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A REEXAMINATION OF THE OBSESSIVE COMPULSIVE PERSONALITY DISORDER QUESTIONNAIRE RELIABILITY AND VALIDITY IN A COLLEGE STUDENT SAMPLE

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A REEXAMINATION OF THE OBSESSIVE COMPULSIVE PERSONALITY DISORDER
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RACHEL MARTUKOVICH

ABSTRACT

The present research was designed to evaluate the reliability and validity of a new measure for Obsessive Compulsive Personality Disorder, namely the Obsessive Compulsive Personality Disorder Questionnaire (OCPDQ). One hundred and forty students at a Midwestern urban university were administered the OCPDQ as well as the Leyton Obsessional Inventory (LOI; Cooper, 1970) and the Padua Inventory-Washington State University Revision (PI-WSUR; Burns, Keortege, Formea, & Sternberger, 1996). The reliability and validity of the OCPDQ were analyzed and each of the eight subscales that corresponded to the eight criteria for OCPD were examined. The OCPDQ had a high level of reliability with a Cronbach’s alpha of .845. The OCPDQ scale was then reduced through item deletion from 143 items to 80 items with 10 items per subscale. The resulting Cronbach’s alpha for the 80 item revision of the OCPDQ was .820. A principal components factor analysis showed that there were three underlying dimensions in the revised version of the OCPDQ. The three factors which emerged were Factor I: “Perfectionism”, Factor II: “Inflexible Control”, and Factor III: “Disorganized Hoarding”. The revised OCPDQ was found to have high internal consistency as well as construct validity.
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CHAPTER I
INTRODUCTION

Obsessive-Compulsive Personality Disorder (OCPD) is one of the most enduring of the personality disorders and has been included in some form in every version of the Diagnostic and Statistical Manual of Mental Disorders since it was first published in 1952. The purpose of the present research is to assess the reliability and validity of a new scale for OCPD. The current DSM-IV-TR criteria for an OCPD diagnosis require that at least four of the following are present for an individual, “1. A preoccupation with details, rules, lists, order, organization, or schedules to the extent that the major point of activity is lost, 2. Shows perfectionism that interferes with task completion, 3. Is excessively devoted to work and productivity to the exclusion of leisure activities and friendships, 4. Is overconscientious, scrupulous, and inflexible about matters of morality, ethics, or values, 5. Is unable to discard worn-out or worthless objects even when they have no sentimental value, 6. Is reluctant to delegate tasks or work to others unless they submit to exactly his or her way of doing things, 7. Adopts a miserly spending style toward both self and others; money is viewed as something to be hoarded for future catastrophes, 8. Shows rigidity and stubbornness”, (American Psychiatric Association, 2000). This
persistent pattern must be present across various contexts and must begin by early adulthood. In moderation, many of these traits might be considered to be adaptive in nature and these characteristics should only be considered to be criteria of the disorder if the individual is experiencing significant functional impairment and distress as a result. OCPD is classified as a Cluster C personality disorder in the DSM-IV-TR, along with Avoidant Personality Disorder and Dependent Personality Disorder and these disorders are characterized by anxiety and fear.

When assessing an individual for OCPD, there are two important caveats that must be addressed. One must first of all take into consideration the fact that many of the traits of OCPD are common to individuals in normal population and consequently, it is the severity, not the mere existence of these traits that must be assessed (Villemarette-Pittman, Stanford, Greve, Houston, & Mathias, 2004). More specifically, it must be noted whether the traits are causing severe impairment or distress for the individual. Secondly, the diagnostican must take precautions to avoid confusing the manifestation of OCPD symptoms with a diagnosis of OCD, (Villemarette-Pittman et al., 2004). Specifically assessing an individual for OCPD is a complicated task due to the lack of assessment methods designed for that particular purpose. Some assessment tools currently used for identifying OCPD traits do not properly distinguish the pathology from other disorders.

Several assessment techniques are currently utilized for the identifying OCPD symptomology, including semi-structured interviews, self-report measures, and projective measures. While many of these techniques offer useful information for the purpose of assessing OCPD, there are also a few drawbacks. Some of the structured interviews
employed for this purpose include the Structured Clinical Interview for DSM-III-R (SCID-II) and SCID-II revisions, the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV) the Structured Interview for DSM-IV Personality (SIDP-IV), the Personality Disorders Examination (PDE) and the Personality Disorder Interview-IV (PDI-IV). As reported by Zanarini et al. (2000), most of these assessments for Obsessive Compulsive Personality Disorder are highly reliable as evidenced by the interrater kappa values; DIPD (.92), PDE (.88), PDI (.67), and SIDP (.36), (Bartz, Kaplan, & Hollander, 2007). These structured interviews are useful in assessing various personality disorders in general but are not overly specific. Some self-report measures utilized for OCPD assessment are the Millon Clinical Multiaxial Inventory-III (MCMI-III), and the Personality Diagnostic Questionnaire-IV (PDQ-IV). Although the value of these self-report tests has been well established, neither of them is specifically tailored to OCPD, and the disorder may not be adequately represented amongst the other Axis I and Axis II disorders these tests assess. There are also self-report measures that identify OCPD features, such as the NEO Personality Inventory (NEO-PI-R), the Schedule for Nonadaptive and Adaptive Personality (SNAP), and the Multidimensional Personality Questionnaire (MPQ). These tests are useful but limited to evaluating personality features, as opposed to specific criteria. Projective measures that have been used for OCPD assessment include the Rorschach and the Thematic Apperception Test although the validity of these measures for this purpose is not well documented (Bartz et al., 2007).

There are multiple motivating factors for the development of new OCPD scales. Many of the current assessment tools do not thoroughly differentiate OCPD and OCD symptomology and there is much overlap between these two disorders. Scales that
specifically and systematically measure OCPD traits are rare. Another important issue to consider is that although there can be a range of varying combinations of OCPD criteria, the sum of these still result in the same final diagnosis. By developing more specific OCPD scales that assess the severity of different criteria, a more specific representation of the disorder can be attained for an individual. In some cases, there may be specific combinations of criteria that exist for individuals with OCPD that do not exist for others with the disorder. More insight could also be gained into how this personality disorder specifically manifests in different populations. The development of scales that are specific to OCPD could possibly lead to an identification of subtypes of this disorder. This would benefit individuals with OCPD in that they could receive a treatment plan that is more specifically tailored to a particular subtype of the disorder. The aims of the present research are to further develop a new scale for OCPD that is in the preliminary stages, as well as to further explore the subtypes within this personality disorder.

It is hypothesized that the OCPD Questionnaire will have high internal consistency regarding the items for each of the individual criteria, meaning that these items will be measuring the same constructs. Each of the eight OCPDQ criteria scores will be compared to both the Leyton Obsessional Inventory (LOI; Cooper, 1970) and the Padua Inventory-Washington State University Revision (PI-WSUR; Burns, Keortege, Formea, & Sternberger, 1996). Many of the OCPDQ criteria scores will likely correlate with the LOI. It is hypothesized that the OCPDQ criterion 1, “Preoccupation with details, rules, lists, order, organization, bodily functions, or schedules to the extent that the major point is lost” will highly correlate with the LOI due to the previous findings that the LOI “ordering and arranging” items were associated with OCPD (Wellen,
Samuels, Bienvenu, Grados, Cullen, Riddle, Liang, & Nestadt, 2007). It is also suspected that the second OCPDQ criterion, “Perfectionism”, as well as the eighth criterion, “Rrigidity and stubbornness”, will highly correlate with the LOI. Regarding the comparison between the OCPDQ and the PI-WSUR, it is suspected that these measures will correlate to some extent due to the “checking” behaviors that are assessed in the PI-WSUR. Compulsive checking has previously been shown in research to be linked to obsessive-compulsive personality traits (Gibbs & Oltmanns, 1995). A factor analysis will be performed and it is likely that certain criterion scores from the OCPDQ will load on different dimensions, which may be indicative of subtypes of OCPD.
CHAPTER II

REVIEW OF RELEVANT LITERATURE

2.1 Prevalence

Several different prevalence rates have been reported for OCPD. The DSM-IV-TR reports a 1% prevalence estimate in the community and a 3-10% rate in individuals in a mental health setting, (American Psychiatric Association, 2000). A study of a large community sample (n=43,093) based on DSM-IV criteria found OCPD to have one of the highest community based prevalence rates (7.88%) of all the personality disorders (Grant, Hasin, Stinson, Dawson, Choa, Ruan, & Pickering, 2004). Some have argued that this study may have yielded a higher than previously reported rate of OCPD due to the use of the NIAAA Alcohol Use Disorder and Associated Disabilities Interview Schedule-DSM-IV version for assessing OCPD (Eisen, Mancebo, Chiappone, Pinto, & Rasmussen, 2008). An additional community based study using the DSM-III-R criteria reported a more modest frequency of this disorder (2%) in a large sample (n=2,053), (Torgerson, Kringlen, & Cramer, 2001). The discrepancies in reported rates of OCPD are likely due to differences in the instruments used, including the use of different versions of the DSM. It should be noted that the DSM-III–R (American Psychiatric Association, 1987), included the OCPD criteria of (a) restricted expression of affect and (b) indecisiveness,
both of which are not included in the DSM-IV. The current utility of the eight criteria for OCPD found in the DSM-IV is the focus of investigation.

2.2 Theoretical Conceptualizations

Several theoretical conceptualizations exist as to the etiology of Obsessive-Compulsive Personality Disorder. Freud’s “anal retentive” characterization of the early 1900s was perhaps the earliest portrayal of an OCPD-type personality and he described such individuals as overconscientious, frugal, obstinate, obsessed with orderliness, and defiant (Bartz et al., 2007). Early Freudians held that this “anal character’ develops in early childhood due to conflicts between parents and offspring regarding toilet training in that the child strives to be independent and the parents pressure him or her to adhere to societal norms (Bartz et al., 2007). Another line of environmental explanation of etiology posits that children learn to be obsessive, inflexible, and over-controlling from caretakers who possess these qualities and interact with the children, (Carr, 1974).

The role of biological factors in the development of OCPD has also been considered. Cloninger, (1987) has found that the traits of high harm avoidance and low risk-taking typify OCPD and because harm avoidance is mediated by serotonin, a dysfunction in this neurotransmitter may be related to OCPD symptomology (Bartz et al., 2007). Along the same lines, Stein (1996), who also found a link between OCPD and low novelty seeking/heightened harm avoidance, hypothesized that a dysfunction in the serotonin system may influence the manifestation of OCPD (Villemarette-Pittman et al., 2004). The majority of current research on serotonergic dysfunction as it relates to compulsive symptomology has been with individuals diagnosed with OCD and further
exploration with OCPD patients is warranted. One study comparing individuals with OCPD (n=9), individuals with non-compulsive personality disorders (n=30), and controls (n=14) compared serotonergic functioning by examining prolactin response to fenfluramine, a drug that increases the level of the serotonin (Stein, Trestman, Mitropoulou, & Coccaro, 1996). This study found that individuals in the OCPD group had significantly lessened prolactin release as compared with the control group and group with non-compulsive personality disorders and that both impulsivity and compulsivity were related to serotonergic dysfunction (Stein et al., 1996). Further research in this area is needed for a more in depth exploration of possible biological components of OCPD.

Although the etiology of this disorder is still under debate, the course of OCPD has been the subject of several studies. The stability of functional impairment in OCPD has been researched and compared to that of other personality disorders. Over a two year study, individuals with OCPD showed no significant improvement in the psychosocial functioning in the areas of employment, relationships with parents, relationships with significant others, friendships, recreation, global adjustment, and Axis V GAFS, (Skodol, Pagana, Bender, Shea, Gunderson, Yen, Stout, Morey, Sanislow, Grilo, Zanarini, & McGlashan, 2004). This provides evidence of the enduring and all-encompassing nature of this personality disorder. Not only does OCPD affect several different areas of functioning but it also is prevalent in the community and mental health settings.

Some researchers have explored whether a multifactorial model of OCPD might offer a more precise representation of the latent dimensions within the disorder. Individuals diagnosed with Binge Eating Disorder were examined using the Diagnostic
Interview for DSM-IV Personality Disorder (DIPD-IV) and subsequent confirmatory factor analyses were run using the 8 DSM-IV OCPD criteria (Ansell, E., Pinto, A., Edelen, M. O., & Grilo, C. M., 2008). This study found that a multifactorial model provided a significant improvement in fit over the one-dimensional factor model of DSM-IV OCPD, with the data strongly supporting a two factor model, including a perfectionism factor and a rigidity factor (Ansell et. al., 2008). Standardized loadings for the Perfectionism factor were Perfectionism (0.81), Details (0.81), Workaholic (0.56), and Packrat (0.55), and loadings for the Rigidity factor were Reluctant to delegate (0.82), Morality (0.81), Rigid and stubborn (0.63), and Miserliness (0.46) thus representing themes of both intrapersonal and interpersonal control (Ansell et al., 2008).

Further research has investigated the utility of OCPD DSM-IV diagnostic criteria on a longitudinal basis. Although each of the eight DSM-IV criteria for OCPD do possess some degree of predictive efficiency, evidence has been found that three of the criteria, specifically “preoccupied with details”, “rigid and stubborn”, and “reluctant to delegate” emerged as being most predictive of an OCPD diagnosis at a 2-year follow-up interview (Grilo, Skodol, Gunderson, Sanislow, Stout, Shea, Morey, Zanarini, Bender, Yen, & McGlashan, 2004). Participants in this study (n=550) were originally assessed for OCPD traits using the DIPD-IV and were re-assessed after 24 months by an interviewer who was blind to their base rates of the OCPD traits. The results show that these specific criteria may be more predictive of OCPD in persistent cases that are more stable over time (Grilo et al., 2004). Further investigation has highlighted the role of perfectionism as a diagnostic criterion. Research on individuals with Panic Disorder with Agoraphobia (PDA) has found that the co-morbidity of a Cluster C personality disorder,
specifically Avoidant Personality Disorder or OCPD was the strongest indicator of high levels of perfectionism (Iketani, Kiriike, Stein, Nagao, Nagata, Minamikawa, Shidao, & Fukuhara, 2002). The traits presented in Panic Disorder share many commonalities with those of OCPD, including an aversion to uncontrollable future events, resistance to change, and setting exceedingly high standards for themselves and individuals with PDA should be assessed for OCPD in order to establish a more effective treatment plan (Iketane et al., 2002).

Some research has examined the differences in coping styles of individuals with Obsessive-Compulsive traits. In a study in which individuals with OCPD were tested on their coping style when dealing with situations of uncertainty, researchers found support for the hypothesis that these individuals possess a decreased degree of information avoidance (blunting), and a high level of information-seeking (monitoring), (Gallagher, South & Oltmanns, 2003). In this study, a group of individuals with Obsessive-Compulsive Personality traits were compared to a group of controls as well as a group of individuals characterized as possessing Avoidant Personality traits on both self-report and observational measures while they participated in an “ego-threatening” cognitive abilities task (Gallegher et al., 2003). The researchers also found that the participants’ self-reported levels of dispositional monitoring more highly correlated to their amount of OC symptoms ($r = 0.29$), than to Avoidant symptoms and this was significantly lower ($r = 0.12$, $z = 2.24$, $P < 0.05$), (Gallegher et al., 2003). Basically, the individuals with higher levels of OC traits were more likely to seek out information and monitor when faced with a somewhat threatening and uncertain event. This behavior further illustrates the chronic perfectionism and meticulous nature of individuals with OCPD.
In addition to striving for perfection, individuals with OCPD have been characterized in the literature as being overly cautious, and highly conscientious. Subsequently, research has explored a possible relationship between OCPD and risk-averse behaviors. In elderly individuals with OCPD and co-morbid depression (n=39) the Iowa Gambling Task (IGT) was administered to assess risk-taking and risk-averse behaviors (Chapman, Lynch, Rosenthal, Cheavens, Smoski, & Krishnan, 2007). As the researchers hypothesized, depressed older individuals with co-morbid OCPD were more risk-averse than controls as the trials went on and chose fewer cards from risky card decks, especially in the fourth block of the IGT (Chapman et al., 2007) The researchers reported a main effect for OCPD (β=-.40, p < .01) in the fourth block which was not mediated by the individual’s level of depression and thus, the level of OCPD ultimately drove these co-morbid individuals in their risk-averse behaviors (Chapman et al., 2007).

There has also been investigation as to how OCPD may relate to aggression in individuals. In patients who were clinically referred to an aggression clinic (n=89) for either impulsive aggression or premeditated aggression, OCPD was the second highest reported Axis II disorder, occurring in 23.9% of individuals who were diagnosed with an Axis II disorder (n=46) and trailing only behind Antisocial Personality Disorder (52%) in prevalence, (Villemarette-Pittman et al., 2004). This research also examined the presence of OCPD in individuals who were self-referred for impulsive aggression problems and found that over half of the individuals (15 out of 29) with an Axis II disorder were diagnosed with OCPD, (Villemarette-Pittman et al., 2004). The researchers suggest that individuals with highly impulsive aggressive tendencies may develop self regulatory
OCPD traits such as excessive attention to detail, a more structured lifestyle, and inflexible routines as a way to cope with their difficulties (Villemarette-Pittman et al., 2004). In a way, these individuals are overcompensating for their loss of control during aggressive states by over-controlling other aspects of their lives.

2.3 OCPD and Obsessive Compulsive Disorder

The connection between OCPD and Obsessive-Compulsive Disorder (OCD) has been the subject of significant dispute and the link between these two disorders has been widely investigated. Some argue that they should be considered as overlapping clinical syndromes whereas others believe they should be held as separate entities. These disorders do share several similar characteristics, including indecisiveness, checking behaviors, self-doubt, emotional over-regulation, and risk aversive behaviors. There are several overlapping traits between OCD and OCPD which may make it difficult to differentiate between the two disorders. Hoarding is categorized as a criterion in OCPD as well as a type of compulsion found in OCD. The act of list making is described as a manifestation of a preoccupation with details which is also a DSM-IV criterion for OCPD. If this same list making becomes compulsive in nature and begins to impair an individual’s functioning in daily living, it can be considered a criterion for OCD. The trait of perfectionism can also be tied to both disorders in that it is listed as criteria for OCPD and can be a symptom of OCD when it involves an obsessive need for arranging items or orderliness (Mancebo, Eisen, Grant, & Rasmussen, 2005). Indeed research has identified hoarding, perfectionism, and preoccupation with details as significantly (p<.006) more common in individuals diagnosed with OCD than in persons without an
OCD diagnosis (Eisen, Coles, Shea, Pagano, Stout, Yen, Grilo, & Rasmussen, 2006). These three criteria of OCPD demonstrate the existence of a link between these two disorders, which could be meaningful for treatment and diagnosis purposes. This link is comprised of certain symptoms which are common to both disorders in some form or another and this may account for the co-morbidity that has been reported between the two. However, each disorder is likely to have varying degrees of these traits and the two should not be considered to be equivalent. Perfectionism, specifically “Concern over Mistakes” and “Doubt about Actions” has been found to be more directly linked to OCPD than to OCD in individuals with eating disorders (n=607) when diagnosed with the six subscales of the Multidimensional Perfectionism Scale (Halmi, Tozzi, Thornton, Crow, Fichter, Kaplan, Keel, Klump, Lilenfeld, Mitchell, Plotnicov, Pollice, Rotondo, Strober, Woodside, Berrettini, Kaye, & Bulik, 2005).

There has also been research focusing on how certain subtypes of compulsive behavior relate to OCD vs. OCPD. Research has shown a relationship between OCPD traits and descriptions of individuals as being concerned with controlling situations, predicting future outcomes, and independence, (Pollack, 1987). Individuals with Obsessive-Compulsive Disorder also exhibit characteristics of these nature and one of the DSM-IV-TR criterion for this disorder includes repetitive behavior such as “checking”, which is often executed in order to prevent a future catastrophe (American Psychiatric Association, 2000). In both cases of individuals with OCD and with OCPD, the concern is focused on controlling prospective outcomes in situations. Indeed, research has shown a relationship between checking behavior and OCPD traits. In a nonclinical study of individuals receiving a score of 15 or higher (n=155) and receiving scores between 5 and
9 (n=54) on the Maudsley Obsessive-Compulsive Inventory, participants were assessed for both washing and checking behaviors as well as OCPD traits, using the Schedule for Nonadaptive and Adaptive Personality (SNAP) and the MMPI Compulsive Personality scale, (Gibbs & Oltmanns, 1995). The researchers found that compulsive checking was more strongly linked to obsessive-compulsive personality traits than was compulsive washing, with checkers receiving higher scores on both the SNAP OCPD dimension scale and the MMPI Compulsive Personality scale (Gibbs & Oltmanns, 1995). Even with this overlapping of phenomenology, there are some hallmark distinguishing characteristics between the OCPD and OCD.

OCD can be described as being ego-dystonic in nature with conflictual traits such as reoccurring obsessional thoughts or compulsive behavior, whereas OCPD is characterized as being more ego-syntonic, with consistent and persevering traits (Goldstein, 1985). Some view OCD as being more disruptive to the individual’s self concept and thus more disruptive in daily functioning. In OCD, the individual spends excessive amounts of time on compulsive ritualistic behavior aimed at reducing the distress caused by ego-dystonic obsessions (Mancebo et al., 2005). OCPD on the other hand, is comprised of symptoms that are ego-syntonic in nature, and the individual is not as distressed by these and often justifies them (Mancebo et al., 2005). An example of the difference between the ego-dystonic nature of OCD and the ego-syntonic nature of OCPD can be illustrated by the characteristic of hoarding, which is common to both disorders. An individual with OCD who hoards items may do so because he or she is overwhelmed by the fear of inadvertently discarding something that might turn out to have value. While these individuals may realize that they are being “packrats” and living
in clutter, they are governed by fear and subsequently useless items are retained. Conversely, a person diagnosed with OCPD may also hoard items, but he or she will justify the behavior as rational and essential.

Another difference between OCPD and OCD revolves around what drives these individuals to seek treatment. Often those who are diagnosed with OCD end up seeking mental health treatment due to the time-consuming and distressing nature of the obsessions and compulsions common to the disorder (Eisen et al., 2008). These obsessional thoughts are often intrusive and interfere with a person with OCD’s daily functioning and these individuals often seek aid in managing these symptoms. Differentially, an individual with OCPD will often end up in a treatment setting due to the distress that develops in relationships with others, such as family members or a spouse, (Eisen et al., 2008). Someone with OCPD may rigidly impose his or her need for order, perfectionism, control, morality, preoccupation with details, or excessive devotion to work on others to the point of familial or marital discord. In some cases, the existence of OCPD or OCPD-like symptoms makes an individual more apt to avoid seeking treatment. Indeed, in participants who were diagnosed with OCD, the co-existence of OCPD traits including perfectionism, reluctance to delegate, and refusal to discard was associated with a lower likelihood of having received treatment as was a co-morbid diagnosis of OCPD (Cullen et al., 2008).

Some researchers have investigated the differences in prevalence of OCPD between those who are diagnosed with OCD and those who have other anxiety disorders. Research has shown that individuals who have OCD are likely to have higher rates of OCPD (22.9%) than those in the general public (3.0%), but not a significantly higher rate
of OCPD (17.1%) than those who have Panic Disorder (Albert, Maina, Forner, & Bogetto, 2004). This shows that although OCPD may occur more often in those individuals already diagnosed with OCD, it may not differ much from other anxiety disorders. Other research with individuals (n=629) with one of four personality disorders, including OCPD as well as Schizotypal, Borderline and Avoidant found that OCPD and OCD were comorbid in 53 (8%) individuals and that OCD was significantly ($\chi^2 = 16.0, p < .0001$) more frequent in participants with OCPD as compared to the other three personality disorders (Eisen et al., 2006). This study did not find a significant link between the OCPD criteria of excessive devotion to work, reluctance to delegate, inflexible morality, miserliness, or rigidity and a diagnosis of OCD (Eisen et al., 2006).

A review of the literature regarding the relationship between OCD and OCPD concluded that although the presence of OCPD is not an automatic precursor to developing OCD, it may signify an aptness for the development of OCD and the two disorders should be considered to be interconnected on some level, (Pollack, 2001). It should also be noted that the co-existence of these disorders may vary according to which version of the DSM is used. Variability in the frequency of co-occurring OCPD and OCD has been reported using the DSM-III criteria in three studies (0-28%), DSM-III-R in twelve studies (3-31%), and the current DSM-IV criteria in three studies (23-32%), (Mancebo, Eisen, Grant, & Rasmussen, 2005). Nevertheless, although there may be a higher probability, the greater part of those diagnosed with OCD do not also exhibit enough criteria to meet a diagnosis of OCPD, (American Psychiatric Association, 2000).
2.4 OCPD and Eating Disorders

There has been extensive debate as to the role of OCPD as a possible precursor to the development of various eating disorders (ED). While some believe that the personality disorder may precede the eating disorder, some feel this relationship is inverse and there are several theories describing this connection. The Predispositional Model contends that the personality disorder is an antecedent to and increases the likelihood of developing an eating disorder and that these two are independent and distinct entities. The Complication Model asserts that the personality construct is a product of the eating disorder in that the ED symptomatology brings about changes in personality. These changes can either be short-term and happen during an eating disorder episode or can be long-term and happen as a result of previously having been diagnosed with an eating disorder. Another type is the Common Cause Model which defines the two conditions as stemming from the same original factors. Two types of this model include the third-variable model in which the two disorders are considered separate entities with the same underlying cause, and the spectrum model in which the two disorders are not considered separate but are two variations of the same underlying psychopathology. A Pathoplasty Model does not imply causation in either direction but rather emphasizes how personality disorders and eating disorders interact with one another and affect both the course and manifestation of each other. (Lilenfeld, Wonderlich, Riso, Crosby, & Mitchell, 2006). Regardless of the exact nature of the relationship between OCPD and various eating disorders the comorbidity of these disorders has been well documented.
A review of 11 longitudinal naturalistic studies in which the participants were individuals diagnosed with Anorexia Nervosa was conducted and six studies found that the co-existence of OCPD/perfectionism had an adverse effect on AN outcome (Crane, Roberts, & Treasure, 2007). Furthermore, an analysis of twelve randomized controlled trials found that OCPD negatively impacted the outcome for individuals with AN in three of the studies (Crane, et al., 2007). These findings suggest that the presence of OCPD traits may moderate the clinical progress of individuals with AN. Perhaps the outcomes of these treatments could be improved by incorporating a focus on how certain OCPD traits, such as perfectionism or rigidity, can influence an individual’s patterns of behavior and cognition.

Other studies have focused on whether the existence of an OCPD diagnosis might subsequently lead to an ED. One study has shown that upon controlling for the effects of Axis I as well as other Axis II disorders, only OCPD was found to independently predict the existence of eating disorder symptoms among a community sample of adolescents (Zaider, Johnson, & Cockell, 2000). Additional researchers have concluded that the combination of OCPD and perfectionism may be an important feature in assessing eating disorder susceptibility (Halmi et al., 2005). Thus the existence of such OC symptoms may be an identifier for individuals that are susceptible to full blown eating disorders in the future.

Research involving individuals with anorexia nervosa (n=17) and bulimia nervosa (n=20) found that nineteen percent of individuals met the DSM-III-R criteria for a comorbid diagnosis of OCPD, including 35% of the anorexia patients and 5% of the bulimia patients (Thorton & Russell, 1997). This study further supports the idea that obsessive-
compulsive traits may be related to the development of eating disorders for some individuals. Although there is a recurrent theme of associating OCPD with anorexia over bulimia, there are certain characteristics of OCPD that are also commonly found in bulimics, including compulsivity, rigidity, and perfectionism (Rosenberg, A., 1990). Additional research has focused solely on individuals with Binge Eating Disorder and the connection with personality disorders. A study of 50 individuals who met the DSM-IV criteria for BED were assessed using the Eating Disorder Examination as well as the SCID-II and 10% were found to have comorbid BED and OCPD, (Picot & Lilenfeld, 2002). Furthermore, researchers found that when they inventoried a continuous measure of personality disorder symptoms, obsessive-compulsive symptoms emerged as being most prominent, followed by avoidant and depressive symptoms, (Picot & Lilenfeld, 2002). Although the causal nature of these two disorders has not been thoroughly defined, it may be beneficial to consider how they interact in order to make treatment more efficient.

Some researchers have specifically compared the prevalence of personality disorders within several different subtypes of eating disordered individuals. In a comparison between four eating disorder subtypes including, anorexics who binge and purge (AN/BP), anorexics who restrict food intake (AN/R), normal-weight bulimics (B), and normal weights bulimics with a history of anorexia (B/AN), the results from the Structured Clinical Interview for DSM-III-R Personality Disorders indicate that restricting anorexics had the highest prevalence (60%) of Obsessive-Compulsive Personality Disorder (Wonderlich, Swift, Slotnick, & Goodman, 1990). The two anorexics groups, AN/R and AN/BP significantly differed ($F (5, 40) = 9.48, p <.001$) in
the likelihood of displaying OCPD than the combined bulimic groups, B and B/AN, and the AN/R group also was significantly \( F(5, 14) = 5.66, p < .01 \) more likely to meet the criteria for OCPD than the AN/BP group (Wonderlich et al., 1990). Basically, the OCPD was most common in restricting anorexics which may reflect the findings that these individuals are rigidly controlling, lacking in impulsiveness, and emotionally confined, (Wonderlich et al., 1990).

There has also been some exploration of how race may influence the relationship between OCPD and eating disorders. Utilizing the SCID-I and SCID-II, researchers were able to interview females from four race categories, Caucasian (n=25), African American (n=23), Asian (n=7), and Hispanic (n=3), during an initial and two-year follow-up session and they found that race significantly interacted \( R^2_{\text{change}} = .06; F_{\text{change}}(1,50) = 5.85, p < .05 \) with obsessive-compulsive personality pathology in predicting eating disorder pathology after the two-year follow-up (Lilenfeld, Jacobs, Woods, & Picot, 2008). More specifically, women in the African American subgroup with elevated OCPD traits at the initial interview were more likely to later have elevated eating disorder pathology at the two-year follow-up interview as compared to women in the other race categories (Lilenfeld, et al., 2008).

OCPD represents a lasting pattern of behaviors and experiences that deviate from societal norms and noticeably effects areas such as interpersonal relationships, cognitions, emotional response, and impulsiveness, (American Psychological Association, 2000). This specific pattern of symptoms is inflexible in nature and often results in clinically significant distress for the individual. OCPD can negatively affect several areas of an individual’s life. When OCPD is comorbid with other disorders it can
have an effect on both the manifestation and the treatment outcome. The necessity of specific assessment measures for OCPD is highly evident.
3.1 Participants

Data were collected from a population of male and female undergraduate college students (n=140) from a Midwestern urban university. The sample consisted of 44 males (31.4%) and 95 females (67.9%). (Gender was not provided for 1 participant). Participants were at least 18 years old and participation was on a voluntary basis. The mean age for this sample was 24.09 with a range of 18 to 59 years of age. Regarding race, the participants were self-classified either “Caucasian/White” (n=99, 70.7%), “African American” (n=29, 20.7%), “Hispanic/Latino” (n=7, 5%), “Asian” (n=3, 2.1%) or “Other” (n=1, .7%). Concerning marital status, the self-reported classifications were “Now Married” (n=15, 10.7%), “Widowed” (n=1, .7%), “Divorced” (n=8, 5.7%), “Separated” (n=1, .7%), and “Never Married” (n=113, 80.7%). In response to the item “Have you ever been diagnosed with a mental disorder?”, 23.6% (n=33) of participants responded “yes” and 75.7% (n=106) responded “no”. The most commonly reported diagnosis was depression (n=12). Regarding the item “Have you ever thought that you might have a mental disorder?”, 26.4% (n=37) responded with “yes” and 72.9% (n=102)
responded with “no”. Depression as also the most commonly reported (n=17) diagnosis for this item. Since most personality disorder traits develop by early adulthood this population was deemed appropriate for evaluation. These participants were most likely novel test takers.

3.2 Measures

Participants were given a short self-report questionnaire to collect demographic data such as age, gender, race, and marital status (See Appendix 1). The participants also answered self-report questions including, “Have you ever been diagnosed with a mental disorder?” “Have you ever thought that you might have a mental disorder?” “Have you ever been diagnosed with a serious medical illness?” and “If so which one(s)?”. Each individual was also given three self-report instruments including the new OCPD Questionnaire (See Appendix 2) as well as the Leyton Obsessional Inventory, (Cooper, 1970, See Appendix 3) and the Padua Inventory-Washington State University Revision (Burns, Keortege, Formea, & Sternberger, 1996, See Appendix 4), and the OCPDQ was analyzed along with these two already existing measures.

The new OCPD Questionnaire includes 143 items with various items corresponding to each of the 8 criteria of OCPD found in the DSM-IV. The OCPDQ items included 17 items assessing for a preoccupation with details, lists, rules, order, 18 items evaluating perfectionism, 19 items for excessive devotion to work, 21 items addressing conscientiousness and inflexible morals, 17 hoarding items, 19 items for reluctance to delegate, 14 items assessing miserliness, and 18 items regarding rigidity and stubbornness (See Appendix 5). This self-report measure was formatted with True/False
answer options regarding an individual’s preferences, perceptions and behaviors in various settings and situations. This measure contains both true and false target responses corresponding to the existence of criteria for OCPD.

The Leyton Obsessional Inventory (LOI) is a self report questionnaire consisting of 69 Yes/ No items, which was published in 1970 by John Cooper as a measure to assess the severity of obsessional traits and symptoms in an individual (Cooper, 1970). This test was originally developed due to a need for a suitable inventory for the assessment of obsessional traits and attitudes that could be administered by a non-medically qualified administrator. At the time, no such assessment was located in a review of the literature and thus the Leyton Obsessional Inventory was developed (Cooper, 1970). The inventory itself is broken down into sections of questions that assess both obsessional symptoms and traits. Under the “Symptom Questions” are items related to Thoughts, Checking, Dirt and contamination, Dangerous objects, Personal cleanliness and tidiness, Household cleanliness and tidiness, Order and routine, Repetition, Over-conscientiousness and Lack of satisfaction, and Indecision. The section of “Trait Questions” includes sections on Hoarding, Cleanliness, Meanness, Irritable and morose, Rigidity, Health, Regularity, and Punctuality.

Research has shown that the LOI can effectively discriminate between OCPD and OCD (Wellen et al., 2007). In this study by Wellen et al. (2007), 488 participants received a diagnosis from a trained clinician and also completed the LOI and these results were then analyzed. The researchers completed a factor analysis on the responses to the LOI items and chose a five factor solution which accounted for 43% of the item variance with 26% of the variance explained by the first factor. The factors were named as
follows; Factor I; “Obsessive ruminations and compulsions”, Factor II; “Ordering and arranging”, Factor III; “Organizing activities”, Factor IV; “Contamination”, and Factor V; “Parsimony” (Wellen et al., 2007, See Appendix 6). The researchers then used multiple logistic regression to determine the relationship between these factors, OCD and OCPD. Wellen et al. (2007), determined that Factor I (obsessive ruminations and compulsions), Factor III (organizing activities) and Factor IV (contamination) were strongly associated with OCD. They also found that Factor II (ordering and arranging) was associated with OCPD and not with OCD. The other four factors were not found to be associated with OCPD and Factor V was not related to either OCD or OCPD. The Leyton Obsessional Inventory was used in comparison with the OCPDQ as a measure of obsessional traits and symptoms.

The second comparative measure used in the present study is the Padua Inventory-Washington State University Revision (PI-WSUR). The original Padua Inventory was published in 1988 by Ezio Sanavio and is a 60 item measure with items describing common compulsive and obsessive behavior (Sanavio, 1988). The 60 items for this self-report measure were developed based on a compilation of 200 statements describing the complaints of individuals with obsessive compulsive disorders and each item is rated on a disturbance scale from 0-4. The PI was found to correlate to the Leyton Obsessional Inventory (0.71 with Symptom Questions and 0.66 with Trait Questions) as well as the Maudsley Obsessive-Compulsive Questionnaire (.70) and the Self-rating Obsessional Scale (0.61), (Sanavio, 1988). A factor analysis of the PI items was run and four items emerged; Factor I: impaired control over mental abilities, Factor II: becoming contaminated, Factor III: checking behavior, and Factor IV: urges and worries of loss of
control of motor behavior, (Sanavio, 1988). The PI was able to discriminate between a group of obsessive-compulsives (n=75) and a group diagnosed with other neurotic disorders (n=75) including agoraphobia, depression, social phobia, and psychosexual dysfunction and the obsessive-compulsive group received significantly higher scores than the neurotic group ($P < 0.001$), (Sanavio, 1988). The Padua Inventory–Washington State University Revision contains 39 items corresponding to the five subscales of “Contamination Obsessions and Washing Compulsions” (10 items), Dressing/Grooming Compulsions” (3 items), Checking Compulsions” (10 items), “Obsessional Thoughts of Harm to Self/Others” (7 items), and “Obsessional Impulses to Harm Self/Others” (9 items), (Burns et al., 1996, See Appendix 7). This scale is formatted with five response options including, “Not at all”, “A little”, “Quite a lot”, “A lot”, and “Very much”. The revised PI was found to have reliability and validity and was better able to distinguish true obsessions from worry in participants, (Burns et al., 1996). In the current study, the PI-WSUR version of the scale was utilized over the original due to the shorter length and discriminative ability of the scale.

3.3 Procedure

Upon receipt of an IRB approval (See Appendix 8), participants were recruited from undergraduate psychology courses and were given the three self-report scales as well as the brief demographic questionnaire together in a packet. The students were informed that the purpose of the study was to collect normative data for a new assessment measure with the purpose of testing the reliability and validity of the measure. Students were offered extra credit for participating in the study. Each participant signed an informed consent form (See Appendix 9) and was given the option to decline
participation at any time during the study. The participants completed these measures in the presence of the researcher which took approximately 20-25 minutes and the packets were returned directly upon completion. The informed consent forms were separated from the self-report questionnaires to ensure confidentiality.

3.4 Analyses

An analysis of bivariate correlations was run on each of the individual scale items and the corresponding criteria scale. Additional bivariate correlational analyses were run between the OCPDQ, LOI, and PI-WSUR. The degree of reliability among the variables in the summated scales was assessed by calculating Cronbach’s alpha for each of that eight criteria scales of OCPD as well as for the measure as a whole. The four LOI factors that emerged in the Wellen et al. (2007) study were also analyzed as subscales of the LOI and correlations between these and the OCPDQ and OCPDQ subscales were run. The five subscales of the PI-WSUR (Burns et al., 1996) were also analyzed as subscales and correlations with the OCPDQ and OCPDQ subscales were analyzed. After these initial analyses, several items were deleted from each of the eight OCPDQ subscales so that each of the eight criteria of OCPD would be more equally represented. Candidates for deletion included items that did not significantly correlate with the corresponding subscale total, as well as items that would raise the Cronbach’s alpha score via their deletion. Each subscale was reduced to 10 items apiece with a total of 80 items in the revised OCPDQ. Cronbach’s alpha was calculated for the revised OCPDQ total score and the revised OCPDQ subscales and correlations were analyzed. A factor analysis was performed on the eight revised subscales of the OCPDQ to determine the number of obsessive-compulsive personality dimensions that emerged as being measured. A
varimax rotation was utilized in a principal axis factor analysis to ensure a clearer separation of factors. Bivariate correlations were then run between the factors of the revised OCPDQ subscales and the factors of the LOI to assess differences in the underlying dimensions of the revised OCPDQ.
CHAPTER IV
RESULTS

A t-test between gender and total OCPDQ score was performed and there was no significant difference between groups, (t=.541, p=.590). An ANOVA revealed no significant difference between the various race groups on total OCPDQ score, (F=.364, p=.779). A T-test was performed on the yes/no response groups to the self report item “Have you ever been diagnosed with a mental disorder?” and no significant difference was found between groups on OCPDQ total score, (t=1.734, p=.086). A subsequent T-test showed no significant difference between yes/no response groups for the item “Have you ever thought that you might have a mental disorder?” on total OCPDQ score (t=.092, p=.277). There was also no significant difference between those who answered yes/no to “Have you ever been diagnosed with a serious medical illness?” on total OCPDQ score, (t=1.596, p=.113). Bivariate correlations revealed no significant correlations between total OCPDQ score and the respondents’ answers to “Have you ever been diagnosed with a mental disorder?” (r=-1.56), “Have you ever thought that you might have a mental disorder?” (r=-.099), and “Have you ever been diagnosed with a serious medical
illness?” (r = -0.144). For these items a “1.00” was given to respondents who answered “yes” and a “2.00” was given to respondents who answered “no”. Regarding the eight individual subscales of the OCPDQ, there were only a few significant correlations. “Perfectionism” significantly correlated with the item “Have you ever thought you had a mental disorder?” (r = -0.224, p < 0.01) and the item “Have you ever been diagnosed with a serious medical illness?” (r = -0.171, p < 0.05). For two these items, the higher the individual’s “Perfectionism” score, the more likely they were to answer “yes” to the self-report item. The only other significant correlation between the subscales and the self-report items was between “Hoarding” and the item “Have you ever thought you might have a mental disorder?” (r = -0.204, p < 0.05), showing that individuals with higher “Hoarding” scores were more likely to answer yes to the item. There were no significant correlations between age and sex and the eight subscales of the OCPDQ.

A bivariate correlational analysis revealed that each of eight criteria subscales significantly correlated (p < 0.01) with the total OCPDQ score; “Preoccupation with details” (r = 0.534), “Perfectionism” (r = 0.633), “Excessive devotion to work” (r = 0.552), “Conscientiousness” (r = 0.524), “Hoarding” (r = 0.422), “Reluctance to delegate” (r = 0.609), “Miserliness” (r = 0.382), and “Rigidity/Stubbornness” (r = 0.687). This indicated that each of the subscales of the OCPDQ were significantly positively associated with the total OCPDQ score. The OCPDQ was also significantly positively correlated with the Leyton Obsessional Inventory total score (p < 0.01, r = 0.567) and the Padua Inventory-Washington State University Revision total score (p < 0.01, r = 0.369). This indicates that the measure has convergent validity. Regarding the relationship of the OCPDQ to the two LOI subscales, the LOI “Symptom” questions had a significant (p < 0.01) correlation of r = 0.491 and the LOI
“Trait” questions had a significant (p<.01) correlation of r=.617, showing a stronger positive relationship to obsessional traits than symptoms as measured by the LOI. The LOI and PI-WSUR had a correlation of r=.720 which was significant at the .01 level.

An additional correlational analysis was run between the five LOI factors produced in the Wellen et al. (2007) study and the OCPDQ scale and subscales (See Table 1.) The LOI factors were reproduced in the current data set by summing the responses to items that comprised each factor in the Wellen et al. (2007) study (See Appendix 6). Each of the five proposed factors of the LOI correlated significantly (p<.01) with the OCPDQ total score; Factor I: “Obsessional ruminations and compulsions” (r=.385), Factor II: “Ordering and arranging” (r=.287), Factor III: “Organizing activities” (r=.521), Factor IV: “Contamination” (r=.239), and Factor V: “Parsimony” (r=.250). The Wellen et al. (2007) research found that Factor II was the only factor that was significantly associated with OCPD when controlling for OCD. In this case the total OCPDQ score was significantly correlated with Factor II: “Ordering and arranging” of the LOI adding evidence that the OCPDQ does indeed measure obsessive-compulsive personality traits. The highest subscale correlations to LOI Factor II, “Ordering and arranging” were “Perfectionism” (p<.01, r=.374), “Preoccupation with details” (p<.01, r=.365), and “Rigidity and Stubbornness” (p<.01, r=.326), (See Table 1.). The fact that the other four factors also each significantly correlated to the total OCPDQ score is likely due to the wide range of obsessive-compulsive symptoms and traits that are addressed in the measure and the overlap with the other LOI factors. An example of this would be the overlap between the OCPDQ subscale of “Miserliness” and
Table 1.  
Bivariate correlations between the five Wellen et al (2007) LOI factors and the eight OCPDQ subscales.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>LOI I</th>
<th>LOI II</th>
<th>LOI III</th>
<th>LOI IV</th>
<th>LOI V</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preoccupation with Details</td>
<td>.153</td>
<td>.365**</td>
<td>.453**</td>
<td>.179**</td>
<td>.155</td>
</tr>
<tr>
<td>2. Perfectionism</td>
<td>.257**</td>
<td>.374**</td>
<td>.374**</td>
<td>.141</td>
<td>.243**</td>
</tr>
<tr>
<td>3. Excessive Devotion to work</td>
<td>.008</td>
<td>.173**</td>
<td>.237**</td>
<td>.076</td>
<td>.133</td>
</tr>
<tr>
<td>4. Conscientiousness</td>
<td>-.010</td>
<td>.097</td>
<td>.286**</td>
<td>.041</td>
<td>-.027</td>
</tr>
<tr>
<td>5. Hoarding</td>
<td>.377**</td>
<td>-.165</td>
<td>.014</td>
<td>.018</td>
<td>.097</td>
</tr>
<tr>
<td>6. Reluctance to delegate</td>
<td>.275**</td>
<td>.275**</td>
<td>.350**</td>
<td>.301**</td>
<td>.093</td>
</tr>
<tr>
<td>7. Miserliness</td>
<td>.168**</td>
<td>-.016</td>
<td>.070</td>
<td>-.093</td>
<td>.383**</td>
</tr>
<tr>
<td>8. Rigidity/Stubbornness</td>
<td>.378**</td>
<td>.326**</td>
<td>.539**</td>
<td>.325**</td>
<td>.107</td>
</tr>
<tr>
<td>Total OCPDQ Score</td>
<td>.385**</td>
<td>.287**</td>
<td>.521**</td>
<td>.239**</td>
<td>.250**</td>
</tr>
</tbody>
</table>

LOI Factors, Factor I: Obsessional ruminations and compulsions; Factor II: Ordering and Arranging; Factor III: Organizing Activities; Factor IV: Contamination; Factor V: Parsimony

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

the LOI factor of “Parsimony” which are assessing analogous traits and which were significantly correlated (p<.01, r=.383). Another example of overlap between the scales is represented by the significant correlation (p<.01, r=.539) between the OCPDQ “Rigidity/Stubbornness” subscale and the LOI Factor III: “Ordering and arranging” which are both scales that measure an inability to stray from routine and order. This overlap likely contributed to the significant correlation (p<.01, r=.521), between the total OCPDQ score and Factor III and this was the most strongly related factor in this study. One possibility for the stronger correlational relationship of Factor III (“Organizing activities”) than Factor II (“Ordering and arranging”) of the LOI could be that the LOI Factor II items seem to more strongly pertain to the original “house-proud” housewife.
population used in the initial Cooper (1970), LOI field study than do the items in Factor III. Some examples of the LOI Factor II item content include the exact arranging of furniture, cushions, belongings and items pertaining to housecleaning whereas the LOI Factor III items are more general in content, including items on the enjoyment of schedules activities, methodological nature in pursuits, and distress if work routines are disrupted (Wellen et al., 2007). For the specific population of college students used in this present research, it is likely that a stronger relationship between the total OCPDQ score and the LOI Factor III was attained due to the more applicable nature of the more generalizable Factor III items over the “house” centered Factor II items.

A bivariate correlational analysis was run between the PI-WSUR and the eight OCPDQ subscales to assess relationships (See Table 2.). The total OCPDQ score significantly correlated (p<.01) to the first four PI-WSUR subscales; 1. Contamination Obsessions and Washing Compulsions Subscale (r=.395); 2. Dressing/Grooming Compulsions Subscale (r=.291); 3. Checking Compulsions Subscale (r=.334); and 4. Obsessional Thoughts of Harm to Self/Others Subscale (r=.261). There was no significant correlation between the fifth subscale, “Obsessional Impulses to Harm Self/Others” (r=.008). The present research found that washing compulsions as measured in the PI-WSUR Scale 1 were more highly correlated (r=.395) to the total OCPDQ score than were checking compulsions (r=.334) as measured by the PI-WSUR Scale 3. This was contrary to the previous findings of Gibbs & Oltmanns (1995), study in which compulsive checking was found to be more strongly related to OCPD than was compulsive washing. Regarding the individual OCPDQ subscales, “Rigidity and Stubbornness” was the only scale that had significant correlations with each of the 5 PI-
Table 2.  
Bivariate correlations between the five Burns et al. (1996) PI-WSUR subscales and the eight OCPDQ subscales.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>PI-WSUR 1</th>
<th>PI-WSUR 2</th>
<th>PI-WSUR 3</th>
<th>PI-WSUR 4</th>
<th>PI-WSUR 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preoccupation with Details</td>
<td>.338**</td>
<td>.272**</td>
<td>.164</td>
<td>.172*</td>
<td>-.033</td>
</tr>
<tr>
<td>2. Perfectionism</td>
<td>.246**</td>
<td>.236**</td>
<td>.202*</td>
<td>.117</td>
<td>-.106</td>
</tr>
<tr>
<td>3. Excessive Devotion to work</td>
<td>.179*</td>
<td>.128</td>
<td>.116</td>
<td>-.006</td>
<td>-.130</td>
</tr>
<tr>
<td>4. Conscientiousness</td>
<td>.162</td>
<td>.136</td>
<td>.023</td>
<td>.034</td>
<td>-.166</td>
</tr>
<tr>
<td>5. Hoarding</td>
<td>-.006</td>
<td>.010</td>
<td>.187*</td>
<td>.227**</td>
<td>.105</td>
</tr>
<tr>
<td>6. Reluctance to delegate</td>
<td>.318**</td>
<td>.214*</td>
<td>.277**</td>
<td>.168</td>
<td>-.016</td>
</tr>
<tr>
<td>7. Miserliness</td>
<td>-.004</td>
<td>-.081</td>
<td>.029</td>
<td>-.014</td>
<td>-.030</td>
</tr>
<tr>
<td>8. Rigidity/Stubbornness</td>
<td>.420**</td>
<td>.345**</td>
<td>.371**</td>
<td>.310**</td>
<td>.180*</td>
</tr>
<tr>
<td>Total OCPDQ Score</td>
<td>.395**</td>
<td>.291**</td>
<td>.334**</td>
<td>.261**</td>
<td>-.008</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)  
* Correlation is significant at the 0.05 level (2-tailed)

WSUR subscales and was the only subscale to correlate to the fifth PI-WSUR subscale of “Obsessional Impulses to Harm Self/Others” (r=.180). Indeed traits such as the desire for routine and control in situations as well as a disliking of unpredictability and change are common among both those with obsessions and compulsions as well as those that could be classified as rigid and stubborn. In both cases, there is a desire to control future events, whether it be through washing and checking compulsions or through remaining inflexible and rigid in the face of uncertainty.

The internal reliability of the OCPDQ and the eight criterion scales was assessed using the reliability coefficient, Cronbach’s alpha. As a whole, 143 items of the scale
yielded a Cronbach’s alpha of .845. This more than exceeds the widely accepted lower-limit of .70, which shows that the OCPDQ has high internal consistency, (Hair, Black, Babin, Anderson, & Tatham, 2006). It should be noted that in exploratory research, the lower-limit of Cronbach’s alpha may be reduced to .60, (Hair et al., 2006). The eight subscales were individually analyzed for internal reliability using Cronbach’s alpha. The “Preoccupation with details” (Scale 1) had 17 items; “Perfectionism” (Scale 2) had 18 items; “Excessive Devotion to work” (Scale 3) had 19 items; “Conscientiousness/Inflexible Morals” (Scale 4) had 21 items; “Hoarding” (Scale 5) had 17 items; “Reluctance to Delegate” (Scale 6) had 19 items; “Miserliness” (Scale 7) had 14 items and “Rigidity” (Scale 8) had 18 items, (See Appendix 5). Scales 1, 2, 3, 4, and 7 did not meet the accepted Cronbach’s alpha cut-off of .70, an indication of only poor to moderate reliability. Scales 5, 6 and 8 each exceeded the widely accepted .70 alpha cut-off showing high levels of internal reliability in these three scales, (See Table 3.).

Each of the eight subscales of the OCPDQ was then empirically analyzed with the purpose of reducing the number of items in each scale through item deletion. Items that did not significantly correlate with the scale total were candidates for deletion. Items were also removed according whether the total Cronbach’s alpha would be increased after deletion. The first scale, “Preoccupation with details” originally had a reliability of $\alpha = .494$. Items 65, 57, 105, 81, 49, 127, and 33 were deleted from Scale 1 which increased Cronbach’s alpha to .603 and reduced the scale to 10 items (See Table 3.)

Scale 2, “Perfectionism” originally had 18 items and a reliability statistic of $\alpha = .535$. The following items were deleted from this scale; 58, 34, 106, 74, 134, 114, 128, 42 which reduced the scale to 10 items. The remaining items were analyzed and the
Table 3.
Comparison of Cronbach’s Alpha for the OCPDQ and each subscale before and after item deletion.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Original Scale</th>
<th>Revised Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N of items</td>
<td>Cases (N)</td>
</tr>
<tr>
<td>OCPD Total</td>
<td>143</td>
<td>123</td>
</tr>
<tr>
<td>1. Details</td>
<td>17</td>
<td>135</td>
</tr>
<tr>
<td>2. Perfectionism</td>
<td>18</td>
<td>136</td>
</tr>
<tr>
<td>3. DevWork</td>
<td>19</td>
<td>132</td>
</tr>
<tr>
<td>4. Conscientious</td>
<td>21</td>
<td>133</td>
</tr>
<tr>
<td>5. Hoarding</td>
<td>17</td>
<td>138</td>
</tr>
<tr>
<td>6. RelDelegate</td>
<td>19</td>
<td>136</td>
</tr>
<tr>
<td>7. Miserliness</td>
<td>14</td>
<td>137</td>
</tr>
<tr>
<td>8. Rigidity</td>
<td>18</td>
<td>138</td>
</tr>
</tbody>
</table>

*Denotes an increase in Cronbach’s Alpha from the original scale to the revised scale.

Cronbach’s alpha for the subscale was increased to .685 (See Table 3.)

“Excessive devotion to work” (Scale 3) originally had a Cronbach’s alpha of .559 and 19 items. Items 59, 139, 135, 107, 27, 129, 75, 99, and 91 were deleted from the scale to increase reliability. The revised scale had 10 items and a Cronbach’s alpha of .601 (See Table 3.)

The fourth scale “Conscientiousness/Inflexible Morals” had 21 total items and a reliability statistic of α = .555. This scale had the largest number of item deletions and items 140, 143, 52, 76, 136, 44, 28, 100, 108, 142, and 68 were removed. The revised scale had a total of 10 items and an increased Cronbach’s alpha of .594 (See Table 3.).
“Hoarding”, the fifth scale, originally had 17 items and the highest reliability statistic of all the subscales, \( \alpha = .823 \). Seven items were removed from this scale including, items 131, 13, 69, 85, 77, 124, 101 which reduced the scale to 10 items. The reliability statistic of Scale 5 was increased to .829 through these deletions (Table 3.).

“Reluctance to delegate” (Scale 6) originally had a Cronbach’s alpha of .756 and consisted of 19 items. Nine of these items were deleted including items 14, 102, 125, 137, 54, 22, 70, 132, and item 6. This increased Cronbach’s alpha to .784 and decreased the scale to 10 items (See Table 3.).

“Miserliness”, the seventh scale, had 14 items in the original version and an alpha level of .595. Items 79, 95, 31, and 39 were deleted which brought the scale total to 10 items and also increased the alpha level to .690 (See Table 3.).

The final scale, “Rigidity and Stubbornness” consisted of 18 items and had a Cronbach’s alpha of .731. Eight total items were deleted from this scale including items 126, 96, 8, 112, 32, 80, 119, and 133. The remaining 10 items in the scale were analyzed and produced a reliability statistic of .754 (See Table 3.).

The various item deletions from each of the scales resulted in a consistent amount of 10 items for each subscale (See Appendix 10) as well as an increase in reliability for each of the individual subscales. The removal of a total of 63 items from the OCPDQ resulted in the creation of a scale almost half the size in length with only a slightly lower reliability statistic. Indeed the revised OCPDQ has a Cronbach’s alpha level of .820 meaning that it is slightly less reliable than the original version of the scale’s alpha level of .845 (See Table 3.). One possible explanation for the slightly lower Cronbach’s alpha of the revised OCPDQ scale (80 items) is that Cronbach’s alpha has a positive
relationship to the number of items analyzed and as the total number of items is lowered, Cronbach’s alpha will become lower even if the same level of intercorrelation is present, (Hair et al., 2006). The original 143 item OCPDQ was significantly correlated (p<.01, r=.948) to the revised 80 item OCPDQ as well. The 80 item revision of the OCPDQ also similarly significantly correlated with the total LOI scores (p<.01, r=.532) and the total Padua scores (p<.01, .349). These correlational values were similar in nature to the original 143 item version of the test (LOI total score (p<.01, r=.567) and PI-WSUR total score (p<.01, r=.369) which also shows that the revised version retained similar levels of validity. The revised OCPDQ had a mean of 40.01 with a standard deviation of 9.49 and variance of 90.10. The means and standard deviations of each of the subscales were: “Preoccupation with details” (Mean=6.01, Std. Dev=2.02); “Perfectionism” (Mean=5.42, Std. Dev=2.37); “Excessive devotion to work” (Mean=3.88, Std. Dev=2.10), “Conscientiousness” (Mean=5.70, Std. Dev=2.11), “Hoarding” (Mean=4.22, Std. Dev=3.02), “Reluctance to delegate” (Mean=4.99, Std. Dev=2.83); “Miserliness” (Mean=5.36, Std. Dev=2.44); “Rigidity and Stubbornness” (Mean=4.32, Std. Dev=2.55).

A principal components factor analysis was run on the eight criteria subscales of the revised 80 item OCPDQ, using a varimax rotation method. The varimax rotation method was utilized to produce an easier interpretation of factor loadings as the amount of separation between the loadings is maximized. The researchers found that a three factor explanation parsimoniously and meaningfully described the underlying dimensions captured by the OCPDQ (See Table 4.). The latent root criterion was employed and only factors with eigenvalues >1.00 were retained. This three factor model accounted for
Table 4.

Principal components factor analysis loadings for the eight subscales of the revised 80 item OCPDQ using varimax rotation with Kaiser normalization.

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
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<tbody>
<tr>
<td>1. Preoccupation with Details</td>
<td>.596*</td>
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<td>-.545</td>
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<tr>
<td>2. Perfectionism</td>
<td>.691*</td>
<td>.325</td>
<td></td>
</tr>
<tr>
<td>3. Excessive Devotion to work</td>
<td>.627*</td>
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<tr>
<td>4. Conscientiousness</td>
<td>.454*</td>
<td>.390</td>
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<tr>
<td>5. Hoarding</td>
<td></td>
<td></td>
<td>.900*</td>
</tr>
<tr>
<td>6. Reluctance to delegate</td>
<td></td>
<td>.853*</td>
<td></td>
</tr>
<tr>
<td>7. Miserliness</td>
<td>.680*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Rigidity/Stubbornness</td>
<td></td>
<td>.826*</td>
<td></td>
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</tbody>
</table>

*Denotes highest loading (Note: loadings below .300 have been omitted)

60.3% of the item variance with 26.8% of the variance explained by the first factor. The first factor had practically significant loadings for “Preoccupation with details”, “Perfectionism”, “Excessive devotion to work”, “Conscientiousness/ Inflexible morals”, and “Miserliness”. The highest loading on this factor was “Perfectionism” with a loading of .691. Each of these constructs represents a desire for fastidiousness and perfection, whether it is concerning finances and the workplace, one’s own morality, or the details of everyday planning. In each case, the item content addresses a need for perfection and high standards in a specific area and Factor I was dubbed “Perfectionism”. The highest Factor II loadings were acquired for “Reluctance to delegate” and “Rigidity and stubbornness”. These subscales address the issues of an excessive need for control in situations in order to avoiding changes and unpredictability. The items in these two
Table 5.  
Bivariate correlations between the three factors of the revised 80 item OCPDQ and the five Wellen et al., (2007) LOI factors and total LOI score.

<table>
<thead>
<tr>
<th>LOI Factors</th>
<th>Factor I</th>
<th>Factor II</th>
<th>Factor III</th>
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</thead>
<tbody>
<tr>
<td>LOI I</td>
<td>.175*</td>
<td>.342**</td>
<td>.338**</td>
</tr>
<tr>
<td>LOI II</td>
<td>.311**</td>
<td>.361**</td>
<td>-.238**</td>
</tr>
<tr>
<td>LOI III</td>
<td>.357**</td>
<td>.522**</td>
<td>-.064</td>
</tr>
<tr>
<td>LOI IV</td>
<td>.060</td>
<td>.359**</td>
<td>.010</td>
</tr>
<tr>
<td>LOI V</td>
<td>.361**</td>
<td>.061</td>
<td>.091</td>
</tr>
<tr>
<td>Total LOI</td>
<td>.334**</td>
<td>.519**</td>
<td>.182*</td>
</tr>
</tbody>
</table>

LOI Factors, Factor I: Obsessional ruminations and compulsions; Factor II: Ordering and Arranging; Factor III: Organizing Activities; Factor IV: Contamination; Factor V: Parsimony  
** Correlation is significant at the 0.01 level (2-tailed)  
* Correlation is significant at the 0.05 level (2-tailed)

subscales assess for the presence of rigidity in both routines and task delegation and this factor was named “Inflexible Control”. The final factor had the highest factor loading for “Hoarding”. Interestingly, there was also a high cross-loading for “Preoccupation with details”, which loaded negatively on Factor III. Indeed, a preoccupation with orderliness would be considered to be conversely related to hoarding, which often entails disorganization and clutter. Factor III was named “Disordered Hoarding”.

Bivariate correlations between the three factors of the revised OCPDQ and the five factors of the LOI from the Wellen et al., (2007) study show that the three factors each measure different personality constructs, (See Table 5.). Factor II, “Inflexible Control” had the strongest significant positive correlation to the total LOI score (p<.01, r= .519), followed by Factor I, “Perfectionism” (p<.01, r=.334), and Factor III, “Disorganized Hoarding” (p<.01, r=.182). These varying levels of correlation show that
the three factors of the revised OCPDQ are indeed representative of separate constructs of OCPD. This is further evidenced by the different levels of correlation between the LOI factors and the revised OCPDQ factors. LOI Factor I, “Obsessional ruminations and compulsions” had the strongest correlation with the revised OCPDQ Factor II, “Inflexible control” (r=.342), a strong correlation with Factor III, “Disorganized Hoarding”(r=.338), and a weaker correlation with “Perfectionism” (r=.175). LOI Factor II, “Organizing and arranging” had positive correlations with OCPDQ Factor I (r=.311) and Factor II (r=.361) and negatively correlated with OCPDQ Factor III (r=-.238). LOI Factor II is associated with excessive tidiness which explains the negative correlation to OCPDQ Factor III, “Disorganized Hoarding” which is characterized with a lack of organization. LOI Factor III, “Organizing activities” and the revised OCPDQ Factor II, “Inflexible Control” had the strongest overall correlation (r=.522) of the two scales and these are both measures of rigidity and a need for control. LOI Factor IV “Contamination” only had a significant correlation (p<.01, r=.359) with the revised OCPDQ Factor II, “Inflexible Control” and this may also related to an individual’s need to control the outcomes of situations. Regarding LOI Factor V, “Parsimony”, the only significant correlation was with the revised OCPDQ Factor I, “Perfectionism” (p<.01, r=.361) and this is likely due to the inclusion of the OCPDQ subscale “Miserliness” in Factor I which is analogous to “Parsimony”. For LOI Factors I, II, III, and V the revised OCPDQ Factors I and Factor III had differential correlational strengths, showing that these two factors represent different and opposing dimensions of the disorder. These correlational relationships strengthen the idea that there are separate underlying constructs of OCPD.
CHAPTER V
DISCUSSION

The purpose of the present study was to further validate the psychometric properties of a new assessment scale for OCPDQ including the reliability, validity, and possible underlying dimensions of the scale. The OCPDQ consists of eight subscales which correspond to the eight criteria for OCPD found in the DSM-IV-TR. As hypothesized, the OCPDQ was found to have a high level of reliability as evidenced by a Cronbach’s alpha = .845. The OCPDQ was also found to have construct validity in that the measure as a whole significantly correlated to both the Leyton Obsessional Inventory total score ($p<.01, r=.567$) and the Padua Inventory-Washington State University Revision total score ($p<.01, r=.369$). The total OCPDQ score also significantly correlated with all five of the LOI factors reported by Wellen et al. (2007), including Factor II “Ordering and Arranging” which was shown to be most strongly related to OCPD. The strongest correlation was found between Factor III “Organizing activities” which may mean that the OCPDQ may be assessing more of these types of traits. The OCPDQ also significantly correlated with four of the PI-WSUR subscales: 1. Contamination Obsessions and Washing Compulsions Subscale; 2. Dressing/Grooming Compulsions Subscale; 3. Checking Compulsions Subscale; 4. Obsessional Thoughts of Harm to Self/Others. An interesting finding was that the OCPDQ total score correlated more strongly with subscale 1 than subscale 3, which was
contrary to previous finding that checking compulsions are more strongly related to OCPD than are washing compulsions, (Gibbs & Oltmanns, 1995). It should be noted however, that subscale 1 of the PI-WSUR also includes items regarding various contamination obsessions and these likely influenced the results to some extent.

The original version of the test was narrowed down through item deletion based on the individual subscale Cronbach’s alpha levels as well as the item to subscale correlations. The revised version of the OCPDQ was much shorter, with 80 total items and an even amount of 10 items per subscale. This revised version had a slightly lower total Cronbach’s alpha ($\alpha=.820$), but each of the subscales’ individual Cronbach’s alphas were raised, and all but one subscale (Conscientiousness/Inflexible Morals) met the exploratory lower-limit of .60. The addition of new items or re-writing of various items will likely improve the reliability levels even further in the future. It is expected that the revised version will be easier to administer and score due to the shorter and more balanced subscales. Additional increases in the simplicity of administration will likely make the OCPDQ useful as a screening tool for levels of OCPD traits. This could be highly useful in settings in which a comorbid diagnosis of OCPD may have negative outcomes on the prognosis of other Axis I disorders such as ED, (Crane et al., 2007). Conceivably the effectiveness of treatment could be improved by incorporating a focus on how certain OCPD traits, such as perfectionism or rigidity, may influence an individual’s patterns of cognition and behavior.

Another interesting development was the emergence of three factors for the OCPDQ revised version, namely Factor I: “Perfectionism”, Factor II: “Inflexible Control”, and Factor III: “Disorganized Hoarding”. Previous studies have found that a
multifactorial model provided a significant improvement in fit over the one-dimensional factor model of DSM-IV OCPD (Ansell et al., 2008). The Ansell et al., (2008) study found that the data supported a two factor model, including a “perfectionism” factor and a “rigidity” factor, both of which emerged in the present study. In the present research however, a third factor emerged which separated “Hoarding” from the other factors and most strongly separated it from “Preoccupation with details”. This result was likely due to the highly oppositional nature of collecting clutter and useless items with maintaining strict organization and order. These different dimensions may be indicative of alternate subtypes of OCPD and this warrants further exploration. The results of the present research indicate that the OCPDQ can be used to determine what dimensions of the disorder an individual may possess. This would be a valuable tool in creating specifically tailored treatment plans that address an individual’s unique constellation of obsessive and compulsive traits. By pinpointing the traits of OCPD that an individual exhibits, therapists can eliminate the need to address criteria of the disorder that are inapplicable. This ultimately should help to reduce the amount of time a client is distressed and make therapy more beneficial.

**Potential Limitations**

One of the most pressing limitations of the current study was that the OCPDQ was not compared to a direct measure of Obsessive-Compulsive Personality Disorder. Although the LOI is a measure of obsessional traits and symptoms, it does not directly address all the facets of OCPD and there is much overlap with OCD traits and symptoms. The Padua Inventory-Washington State University Revision also is a measure of
obsessions and compulsions but is not considered a diagnostic test for OCPD. These two measures were selected for the present research because of the assessments’ ease of administration and scoring. The length and simplicity of the measures made it possible to administer the three questionnaires to a larger sample in a group setting as opposed to conducting individual private interviews. In order to further validate the new OCPDQ, it would be beneficial to compare the results to an actual diagnostic measure for OCPD such as the Structured Clinical Interview for DSM-III-R (SCID-II) and SCID-II revisions, the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV), or the Structured Interview for DSM-IV Personality (SIDP-IV). The addition of these time consuming yet valuable structured interview techniques would provide a more direct measure of OCPD that the new scale could be compared to in order to further confirm the scale’s validity.

Another possible limitation was that the mental health status of the participants was not reported by a qualifiedclinician and was instead collected through a self-report measure. The current mental health status of the participants was unknown and participants were not prescreened for existing disorders. The questionnaire only included items such as “Have you ever been diagnosed with a mental disorder?”, and “Have you ever though you might have a mental disorder?” which may or may not have applied to the participants current mental status. It is also possible that some participants may have failed to report diagnoses for various reasons and in some cases, these individuals may not have been aware of a preexisting diagnosis.

The questionnaire packet was also somewhat lengthy with approximately 11 pages of questions as well as a demographics and informed consent form. There were a total of 251 questions between the three measures and it is possible that the respondents
may have been somewhat mentally fatigued by the end of the packet. The Padua Inventory-Washington State University Revision was the last measure in the packet and the results for this assessment may have been partially affected by respondent fatigue.

**Directions for Future Research**

The focus of future research should include the administration of the OCPDQ to clinical populations. This could include those with a pre-existing diagnosis of OCPD as well as those with an Axis I disorder that is highly comorbid with OCPD, such as OCD or various Eating Disorders or Anxiety Disorders. Further administration of the OCPDQ may reveal the emergence of different subtypes of OCPD within these various populations. By conducting the OCPDQ in a population of individuals with a diagnosis of OCPD, it would be possible to further assess the existence of various subtypes of OCPD within the subscales of the measure. Data collection from this population would also provide researchers with appropriate cut-off points for significantly high levels of obsessive-compulsive personality traits. It would also be beneficial continue collecting normative data from different populations including individuals with various socioeconomic statuses, racial and ethnic backgrounds, education levels, and those in diverse regions. This would determine whether or not the current findings are sample specific or whether they can be considered generalizable.
REFERENCES


Grant B.F., Hasin, D.S., Stinson, F.S., Dawson D.A., Chou S.P., Ruan W.J., & Pickering R.P.,


Villemarette-Pittman, N. R., Stanford, M. S., Greve, K. W., Houston, R. J., & Mathias, C., W.,


APPENDICES
Appendix 1

Demographic Information

(This information will be kept confidential)

1. Age: 

2. Sex:  Male___________  Female________

3. Race/Ethnicity:  Caucasian/White _____  African American _____

   Hispanic/Latino_____  Asian_____  Native  American _____  Other

4. Marital Status:  Now Married_______ Widowed _________ Divorced_______

   Separated _________ Never Married _________

5. Have you ever been diagnosed with a mental disorder? _________________

   If so which one(s)? ___________________________________________

6. Have you ever thought that you might have a mental disorder? _________________

   If so which one(s)? ___________________________________________

7. Have you ever been diagnosed with a serious medical illness?

   If so which one(s)? ___________________________________________
Appendix 2

Study ID (Last 4 digits of your phone #): _______________ Date: ___/___/_____

Instructions: Please put a circle around the response that you feel best DESCRIBES YOUR USUAL SELF (for the past two years or longer) in relation to each statement. Circle T if you think the statement is true. Circle F if you think the statement is false. There are no right or wrong answers and there are no trick questions. Please respond as honestly as you can, but don't ponder too long over each item.

*Please answer every question, even though sometimes you may find it hard to decide.*

<table>
<thead>
<tr>
<th>Circle one</th>
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<tbody>
<tr>
<td>1. I have a hard time with people who are preoccupied with rules.</td>
</tr>
<tr>
<td>2. The assignments I take on need to be completed just right.</td>
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<tr>
<td>3. My work comes before any leisure (play) activities.</td>
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<tr>
<td>4. I dislike people who “cut corners.”</td>
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<td>5. I have piles of old “stuff” lying around the house/office.</td>
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<td>6. I cannot depend on anyone to clean my house/office the right way</td>
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<td>7. I try to save money each month for future emergencies.</td>
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<td>8. Others would describe me as rigid.</td>
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<td>9. I am a spontaneous person and hate having to follow a tight schedule.</td>
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<td>10. People often comment that my standards are high.</td>
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<td>11. I constantly think about work, even when I am on vacation.</td>
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<td>12. There is no excuse for lying to someone else.</td>
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<td>13. I enjoy collecting things.</td>
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<td>14. People sometimes say that I need to have the final say.</td>
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<td>15. I have a budget and I try to follow it.</td>
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<td>16. I have difficulty changing my routine.</td>
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<td>17. I keep a to-do list and carefully follow it.</td>
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<td>95.</td>
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</table>
96. I don't like to undertake any project unless I have a pretty good idea as to how it will turn out. T F
97. The hardest battles are often with oneself. T F
98. I keep such high standards that sometimes it gets in my way of getting projects completed on time. T F
99. When I was young I did not care about school. T F
100. I consider the observance of social customs and manners an essential aspect of my life. T F
101. I feel guilty if I do not recycle things. T F
102. When I work on a committee I like to take charge of things. T F
103. I respect people who use coupons to save money. T F
104. I don't like things to be uncertain or unpredictable. T F
105. I prefer a line of work requiring different activities, to one which involves much attention to detail. T F
106. When I was young my parents and I got into fights over doing my homework. T F
107. I dislike going to parties. T F
108. I dislike doing things which are not customary, even though they seem all right in other respects. T F
109. When was young my room was always cluttered. T F
110. I prefer to work alone and be held solely responsible. T F
111. I have no trouble ordering alcohol and desserts when I eat out. T F
112. I often feel that I can make up my mind with great ease. T F
113. I never use a calendar. T F
114. I have encountered some problems that are so full of possibilities that I have been unable to make up my mind about them. T F
115. I don't like working overtime, even when I am compensated. T F
116. My family considers me very set in my ways. T F
117. When I was a child I used to collect things that did not have an immediate use. T F
118. I often prefer to do things my own way, even when some other method is more commonly accepted. T F
119. I find it hard to set aside a task that I have undertaken, even for a short time. T F
120. When I do something, I hate dealing with the smallest details. T F
121. I often start doing my assignments at the last minute. T F
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<tr>
<td>122.</td>
<td>I don't like my line of work.</td>
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<tr>
<td>123.</td>
<td>I think there are a large number of people with unwholesome sexual morals.</td>
</tr>
<tr>
<td>124.</td>
<td>When I was a child I got upset when my things were discarded.</td>
</tr>
<tr>
<td>125.</td>
<td>A good manager allocates many tasks to others.</td>
</tr>
<tr>
<td>126.</td>
<td>I generally am one of the last to adopt new technology.</td>
</tr>
<tr>
<td>127.</td>
<td>I prefer to do one thing at a time rather than working on several projects at the same time.</td>
</tr>
<tr>
<td>128.</td>
<td>When I was young I made many careless errors on my homework.</td>
</tr>
<tr>
<td>129.</td>
<td>I look forward to weekends to get a break from work.</td>
</tr>
<tr>
<td>130.</td>
<td>If somebody acts in an unethical manner they should be held accountable.</td>
</tr>
<tr>
<td>131.</td>
<td>Wasting food is unacceptable.</td>
</tr>
<tr>
<td>132.</td>
<td>I often meet people who are supposed to be experts in my line of work who really don’t know as much about the work as I do.</td>
</tr>
<tr>
<td>133.</td>
<td>Once I have made up my mind, it is difficult for others to change it.</td>
</tr>
<tr>
<td>134.</td>
<td>Children should be taught to strive for perfectionism.</td>
</tr>
<tr>
<td>135.</td>
<td>I exercise very regularly and feel uncomfortable if I am not able to.</td>
</tr>
<tr>
<td>136.</td>
<td>It is disrespectful to be late for an appointment.</td>
</tr>
<tr>
<td>137.</td>
<td>I have found that group consensus always leads to the right outcome.</td>
</tr>
<tr>
<td>138.</td>
<td>My family has pointed out more than once that I am very controlling.</td>
</tr>
<tr>
<td>139.</td>
<td>I have run or plan to run a marathon.</td>
</tr>
<tr>
<td>140.</td>
<td>My family considers me to be flexible and easygoing.</td>
</tr>
<tr>
<td>141.</td>
<td>I often have to redo the work of others because it my does not meet my standards.</td>
</tr>
<tr>
<td>142.</td>
<td>I often get upset with others if they are preventing me from arriving on time.</td>
</tr>
<tr>
<td>143.</td>
<td>Occasionally I complain to the waiter when I am served inferior or poorly prepared food.</td>
</tr>
</tbody>
</table>
Appendix 3

Leyton Obsessional Inventory

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Appendix 4

Padua Inventory- Washington State University Revision

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Appendix 5

OCPDQ Scoring Key

Add the items for each sub-scale. The total score is the sum of the sub-scales.
Score one mark for each item when True is circled, except for items followed by an asterisk (*). These receive one mark when False is circled.

1. Preoccupation w/details.
   1*, 9*, 17, 25, 33, 41*, 49, 57, 65, 73*, 81, 89, 97, 105*, 113*, 120*, 127

2. Perfectionism.
   2, 10, 18, 26, 34*, 42*, 50, 58*, 66, 74*, 82, 90, 98, 106*, 114, 121*, 128*, 134

3. Excessive devotion to work.

   4, 12, 20*, 28*, 36, 44, 52, 60, 68, 76*, 84, 92, 100, 108, 116, 123, 130, 136, 140*, 142, 143*

5. Hoarding.
   5, 13, 21, 29*, 37, 45, 53, 61*, 69, 77, 85, 93, 101, 109, 117, 124, 131

6. Reluctance to delegate.
   6, 14, 22*, 30, 38*, 46, 54, 62*, 70*, 78, 86, 94, 102, 110, 118, 125*, 132, 137*, 141

7. Miserliness.
   7, 15, 23, 31*, 39, 47*, 55*, 63, 71, 79, 87, 95*, 103, 111*

8. Rigidity and Stubbornness.
   8, 16, 24*, 32*, 40, 48, 56, 64, 72*, 80*, 88, 96, 104, 112*, 119, 126, 133, 138
Appendix 6

Leyton Obsession Inventory factors and items with high loadings as reported in the

Wellen et al., 2007 study

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Appendix 7

Padua Inventory-Washington State University Revision five subscales and corresponding items as reported by Burns et al., (1996).

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Appendix 8

(Copy of original approval e-mail from the IRB)

Updated "Validation of Obsessive-Compulsive Personality Disorder measures"

Sheila M
Patterson

Thursday, February 18, 2010 12:04PM

To: aporeh@yahoo.com, Rachel J Martukovich

Cc: Richard Piiparinen

Ms. Martukovich and Dr. Poreh
We are in receipt of your updated IRB application

Please accept this e-mail as your approval for this research project, with an effective
data collection date 2/18/10. The approved cover sheet will be forthcoming

I am cc'ing the IRB staff so that they have a copy of your request, the questionnaire,
and this approval.

Best,
IRB proposal

-----Forwarded by Sheila M Patterson/s.m.patterson/CSUOHIO on 02/18/2010
11:53AM -----
Appendix 9

Informed Consent Statement

To the Participant:

The purpose of the present study is to collect updated normative data for a new personality questionnaire. Your participation will be limited to one session lasting approximately 20 minutes. Later you might be contacted and asked if you would like to return to be interviewed which would take 10-15 minutes. Please be aware that you are not required to participate in this research and you may discontinue your participation at any time without penalty. You may also omit any items on the questionnaire you prefer not to answer.

There are minimal risks associated with responding to the questionnaire. Your name will not appear anywhere on the form, the only identifying marker will be the last four digits of your phone number. Only the investigators will have access to your signed consent form and your responses will only be linked back to you if we would like to contact you and ask if you would like to come in for an interview as previously mentioned. Your participation in this study is completely voluntary; at any time, you may withdraw from participation without penalty.

Although your participation in this study offers no direct benefits to you, many people find it interesting to participate in a research experiment.

At this time you may ask any questions you have about the research. In addition, you may contact Rachel Martukovich at (216) 536-9788, email r.martukovich@csuohio.edu or Dr. Amir Poreh at (216) 687-3718, email a.poreh@csuohio.edu if you have any concerns. Should you need further assistance or if you are experiencing psychological distress, you may schedule an appointment at the CSU Counseling and Testing Center by calling (216) 687-2277. Finally, if you have any questions about your rights as a research participant you may contact the Cleveland State University Institutional Review Board at (216) 687-3630.

There are two copies of this letter. After signing them, please return one copy and keep the other for your records. Thank you in advance for your participation and support.

Please indicate your agreement to participate by signing below.

I am at least 18 years old and have read and understood this consent form and agree to participate:

(Signed name)

(Printed name/date)

Phone Number: ________________________________

66
Appendix 10

Obsessive-Compulsive Personality Disorder Questionnaire- 80 Item Revision

(* denotes that the target response to the question is “False” as opposed to “True”)

Criteria 1: “Preoccupation with details”

Q1* “I have a hard time with people who are preoccupied with rules.”
Q9* “I am a spontaneous person and hate having to follow a set schedule.”
Q17 “I keep a to-do list and carefully follow it.”
Q25 “When I purchase or use a new product I read the manual carefully.”
Q41* “I dislike using daily planners, schedules, and lists.”
Q73* “I am more of an idea person and hate being preoccupied with details.”
Q89 “Without discipline nothing gets done.”
Q97 “The hardest battles are often with oneself.”
Q113* “I never use a calendar.”
Q120* “When I do something, I hate dealing with the smallest details.”

Criteria 2: “Perfectionism”

Q2 “The assignments I take on need to be completed just right.”
Q10 “People often comment that my standards are high.”
Q18 “I often delay handling a project because I want to make it better.”
Q26 “I tend to be hard on myself when I make a mistake.”
Q50 “I strive to achieve high standards in anything I do, even if it takes longer to complete.”
Q66 “I tend to over think the details of a project.”

Q82 “After I complete a project I often can’t stop thinking how I might have been able to make it better.”

Q90 “I enjoy working with people who pay attention to details.”

Q98 “I keep such high standards that sometimes it gets in the way of getting projects completed on time.

Q121* “I often start doing my assignments at the last minute.”

**Criteria 3: “Excessive devotion to work”**

Q3 “My work comes before any leisure (play) activities.”

Q11 “I constantly think about work, even when I am on vacation.”

Q19 “I often take work-related phone calls after hours.”

Q35* “I would rather spend time socializing than at work.”

Q43 “I often work on the weekend, even when I don’t have to.”

Q51 “People tell me I am excessively devoted to work.”

Q67* “When I come home I don’t want to think about work.”

Q83* “People who win the lottery should quit work and enjoy life.”

Q115* “I don’t like working overtime, even when I am compensated.”

Q122* “I don’t like my line of work.”

**Criteria 4: “Conscientiousness/Inflexible Morals”**

Q4 “I dislike people who “cut corners”.

Q12 “There is no excuse for lying to someone else.”
Q20* “In desperate times stealing is okay.”
Q36 “The road to success is being honest and leading a moral life.”
Q60 “People often tell me I am too moral.”
Q84 “I sometimes find that people are too laid back about moral issues.”
Q92 “I often worry about issues of morality or ethics.”
Q116 “My family considers me very set in my ways.”
Q123 “I think there are a large number of people with unwholesome sexual morals.”
Q130 “If somebody acts in an unethical manner they should be held accountable.”

Criteria 5: “Hoarding”

Q5 “I have piles of old “stuff” lying around the house/office.”
Q21 “I have a hard time giving things away.”
Q29* “I regularly throw out things that I don’t need.”
Q37 “I become very distressed when I have to throw things away.”
Q45 “I have difficulty parting with objects because I know they might be useful in the future.”
Q53 “Much of my living area is packed with things.”
Q61* “I regularly discard old things that I have little space for.”
Q93 “I often keep free things for which I have no immediate use.”
Q109 “When I was young my room was always cluttered.”
Q117 “When I was a child I used to collect things that did not have immediate use.”
Criteria 6: “Reluctance to delegate”

Q30 “I often feel that tasks are not done right unless I do them myself.”
Q38* “I enjoy working on group projects.”
Q46 “I have problems with assigning tasks to others.”
Q62* “I have no issues asking other people for assistance when it is needed.”
Q78 “I can’t trust others to do things right.”
Q86 “I often end up doing a lot of jobs myself because no one else can do them exactly the way I want them done.”
Q94 “I sometimes take on responsibilities of others to make sure things are done right.”
Q110 “I prefer to work alone and be held solely responsible.”
Q118 “I often prefer to do things my own way, even when some other method is more commonly accepted.”
Q141 “I often have to redo the work of others because it does not meet my standards.”

Criteria 7: “Miserliness”

Q7 “I try to save money each month for future emergencies.”
Q15 “I have a budget and I try to follow it.”
Q23 “One should not spend too much money on leisure activities.”
Q47* “I have no trouble spending money when I am in a restaurant.”
Q55* “I have no money saved for emergencies.”
Q63 “People sometimes say that I am tight with money.”
Q71 “The idiom “A penny saved is a penny earned” is a good description of how I view money.”
Q87 “I do not replace things such as cars and appliances that are not broken.”

Q103 “I respect people who use coupons to save money.”

Q111* “I have no trouble ordering alcohol and desserts when I eat out.”

Criteria 8: Rigidity and Stubbornness

Q16 “I have difficulty changing my routine.”

Q24* “I enjoy trying new things.”

Q40 “The idiom “my way is the right way” hold true.”

Q48 “I become easily flustered/upset when things do not go my way.”

Q56 “I have a set way of doing things.”

Q64 “I do not enjoy changing plans that are already made.”

Q72* “People often describe me as very easy going and flexible in my ways.”

Q88 “It bothers me when something unexpected interrupts my daily routine.”

Q104 “I don’t like things to be uncertain or unpredictable.”

Q138 “My family has pointed out more than once that I am very controlling.”