfectionism and perseveration (APA, 2011). It will be of interest for future research to determine whether such additional traits as workaholism, ruminative deliberation, constricted, detached coldness, dogmatism, and/or risk aversion assessed by the FFOCI are really necessary for a valid assessment.

Finally, it might be informative in future research to utilize item-response theory analyses to

investigate the properties of the FFOCI items and/or scales. As the FFOCI scales are designed to assess extreme and/or maladaptive variants of FFM traits (particularly as assessed by the NEO PI-R) one might predict that FFOCI scales will have better fidelity for the extreme range of traits whereas the respective NEO PI-R facet scales will have better fidelity for the lower range, as indicated in previous FFM IRT studies by Samuel, Simms, Clark, Livesley, and Widiger (2010) and Stepp et al (in press). However, in some cases a respective FFOCI subscale is perhaps best understood as assessing an OCPD maladaptive variant of an FFM trait rather than a more extreme variant. For example, NEO PI-R low Warmth is a scale that is also assessing a maladaptive trait of introversion (Haigler & Widiger, 2001). FFOCI Detached Coldness might not be assessing a more extreme variant of low warmth, but simply an OCPD variant of low warmth.

Limitations

One potential limitation of the current study was the use of online data collection. The latter does not provide as much control over the validity of questionnaire completion as would be provided by a group administration in a classroom setting or other uniform environment. This concern can be further exacerbated by the number of items that the participants were asked to complete. However, several factors offset these concerns. First, the participants were free to use as much time as needed to complete the questionnaires. Second, an exclusion threshold was used to ensure that invalid protocols were deleted. In addition, the findings were largely consistent with theoretical expectations, suggesting that the results were not substantially negatively affected by random, careless responding. Indeed, a number of recent studies attest to reliability and validity of data that are collected online (e.g., Wilt, Condon, & Revelle, in press; Witt, Donnellan, & Orlando, 2011).

An additional potential limitation was that the data were collected within a student population. It will be important to replicate the current findings within a clinical sample in which a number of persons with OCPD are known to be present. Anticipating this concern, the authors of the current study

ensured that the PDQ-4 OCPD scale was administered to over 1,000 potential participants; inviting 100 of them with the very highest scores to participate in the study was intended to provide the student sample with a sufficient range of OCPD symptomatology. The mean scores on measures of OCPD included within the current study were comparable to mean scores obtained within clinical samples.

Finally, it is important to note that the validity evidence presented here is confined to other self-report questionnaires. It will be important for future studies to go beyond this methodology and compare the FFOCI against semi-structured interviews and informant reports of OCPD to determine how well these scales predict specific problematic behaviors and important clinical outcomes, such as psychosocial functioning. For example, one area of fruitful research might be the distinction between adaptive and maladaptive career, work, and/or academic performance. Competence and achievement-striving are unambiguously related to successful work, but traits such as perfectionism and workaholism can be both advantageous and problematic (Bieling et al., 2004; Flett & Hewitt, 2006).

Conclusions

The FFOCI obtained strong convergent validity with existing measures of normal personality, suggesting that the subscales provide robust assessments of the same FFM personality traits. However, the FFOCI also correlates highly with, yet provide incremental validity over, established measures of OCPD pathology. Taken together, these findings support the understanding of OCPD as a constellation of maladaptive traits that are variants of general personality structure and suggest the FFOCI provides a promising tool for assessing of these traits in clinical and research settings.

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Table 1

Properties of FFOCI Scales from Validation Sample

				Avg.	Inter-item Correlations		
	m	*sd*	α	CITC	mean	min	max
Perfectionism (C1)	32.6	6.0	.84	.54	.35	.09	.68
Fastidiousness (C2)	31.4	6.8	.87	.60	.38	.19	.77
Punctiliousness (C3)	31.2	5.7	.80	.47	.28	.09	.58
Workaholism (C4)	29.8	6.2	.82	.52	.29	-.01	.65
Doggedness (C5)	31.6	6.2	.86	.57	.35	.03	.56
Ruminative Deliberation (C6)	31.1	6.6	.86	.56	.37	.07	.61
Detached Coldness (E1)	24.8	6.5	.84	.54	.31	.08	.73
Risk Aversion (E5)	26.9	6.8	.87	.58	.41	.17	.65
Excessive Worry (N1)	35.0	7.4	.87	.60	.42	.14	.72
Constricted (O3)	25.4	6.5	.85	.55	.37	.03	.66
Inflexibility (O4)	26.1	5.7	.77	.45	.25	.02	.52
Dogmatism (O6)	25.2	6.1	.83	.51	.32	.04	.64

Notes: FFOCI = Five-Factor Obsessive Compulsive Inventory; Avg. CITC = Averaged Corrected Item-total correlations. n = 203

Table 2
Intercorrelations Among the Final FFOCI scales in the Validation Sample (n = 203)

	C1	C2	C3	C4	C5	C6	E1	E5	O3	O4	O6
Perfectionism (C1)											
Fastidiousness (C2)	.73**										
Punctiliousness (C3)	.62**	.69**									
Workaholism (C4)	.72**	.63**	.70**								
Doggedness (C5)	.62**	.59**	.67**	.74**							
Ruminative Deliberation (C6)	.60**	.68**	.64**	.67**	.64**						
Detached Coldness (E1)	.23**	.35**	.36**	.36**	.34**	.42**					
Risk Aversion (E5)	.38**	.51**	.54**	.47**	.46**	.68**	.48**				
Constricted (O3)	.10	.13	.14*	.21**	.22**	.20**	.61**	.21**			
Inflexibility (O4)	.44**	.55**	.57**	.56**	.50**	.57**	.59**	.66**	.32**		
Dogmatism (O6)	.41**	.45**	.65**	.44**	.48**	.47**	.41**	.50**	.31**	.51**	
Excessive Worry (N1)	.32**	.35**	.29**	.31**	.15*	.40**	.19**	.32**	-.09	.41**	.20**

Notes: FFOCI = Five Factor Obsessive Compulsive Inventory.
** = $p < .01$ (2-tailed), * = $p < .05$ (2-tailed)

Table 3

Convergent and discriminant validity of the FFOCI subscales with measures of general personality.

	FFOCI Subscales											
Other Measures	(C1)	(C2)	(C3)	(C4)	(C5)	(C6)	(E1)	(E5)	(N1)	(O3)	(O4)	(O6)
NEO facet[a]	.45**	.74**	.51**	.69**	.77**	.76**	-.74**	-.68**	.82**	-.78**	-.53**	-.62**
Disc Same[b]	.49	.46	.49	.51	.59	.45	-.46	-.36	.49	-.26	-.22	-.31
Disc Other[c]	-.01	-.04	-.06	-.05	.11	-.08	-.07	.06	-.06	-.15	.01	.01
Exp C[d]	.52**	.76**	.55**	.69**	.72**	.70**						
HEX C[e]	.66**	.75**	.66**	.69**	.72**	.69**						
SNAP-C[f]	.41**	.50**	.55**	.56**	.51**	.60**						

Note. n = 203. FFOCI=Five-Factor Obsessive-Compulsive Inventory; FFOCI subscales are denoted as follows: C1: Perfectionism, C2: Fastidiousness, C3: Punctiliousness, C4: Workaholism, C5: Doggedness, C6: Ruminative Deliberation, E1: Detached Coldness, E5: Risk Aversion, N1: Excessive Worry, O3: Constricted, O4: Inflexibility, O6: Dogmatism.
[a]Corresponding NEO Personality Inventory-Revised (NEO PI-R; Costa & McCrae, 1992) facet for each FFOCI subscale; [b]Discriminant validity between the FFOCI and the average correlation of non-corresponding NEO PI-R facets within the same domain; [c]Discriminant validity between the FFOCI and the average correlation of non-corresponding NEO PI-R facets outside of each subscale's domain; [d]Corresponding Experimental NEO PI-R (Haigler & Widiger, 2001) Conscientiousness facet; [e]Total HEXACO PI-R Conscientiousness scale (Ashton & Lee, 2008); [f]SNAP-2 = Schedule for Nonadaptive and Adaptive Personality, Constraint scale (Clark et al., in press).
*p < .05, **p < .01

Table 4

Convergence of FFOCI and OCPD Scales

	MCMI-III	PDQ-4	SNAP-2	WISPI-IV	DAPP-BQ
FFOCI	.58**	.50**	.66**	.71**	.66**
MCMI-III		.00	.27**	.30**	.53**
PDQ-4			.67**	.61**	.38**
SNAP-2				.63**	.58**
WISPI-IV					.60**

Notes. n = 203. FFOCI = Five Factor Obsessive Compulsive Inventory; OCPD = Obsessive Compulsive Personality Disorder; MCMI-III = Millon Clinical Multiaxial Inventory - III (Millon, 1994); PDQ-4 = Personality Diagnostic Questionnaire (Bagby & Farvolden, 2004); SNAP-2 = Schedule for Nonadaptive and Adaptive Personality (Clark et al., in press); WISPI-IV = Wisconsin Personality Inventory (Klein et al., 1993); DAPP-BQ (Livesley & Jackson, 2009).

*$p < .05$, **$p < .01$

Table 5
Convergent Validity of FFOCI Subscales with OCPD and Related Measures

	FFOCI Subscales											
Other Measures	C1	C2	C3	C4	C5	C6	E1	E5	N1	O3	O4	O6
MCMI-III	.43**	.50**	.53**	.52**	.62**	.60**	.26**	.59**	.09	.07	.35**	.36**
PDQ-4	.48**	.44**	.38**	.39**	.22**	.35**	.26**	.23**	.48**	.14*	.39**	.40**
SNAP-2	.64**	.56**	.52**	.54**	.49**	.49**	.33**	.41**	.41**	.23**	.51**	.47**
WISPI-IV	.62**	.63**	.58**	.59**	.49**	.60**	.33**	.46**	.42**	.14*	.57**	.53**
DAPP-BQ	.70**	.77**	.59**	.61**	.60**	.60**	.21**	.43**	.29**	.02	.38**	.41**

Note. n = 203. FFOCI=Five-Factor Obsessive-Compulsive Inventory; FFOCI subscales are denoted as follows: C1: Perfectionism, C2: Fastidiousness, C3: Punctiliousness, C4: Workaholism, C5: Doggedness, C6: Ruminative Deliberation, E1: Detached Coldness, E5: Risk Aversion, N1: Excessive Worry, O3: Constricted, O4: Inflexibility, O6: Dogmatism. MCMI=Millon Clinical Multiaxial Inventory III (Millon, 1994); PDQ-4 = Personality Diagnostic Questionnaire (Bagby & Farvolden, 2004); SNAP-2 = Schedule for Nonadaptive and Adaptive Personality-2 (Clark et al., in press); WISPI-IV=Wisconsin Personality Inventory (Klein et al., 1993); DAPP-BQ = Dimensional Assessment of Personality Pathology-Basic Questionnaire Compulsivity scale (Livesley and Jackson, 2009).
*p < .05, **p < .01.

Table 6

Incremental Validity of FFOCI Subscales over NEO PI-R Facets for Predicting OCPD Composite

	Step 1		Step 2		
	NEO PI-R β	R^2	NEO PI-R β	FFOCI β	R^2 Δ
C1	.37**	.14**	.06	.70**	.39**
C2	.51**	.26**	-.04	.74**	.25**
C3	.41**	.17**	.10	.62**	.29**
C4	.55**	.30**	.14*	.58**	.18**
C5	.38**	.15**	-.22*	.78**	.24**
C6	.58**	.34**	.15	.57**	.14**
E1	-.20**	.04**	.20*	.54**	.13**
E5	-.36**	.13**	.05	.60**	.19**
N1	.33**	.11**	-.16	.59**	.12**
O3	-.10	.01	.12	.29*	.03*
O4	-.44**	.19**	-.16*	.52**	.20**
O6	-.38**	.15**	-.03	.56**	.20**

Note. n = 203. FFOCI = Five-Factor Obsessive-Compulsive Inventory; OCPD Composite = The mean standardized scores of the OCPD scales from the Millon Clinical Multiaxial Inventory - III (Millon, 1994), Schedule for Nonadaptive and Adaptive Personality (Clark et al, in press), Wisconsin Personality Inventory (Klein et al., 1993), and Personality Diagnostic Questionnaire (Bagby & Farvolden, 2004). FFOCI subscales are denoted as follows: C1: Perfectionism, C2: Fastidiousness, C3: Punctiliousness, C4: Workaholism, C5: Doggedness, C6: Ruminative Deliberation, E1: Detached Coldness, E5: Risk Aversion, N1: Excessive Worry, O3: Constricted, O4: Inflexibility, O6: Dogmatism.

* $p < .05$, ** $p < .01$.

Table 7

Incremental validity of FFOCI Over Established OCPD Scales

	SNAP-2		MCMI-III		PDQ-4		WISPI-IV	
	β	$R^2\Delta$	β	$R^2\Delta$	β	$R^2\Delta$	β	$R^2\Delta$
Step 1		.51**		.05**		.30**		.49**
OCPD[a]	.71**		.22**		.55**		.70**	
Step 2		.21**		.52**		.43**		.18**
OCPD[a]	.31**		-.30**		.18**		.28**	
FFOCI[b]	.61**		.89**		.75**		.59**	
Total R^2		.71**		.57**		.73**		.66**

Note. Values down each column indicate the comparison of the FFOCI with the scale listed on the column header. Criterion measure for each analysis was the mean of the standardized scores from the remaining OCPD scales. FFOCI = Five-Factor Obsessive-Compulsive Inventory; MCMI=Millon Clinical Multiaxial Inventory - III (Millon, 1994); SNAP-2 = Schedule for Nonadaptive and Adaptive Personality (Clark et al, in press); WISPI-IV = Wisconsin Personality Inventory (Klein et al., 1993); PDQ-4 = Personality Diagnostic Questionnaire (Bagby & Farvolden, 2004). [a] Total score of the individual OCPD scale listed at the top each column; [b]FFOCI total score.

* $p < .05$, ** $p < .01$.