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The impact of pre-treatment identification of personality style and personality disorder symptoms on psychotherapy outcomes in a training clinic

Shauncie Marie Skidmore
shauncie.skidmore@va.gov

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The Impact of Pre-Treatment Identification of Personality Style and Personality Disorder Symptoms on Psychotherapy Outcomes in a Training Clinic.

by
Shauncie Marie Skidmore, M.S.

Dissertation
Submitted to the Department of Psychology
Eastern Michigan University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

in
Clinical Psychology

Dissertation Committee:
Karen Saules, Ph.D., Chair
Norman Gordon, Ph.D.
John Knapp, Ph.D.
Denise Tanguay, Ph.D.

26 October 2009
Ypsilanti, Michigan
The Impact of Pre-Treatment Identification of Personality Style and Personality Disorder Symptoms on Psychotherapy Outcomes in a Training Clinic.

Shauncie Marie Skidmore

APPROVED:

Kargh Saules, Ph.D.

Date

10/26/09

Date

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Date

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Date

10/26/09

Date

4/12/10

Deborah de Laski-Smith, Ph.D.
Interim Dean of the Graduate School
Dedication

This dissertation is dedicated to the Eastern Michigan University community, without whom this momentous academic endeavor would not have been possible. In particular, it is dedicated to Dr. Karen Saules for her unwavering professionalism and support. Pages of gratitude could be written. I sincerely thank you for everything you have done for me.
Acknowledgements

It is with very deep gratitude and a heart felt thank you that I wish to acknowledge the organizations and individuals below. Without their help this endeavor would not have been possible.

To the clients seeking therapy services who were willing to share their thoughts and feelings, to the therapists who willingly participated in this project, to the clinic directors – Dr. Lisa Lauterbach and Dr. Karen Saulcs – for allowing this study to take place at their very busy clinics, to the clinic staff and supervisors who assisted in every phase of this study, to the students seeking research experience who played a key role in subject recruitment and data collection – Doug, Amy, Alicia, Katelyn and Sean – this could not have been done without your very valuable help, to all the friends who encouraged me through this process, to my family who honestly believed I would be able to apply for Social Security by the time I completed this degree, to Amy and Jeremy for all your wise counsel – statistics and otherwise, to Ralph and Mark for your very special support, to Amy Collins for helping in a pinch, to Stephanie Tandy for all her help and infectious smile, to the American Psychological Association and the EMU Graduate School for their financial support of this project, to the Psychology Department faculty for their wise counsel and awesome instruction, and to my dissertation committee – Dr. Norman Gordon, Dr. John Knapp, and Dr. Denise Tanguay - for their unending patience.... thank you so very much!
Abstract

To investigate the clinical and fiscal feasibility of administering a pre-treatment, dimensional personality assessment to clients seeking treatment at university-based counseling centers, a multi-phase study was conducted. This study sought to replicate the results of a recent study conducted by Ryder, Costa Jr., and Bagby (2007) regarding the validity of the DSM-IV-TR PD symptoms and their relationship to normal personality traits. This study also investigated the clinical utility of providing pre-treatment personality information to therapists, as assessed by a dimensional measure of normal personality – the NEO-PI-R. Impact on treatment outcome was evaluated. After completing a pre-treatment assessment battery, university-affiliated clinic clients were randomly assigned to treatment condition (therapist received results of NEO-PI-R assessment or therapist did not receive results). Client treatment outcome data were collected for the first six sessions of therapy. Results from both phases of the study were mixed, indicating that additional research on both topics is warranted. Replication analyses generally supported the results of Ryder et al. (2007); however, more research needs to be conducted before the generalizability of the results can be adequately addressed. Likewise, access to pre-treatment personality assessment results appeared to be beneficial from a preventive medicine perspective; however, more methodologically rigorous investigations need to be conducted before anything definitive can be deduced.
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The Impact of Pre-Treatment Identification of Personality Style and Personality Disorder Symptoms on Psychotherapy Outcomes in a Training Clinic.

Statement of the Problem

Aided by the passage of the Health Maintenance Organization (HMO) Act in 1973, managed care organizations have dominated the health care scene since the 1990s. The primary purpose of these organizations is to stem the rising cost of health care, including behavioral/mental health care. Since the late 1990s, HMOs and their behavioral/mental health care subcontractors (managed behavioral health organizations; MBHOs) have been credited with subduing rising medical costs. They accomplished this by implementing cost containment strategies that reduced unnecessary hospitalizations, lowered provider fees, and limited assessment and therapy services (Frank & Garfield, 2007; Meyer et al., 2001).

A particular cost containment strategy employed by MBHOs is to limit the number of psychotherapy sessions a client may obtain during a specific time frame, typically 6 to 20 sessions per calendar year. Interestingly, researchers (Anderson & Lambert, 2001; Lambert, Hansen, & Finch, 2001) have determined that 50% of therapy clients required 11 to 21 sessions of treatment before they met criteria for clinically significant therapeutic improvement. Clinically significant improvement was defined as a 14-point decrease in a total symptom score on a measure of symptom distress [Outcome Questionnaire 45.2 (OQ45.2); Lambert et al., 1996] when the initial total symptom score is in the dysfunctional range (above 63 on the OQ 45.2).

Not only is it interesting to note that this research suggested the number of sessions needed to effect change may be greater than the typically allotted 6 to 20, it begs the questions, “What is the treatment status of the other 50% of the clients?” and “What factors
impede or facilitate therapeutic effectiveness?" According to the psychotherapy literature, two of the major impediments to effective therapeutic outcomes are poor therapeutic alliance (e.g., Klein et al., 2003; Kopta, Lueger, Saunders, & Howard, 1999) and comorbid personality disorder (PD) symptomology (e.g., Chiesa, Fonagy, Holmes, Drahorad, & Harrison-Hall, 2002). Unfortunately, third party payers are reluctant to approve payment for services related to personality assessment (e.g., Mariush, 2004; Meyer et al., 2001). They contend that there is no empirical evidence to suggest personality assessment, in particular, is useful in the context of current treatment protocols. They also maintain that personality assessment procedures significantly deplete limited psychotherapy funds, thereby decreasing the number of sessions a client is eligible to receive (e.g., Eisman et al., 2000; Kubiszyn et al., 2000).

In light of data suggesting the most effective therapy experience could entail more sessions than third-party payers are willing to reimburse, it has become imperative that providers be able to quickly identify potential obstacles to effective treatment outcome so that clients’ concerns can be better addressed in the insurance-coverage allocated time frames. The development of a time and cost effective pre-treatment protocol that enhances the therapeutic alliance, facilitates clinically significant therapeutic change, and is deemed acceptable for routine reimbursement by third-party payers is sorely needed. Since therapeutic alliance and comorbid PD symptomology have been identified as major impediments to therapeutic change, any pre-treatment behavioral health care protocol should include measures of these moderators.

However, thwarting the development of an empirically validated pre-treatment assessment protocol that would include measures of personality assessment is a literature full
of experimental studies questioning the clinical validity of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Association, 2000), especially the personality disorder categories. The DSM-IV-TR Axis II personality disorder categorical system is often utilized as the basis for many personality assessment instruments. Critics note the system has excessive within-disorder diagnostic heterogeneity, high rates of between-disorder diagnostic overlap, and poor correlation with functional impairment (e.g., Grilo et al., 2001; Widiger & Frances, 2002).

Thus, there are two issues that need to be addressed when considering the feasibility of behavioral health care pre-treatment assessment for personality disordered symptomology and therapeutic alliance: (1) will the chosen measure for personality assessment be clinically valid and useful, and (2) will the pre-treatment assessment battery yield results that are cost-effective in terms of reduced symptom distress and subsequent reduction in utilization of services, so that third-party payers will reimburse the cost of the assessment services? The answers to these questions will provide behavioral/mental health practitioners with information that may promote reimbursement for services that identify known impediments to effective therapeutic outcomes.
Overview of the Behavioral Health Care System and Issues Impacting the Delivery of Therapeutic Treatment

"All modern societies use varying types and intensities of health care rationing simply because there are not enough resources to meet the need and demand" (Cummings, Budman, & Thomas, 1998, p. 460).

At one point in the not-so-distant past, assessment was a major component of the services offered by psychologists. Testing services were justified as being a means to improve diagnosis, improve treatment outcomes, and shorten treatment (Ambrose, 1997). However, with the advent of managed behavioral health care, the autonomy of many psychologists, with regard to deciding when and how to best assess and treat clients, has been significantly curtailed (Maruish, 2004). Why? According to numerous authors (e.g., Cummings, O’Donohue, & Cummings, 2009; Frank & Garfield, 2007; Maruish, 2004), the two main reasons for the development of managed behavioral care oversight were “runaway” costs and lack of empirical evidence to justify expenditures.

Runaway Costs

In the 1980s, three events in behavioral health care converged to set the stage for runaway costs:

1) In an effort to slow Medicare and Medicaid spending, the United States Congress enacted diagnosis related groups (DRGs). DRGs defined the maximum number of hospital days for which the federal government would pay. However, Congress was unable to write DRGs for psychiatry, leaving hospital stays for this service up to the discretion of the practitioner (Cummings et al., 2009).¹

¹ According to English, Sharfstein, Scherl, Astrachan, and Muszynski (1986), DRGs for psychiatry were inappropriate due to evidence that suggested DRGs were poor predictors of resource utilization; and, since hospitals treat more severe cases, they would be at financial risk if payment for services was based on DRGs.
2) Most states repealed certificate-of-need legislation for in-patient behavioral health care. Thus, to address the loss of revenue from DRGs for medical hospitalizations, hospitals doubled the number of beds available for psychiatric in-patient hospitalizations. The increase in beds was accompanied by an increase in spending – from $350 million in 1980 to $1.2 billion in 1990 (Frank & Garfield, 2007).

3) From the 1960s through the 1980s, indemnity plans (fee for service plans) allowed psychotherapy clients to obtain psychotherapy services for as long as the client and/or therapist felt the services were justified. Evidence from national surveys in the 1970s and 1980s indicated that 80% of those seeking psychotherapy services under indemnity plans utilized 18 or fewer sessions of treatment (e.g., Cummings, 1977; Wright, 1991, 1992). This suggested that 20% of those seeking psychotherapy services needed long-term treatment. Research conducted by Cummings and VandenBos during that time collaborated these survey results (Cummings, 1977; Cummings & VandenBos, 1979, 1981). Their findings indicated that 85% of therapy clients responded to treatment in 15 sessions or less, while another 10% needed “and should receive” long-term therapy, with an additional 5% being interminable (Cummings, Budman, & Thomas, 1998). These authors noted, whether by design and or a consequence of circumstance, from the 1960s until the 1980s, many solo-practice therapists eventually acquired a caseload of those 15-20% long-term clients. Thus, according to Cummings, Budman, and Thomas (1998, p. 463), “During the
heyday of indemnity-reimbursed solo practice, 20% of the patients could absorb 70% of the expenditures.”

Unable to control the rapidly escalating behavior health care costs, Congress turned the problem over to the private sector, and managed health organizations (HMOs) and their subcontractors, managed behavioral health organizations (MBHOs), came into being. Cummings et al. (2009, p. 33) portrayed the situation succinctly:

The Golden Age of psychotherapy was over by the mid-1990s, done in by our insistence on long term (largely psychoanalytically oriented) psychotherapy, as well as the profession’s refusal to address out of control mental health costs that exceeded for a time a 16% inflation rate. Controls were foisted upon the economically helpless psychotherapy practitioners, often arbitrarily, but ever so drastically.

The main cost containment strategies employed by MBHOs were lower reimbursement for services, significant curtailment of inpatient care, denial or significant curtailment of assessments, and limitation of the number of therapy sessions available per year per client (Frank & Garfield, 2007; Meyer et al., 2001). These strategies continue to be the major cost containment techniques utilized by MBHOs to date.

Lack of Evidence to Justify Expenditures

What enabled MBHOs to control utilization of inpatient care, deny reimbursement for most psychological assessment, and dictate to psychotherapists how many sessions they have to address a client’s distress-related symptomology? According to these arbitrators of care, the psychological literature.
For instance, MBHOs often deny reimbursement for personality assessment on the basis that “there is no conclusive, unequivocal research that demonstrates that objective personality assessment in and of itself” improves diagnosis, improves treatment outcomes, or shortens treatment (Ambrose, 1997, p. 66). Moreover, third-party payers have used the DSM to justify nonpayment for personality assessment services:

One provider manual states: However... [the MCO] cannot support the use of tests for behavioral health diagnostic purposes since the DSM-IV... makes no reference to psychological or neurological testing for diagnostic purposes. Instead to make behavioral health diagnoses the DSM-IV emphasizes clinical interviews and obtaining information from persons who have observed the patient. (Eisman et al., 2000, p. 132).

With regard to dictating the number of allowable therapy sessions, MBHOs rely on national survey figures, such as those from the 1970s and 1980s mentioned previously, that indicate typical psychotherapy services range from 1-2 sessions for 40% of clients, less than 10 sessions for 60% of clients, and less than 18 sessions for 80% of clients (Wright, 1991, 1992).

Notably, there is a growing literature that indicates treatment for personality disorder symptomology has significant cost reduction benefits with regard to health care utilization following treatment (e.g., Maruish, 2004). However, as mentioned above, personality assessment, in and of itself, has not been empirically validated as a means to realizing behavioral health cost reductions (e.g., Ambrose, 1997; Jones, Amaddeo, Barbui, & Tansella, 2007). So, the MBHOs may be justified in using this rationale for denial of assessment. However, using national survey utilization data to justify limiting the number of available
sessions is not justifiable, given that the reason for leaving therapy in these surveys is unclear. In fact, Hennessy and Green-Hennessy (1997) cite several studies that indicate client preferences regarding number of sessions of psychotherapy are influenced by levels of cost-sharing and out-of-pocket expenses associated with services – not recovery from symptomology.

**Empirical Evidence Regarding Number of Sessions Needed to Evidence Psychotherapeutic Recovery**

An administrative requirement imposed upon practitioners, which MBHOs utilize under the rubric of containing costs, is the provision that behavioral health care providers supply documentation that demonstrates the effectiveness of treatments offered to clients. A client self-report questionnaire developed specifically for outpatient psychotherapy assessment is typically utilized (e.g., OQ 45.2, Lambert et al., 1996; Treatment Outcome Package, Kraus, Jordan, & Horan, 1996; Clinical Outcomes in Routine Evaluation – Outcome Measure, Evans et al., 2000). It is interesting to note that Lambert and his colleagues have conducted a series of studies that challenge the validity of limiting therapy sessions, especially with regard to symptom recovery issues.

As noted previously, Lambert’s research team (Anderson & Lambert, 2001; Lambert, Hansen, & Finch, 2001) suggested that only half of those remaining in therapy long enough to evidence clinically significant symptom change realize that change in 11 to 21 sessions of therapy. In particular, Anderson and Lambert (2001) reported the results of a survival analysis utilizing the OQ 45.2 data from clients seen in a training clinic setting. Study outcomes indicated that 25% of the 100 clients beginning therapy in the dysfunctional range (total symptom distress levels greater than 64) were estimated to reach clinically significant
change by the end of session 8, 50% after session 13, and 75% after session 25. When analysis was conducted on the group of clients reporting initial levels of distress higher than 83.1 (n=56), survival analysis results indicated a 25% recovery rate after 10 sessions, a 50% recovery rate after 20 sessions, and a 73% recovery rate after 26 sessions.

Likewise, in the study conducted by Lambert, Hansen, and Finch (2001), utilizing the data from 6,072 clients from a variety of employee assistance programs and managed behavioral health care programs, survival analyses results suggested that 50% of those who begin treatment in the dysfunctional range could be expected to achieve clinically significant change after 21 sessions of psychotherapy. If those who terminated therapy early were to be included in these analyses, the proportion of clients evidencing significant change in symptom distress early in treatment would be lower (Lambert, Hansen, & Finch, 2001).

Limited Availability of Services Revisited

Even though research suggests that 50 to 75% of clients need 11 to 40 sessions of therapy to realize clinically significant change in their symptomology, it is doubtful that employers and MBHOs will be incorporating approval for extended services into their therapy protocols. “The demands of managed mental health care are for... time-efficient services” (Quirk, Strosahl, Kreilkamp, & Erdberg, 1995, p. 28). Moreover, the maximum number of sessions is often limited by contract stipulations between the MBHO and the employer purchasing the MBHO services (Howard & Bassos, 2000).

Thus, a therapist’s ability to effectively address a client’s presenting problem(s) is often hampered by the unwillingness of MBHOs to approve more than six to twenty sessions in a given fiscal year. Consequently, if therapists are to be optimally effective in twenty
sessions or less, it becomes imperative that the impediments to client change be quickly identified and addressed.

**Identifying the Impediments to Therapeutic Change**

Numerous researchers have postulated a variety of predictors of therapeutic change. Therapist-client matching (e.g., Calvert, Beutler, & Crago, 1988), client-treatment matching (e.g., Conrod, Pihl, Stewart, & Dongier, 2000), severity of symptoms, past use of therapy, duration of the problem, treatment expectation (e.g., Lutz, 2002), therapeutic reactance (e.g., Arnow et al., 2003), therapeutic alliance (e.g., Kivlighan & Shaughnessy, 1995; Krupnick et al., 1996), specific personality variables (e.g., Conte, Plutchik, Picard, Karasu, & Vaccaro, 1988; Conte, Plutchik, Picard, & Karasu, 1991), and comorbid personality disorders (e.g., Shea, Widiger, & Klein, 1992; Tyrer, Manley, Van Horn, Leddy, & Ukoumune, 2000) are a few of the predictors most often cited in the research literature. Nonetheless, according to Orlinksy, Grawe, and Parks (1994), the five variables that have consistently demonstrated robust relationships with outcome in the research literature are therapist skill, client openness versus defensiveness, client cooperation versus resistance, treatment duration, and overall quality of the therapeutic relationship, often referred to as the therapeutic alliance.

Treatment duration, as noted previously, is highly correlated with the client’s ability to achieve clinically significant change; however, it is the one variable most easily targeted as the venue to control escalating mental health care costs. Therefore, therapist skill, client characteristics, and the therapeutic alliance appear to be the most likely candidates for identification and modification with regard to facilitating therapeutic change.

**Therapist skill.** There is an extremely large literature addressing the various therapist skills and characteristics that can influence the therapeutic process. In a review of this
literature, specifically investigating the therapist characteristics and techniques that negatively impact the therapeutic alliance, Ackerman and Hilsenroth (2001) identified the most common attributes impacting the therapeutic relationship as over structuring the therapy, failure to structure therapy, inappropriate self-disclosure, criticalness, unyielding transference interpretation, inappropriate use of silence, belittling, superficial interventions, unwanted advice, misinterpretation, unsupportive confrontation, and doing something the client does not want or need. They summarized by noting that these negative attributes may weaken the therapeutic alliance and "reduce the opportunity for patient change" (p. 173). Overall, their findings suggested that therapist attributes, as well as client attributes and process variables, can significantly impact the outcome of therapy and that this impact is best understood in the context of the therapeutic alliance.

Therapeutic alliance. Kopta et al. (1999, p. 447) claimed, "Randomized clinical trials repeatedly find that a positive alliance is one of the best predictors of outcome." Their contention is substantiated by numerous outcome studies. Krupnick et al. (1996) reported results from the National Institute of Mental Health Treatment of Depression Collaborative Study suggesting that the therapeutic alliance was predictive of treatment success for 225 patients receiving either interpersonal psychotherapy, cognitive-behavior therapy, imipramine with clinical management, or placebo with clinical management. In addition, Kivlighan and Shaughnessy (1995) reported a significant association between therapist ratings of the working alliance and therapeutic outcome.

Klein et al. (2003) investigated the relationship between alliance and symptomology change in a large sample of chronically depressed patients while controlling for (a) early change in symptoms, hypothesized to possibly influence subsequent alliance ratings and (b)
patient characteristics—gender, severity, comorbid anxiety, substance use, personality disorders, highest level of functioning in last 5 years, and childhood history of abuse and/or neglect. The results indicated early alliance predicted change in depressive symptoms, even after controlling for early change in symptomology and patient characteristics. Thus, empirical research strongly supports the importance of controlling for the strength of the therapeutic alliance if identification of other impediments to therapeutic change is the objective.

**Client personality characteristics.** Although Klein et al. (2003) results implied that client characteristics do not appear to interfere with the ability of the therapeutic alliance to predict therapy outcome, the results of other studies suggest that client characteristics can significantly influence therapeutic outcome. For instance, comorbid personality disorder has been identified as a significant predictor of therapeutic outcome, with researchers contending that comorbid personality disorders are associated with a poorer response to treatment for depression (e.g., Shea, Widiger, & Klein, 1992), anxiety (e.g., Dressen & Arntz, 1998), and substance abuse disorders (e.g., Compton, Cottler, Jacobs, Ben-Abdallah, & Spitznagel, 2003; Pettinati, Pierce Jr., Belden, & Meyers, 1999). Correspondingly, Tyrer et al. (2000) reported that the average hospital stay for psychotic patients with comorbid personality disorder was 49 days longer than the average hospital stay for psychotic patients without personality disorder.

The prevalence of personality disorders in the clinical setting has been estimated to be as high as 78%. Psychiatrists and psychologists responding to a survey (30% response rate) reported that 40% of the clients being treated for maladaptive personality characteristics had a diagnosable DSM-IV Axis II disorder (Westen & Arkowitz-Westen, 1998). Likewise, an
analysis of epidemiological studies of psychiatric disorders conducted by Zimmerman, Chelminski, and Young (2008) indicated that 33 to 50% of patients in psychiatric settings had a personality disorder, as indicated by semi-structured interviews. Notably, results from the Collaborative Longitudinal Personality Disorder Study (Shea, Stout, Yen, et al., 2004) indicated that 78% of the individuals diagnosed with major depressive disorder had one of four co-occurring personality disorders (schizotypal, borderline, avoidant or obsessive-compulsive). Therefore, comorbid personality disorder symptomology appears to be pervasive among clients seeking psychotherapy.

However, client personality characteristics do not have to be “disordered” or maladaptive to negatively or positively influence therapy outcome. For example, Calvert, Beutler, and Crago (1988) investigated the assumption that matching psychotherapy to patient characteristics would result in improved treatment outcome. Their results suggested that patients reporting an internalizing defensive style achieved greater symptom relief with insight/awareness-focused therapies, whereas, externally defended patients achieved greater symptom relief with behaviorally oriented treatments.

Likewise, Conrod, Stewart, Phil, Cote, Fontaine, and Congier (2000) conducted a study investigating the utility of motivation-matched treatments for female substance abusers. Motivation was assessed utilizing a composite of subscales from various empirically validated personality and psychopathology measures [e.g., all NEO-PI-R subscales (Costa & McCrae, 1992); the Trait Anxiety subscale of the State-Trait Anxiety Inventory (Spielberger, Gorsuch, Lushene, Vagg, & Jacobs, 1983); etc.]; results from these subscales were then categorized into five personality-specific motivation types (anxiety sensitive, hopeless-introverted, sensation seeking, impulsive, and low personality risk; Conrod, Pihl, Stewart, &
Dongier, 2000). The study had three conditions: (1) a motivation-matched intervention in which participants with anxiety-related symptoms were assigned to a cognitive restructuring training developed for anxiety disorders, participants with depression-related symptomology were assigned to a cognitive restructuring training for depression, and participants with impulsive and sensation-seeking tendencies were assigned to a cognitive restructuring training that addressed these symptomologies; (2) a motivation film (control) intervention; and (3) a motivation-mismatched intervention. The investigators reported that only the participants in the matched intervention reported reduced frequency and severity of problematic alcohol and drug use. These two studies are just a sample of those that establish the correlation between client personality characteristics and treatment outcome (e.g., Karno, Beutler, & Harwood, 2002; McKnight, Nelson, Hayes, & Jarrett, 1984; Trower, Yardley, Bryant, & Shaw, 1978). Thus, it appears to be important to also identify client personality characteristics—normal or disordered—that may be impediments to therapeutic effectiveness.

In summary, the research literature intimates that identification of client personality characteristics and strength of therapeutic alliance (which inherently incorporates therapist characteristics), combined with effective therapy techniques, can significantly impact therapeutic outcomes. Given that third-party payers are reluctant to approve more than 6 to 20 sessions without sufficient justification, the timing of the identification of possible impediments to therapeutic change is crucial.

**Pre-treatment Assessment**

Haynes, Leisen, and Blaine (1997) have identified the conditions under which pre-treatment assessment is likely to have the greatest utility, one in particular being “when there is a body of knowledge linking treatment methods to client characteristics” (p. 335). The
treatment matching literature, exemplified by the Conrod, Stewart, Pihl, et al. (2000) study, appears to be providing the body of knowledge that links client characteristics to treatment methods. Moreover, a literature base that portends the therapeutic utility of pre-treatment assessment is beginning to develop. Finn and Tonsager (1997) have delineated the benefits of pre-treatment assessment, highlighting results from various studies investigating its utility. The studies in their review indicated that assessment feedback could be utilized as a therapeutic intervention that facilitates the therapeutic alliance.

In one such study, Newman and Greenway (1997) investigated the impact of MMPI-2 feedback for clients seeking therapy at a university counseling center. All participants were administered the MMPI-2 and then randomly assigned to one of two groups: test feedback (experimental condition) or attention-only with delayed feedback (control condition). Results indicated that participants who received MMPI-2 feedback demonstrated a significant decline in self-reported symptom distress levels compared to the attention-only group. Thus, it appears that pre-treatment personality assessment may, in fact, positively impact treatment outcome. However, the positive impact seems to be contingent upon whether or not the results are utilized to determine appropriate treatment (e.g., Conrod, Stewart, Pihl, 2000) or whether the results of the assessment are reviewed with the client (e.g., Finn & Tonsager, 1997; Newman & Greenway, 1997).

**Benefits of personality assessment in a clinical setting**

Regarding the issue of the validity of psychological testing and assessment in general, several authors (e.g., Finn & Tonsager, 1997; Haynes et al., 1997; Meyer et al., 2001) have identified the primary purposes of assessment. Summarized, they are to:

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Testing is defined as the administration, scoring, and interpretation of a psychological test; whereas, assessment is a broader concept and refers to "the scientific and professional activity of collecting, evaluating,
(a) describe current functioning, including cognitive abilities, severity of disturbance, and capacity for independent living, through the simultaneous measurement of a potentially large number of personality, cognitive, or neuropsychological characteristics,

(b) confirm, refute, or modify the impressions formed by clinicians through their less structured interactions with patients,

(c) identify therapeutic needs, highlight issues likely to emerge in treatment, offer guidance about likely outcomes, and recommend forms of intervention (especially when there are a variety of treatment approaches to choose from, when there is empirically validated support for matching treatment to client characteristics, or when the client is experiencing a multiple problems and treatment foci need to be prioritized),

(d) aid in the differential diagnosis of emotional, behavioral, and cognitive disorders,

(e) monitor treatment over time so that successful interventions (or lack thereof) can be evaluated or to identify new issues that may require attention as original concerns are resolved,

(f) manage risk, including minimization of potential legal liabilities and identification of problematic treatment reactions, and

(g) provide the information necessary to give skilled, empathic assessment feedback as a therapeutic intervention in itself.

All of these functions can be ascribed to personality assessment in particular. Personality assessment information, if used appropriately, can decrease the number of therapy sessions needed to obtain beneficial results (Quirk et al., 1995) and/or can increase the effectiveness of the chosen treatment (e.g., Barkman, Stiles, & Shapiro, 1993; Conrod,

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and integrating information about a subject using, whenever possible, different sources of information” (Fernández-Ballesteros et al., 2001, p. 188).
Results from a meta-analysis (Perry, Banon, & Ianni, 1999), conducted to investigate the utility of psychotherapy for personality disorder symptomology, indicated that 52% of patients remaining in therapy recovered (no longer met full criteria for personality disorder). In addition, the investigators reported, “A heuristic model based on these findings estimated that 25.8% of personality disorder patients recovered per year of therapy, a rate sevenfold larger than that in a published model of the natural history of borderline personality disorder (3.7% recovered per year, with recovery of 50% of patients requiring 10.5 years of naturalistic follow-up)” (p. 1312).

Perhaps more importantly, personality assessment information has been shown to improve diagnostic accuracy. For example, in a study examining the incremental validity of MMPI profile information for diagnostic purposes, six psychiatry or neurology residents were given case history information, physical exam information, and medical test data for thirteen patients (Schwartz & Wiedel, 1981). In half of the cases, they were also given MMPI profiles and automated interpretations. Results indicated that diagnostic decisions based on information that included the MMPI profiles were significantly more accurate than diagnoses made without benefit of MMPI profile interpretations.

Numerous studies (e.g., Fennig, Craig, Lavelle, Kovasznay, & Bromet, 1994; Shear et al., 2000, Jensen-Doss & Weisz, 2008) have been conducted unequivocally indicating that diagnoses based on an unstructured interview and clinical judgment alone are inaccurate more often than accurate. This, in combination with MBHOs reluctance to reimburse personality assessments, prompted the American Psychological Association to commission a study (e.g., Meyer et al., 2001, p. 128) to evaluate contemporary threats to psychological
assessment and to assemble evidence of the efficacy of assessment in clinical practice.

According to Meyer and colleagues (2001), disagreements between unstructured interview diagnoses and structured interview diagnoses in general psychotherapy clinical practice are pronounced. However, they contend, "Even more drastic errors have been found for personality disorders. . . . Across studies, there was a meager correspondence between the diagnoses derived from a single clinician using the single method of assessment and the diagnoses derived from the multimethod evaluations ($\kappa = .28, N = 218, \ldots$)" (p. 151). They went on to state that, after correcting for agreements due to chance, about 70% of the interview diagnoses were in error. “By necessity then, the research findings indicate that many patients may be misunderstood or improperly treated when they do not receive thorough assessment. Errors of misappraisal and mistreatment are most likely when administrative efforts to save money restrict clinicians to very brief and circumscribed evaluations” (Meyer et al., 2001, p. 151).

Haynes, Spain, and Oliveira (1993, p. 281) summarized the previous findings succinctly: “Because of the difficulties of relying on psychiatric diagnosis and subjective judgment to identify the causes of a client’s behavior problems, pretreatment psychological assessment is pivotal to deriving valid causal inferences.” Moreover, according to Harkness and Lilienfeld (1997, p. 349), the American Psychological Association’s Ethics Code (2002) and the individual differences research literature necessitate inclusion of personality trait assessment for the “construction and implementation of any treatment plan that would lay claim to scientific status.” Harkness and Lilienfeld support their contention with quotes from the Ethics Code, Standard 2.04, “Psychologists’ work is based upon established scientific and professional knowledge of the discipline” (p.5). Hence, from an ethical as well as diagnostic
perspective, personality assessment appears to enhance all aspects of the therapeutic endeavor.

Summary

Despite high clinical prevalence rates and compromised therapeutic recovery for individuals with comorbid personality disorders, as well as the noted advantages of performing this type of evaluation, personality assessment is rarely conducted as a routine part of a clinical intake protocol. Clinicians often cite lack of appropriate reimbursement as the culprit, whereas inefficient use of time and lack of cost-effectiveness are reasons cited by MHBOs (e.g., Eisman et al., 2000; Kubiszyn et al., 2000). However, the current literature suggests personality assessment has the potential to significantly improve the therapeutic process and perhaps shorten a treatment protocol. So the challenge becomes: how can clinicians convince MHBOs to reimburse this valuable therapeutic tool?

Dorffman (2000) suggested that clinicians, when requesting authorization for assessment--personality or otherwise--be prepared to answer the following questions:

1. Will the assessment render a more valid clinical diagnosis that leads to shorter treatment duration with greater effectiveness?
2. How will the assessment save time and money over the course of treatment and thereafter?
3. If other psychologists routinely make diagnoses and are able to provide effective treatment without objective assessment, why should this service be covered?
4. Can you back up your assertions with support from the research literature?

Payment-justification support for questions 1 and 3 has been provided in this discourse. However, empirical support for question 2 is sparse; and the ability to provide
definitive support with regard to personality assessment for question 4 is contingent upon the assessment instrument utilized. In the following sections, identification of an empirically validated, clinically useful personality assessment instrument will be explored in the context of a discussion regarding the validity of the DSM PD diagnostic taxonomy and a review of the available assessment instruments.
The Classification of Personality Disorders – A Taxonomy in Turmoil

"The categories and criteria proposed in DSM were never more than arbitrary ideas based on expert opinion. The fact that fundamental revision is now required attests to the success of DSM-III in stimulating research and promoting personality as an integral part of the diagnostic process" (Livesley, 2003, p. 153).


Personality Disorder History in the Evolution of the DSM

With each revision of the DSM, serious efforts were made to address these concerns. The PD classification system in the original DSM (DSM-I; American Psychiatric Association, 1952) was strongly influenced by psychoanalytically trained psychiatrists (First et al., 2002). It included five PD subclasses, ranging from those considered deep-rooted and relatively unaffected by therapy to those that were situationally transient. There were two major concerns with the DSM-I classification system: (1) the requirement that a choice be made between a neurotic disorder and personality disorder when both were present and (2) the unclear diagnostic criteria. The attempt to address these concerns in DSM-II (American Psychiatric Association, 1968) included dropping the distinction between personality trait and personality pattern disturbances – both were grouped under one heading “personality disorders” - adding and dropping disorders, requiring that impaired functioning and
personally experienced distress were needed for diagnosis, and separating sexual deviations and alcoholism from personality disorders (Millon & Davis, 1995). In addition, the revision committee made a distinct effort to avoid terms that implied acceptance of a particular theoretical viewpoint, especially "where matters of causality were notably controversial" (Millon & Davis, 1995, p. 15).

It was the introduction of DSM-III (American Psychiatric Association, 1980), however, that had the most profound effect on the current status of personality disorder assessment, diagnosis, and research. Theoretical references regarding the nature or etiology of mental disorders were "actively" expunged from this version of the manual (Millon & Davis, 1995, p. 16). In addition, more specific and explicit diagnostic criteria (essentially behavioral in nature) were included for the personality disorders, "with the hope that [personality disorders] would then be diagnosed reliably in general clinical practice" (Widiger, 2001, p. 64). Moreover, personality disorders were placed on a separate axis, eliminating the need to choose between a personality or symptom syndrome when both were present. The separate axis also allowed "practitioners to place the clinical syndromes of Axis I within the context of the individual's lifelong and pervasive style of functioning recorded on Axis II" (Millon & Davis, 1995, p. 17). Accordingly, if a personality disorder was not diagnosed but dysfunctional personality traits were identified, it was recommended that these traits be listed under Axis II. Many investigators credit the establishment of a separate axis for personality disorders, the detailed criteria sets, and the subsequent development of PD symptomology assessment instruments for the flurry of personality-related research that followed (e.g., Livesley, 2001; Morey, 1997; Widiger, 2001).
It was the notable increase in PD research that highlighted the systematic diagnostic errors resulting from unclear, inconsistent, and contradictory DSM-III (American Psychiatric Association, 1980) PD criteria (Widiger, 2001). This, in turn, instigated substantial revisions to the PD criteria sets in DSM-III-R (American Psychiatric Association, 1987). In addition, a general revision was made to four disorders (schizoid, avoidant, dependent, and compulsive), changing the monothetic diagnostic requirements (all criteria must be met) to polythetic diagnostic standards (only a subset of criteria are required for diagnosis; Widiger, 2001). However, the reliability and validity of the criteria sets for PDs remained controversial. Specifically, the rate of diagnostic overlap (typically 3 to 4 PDs per individual; Widiger & Rogers, 1989) forced researchers to question the qualitative distinctiveness of the PD criteria sets.  

In an effort to further address the problematic overlapping criteria between the PD disorders, revisions in the DSM-IV (American Psychiatric Association, 1994) PD classification system were again substantial. Of the 21 criteria that were listed for more than one disorder, 12 were eliminated and 9 were reworded so that the criteria reflected the motivational aspects associated with a particular disordered behavior (Widiger, 2001). For example, the DSM-III-R (American Psychiatric Association, 1987) criteria “avoidance of close relationships” for avoidant and schizoid disorders were qualified in DSM-IV with “is unwilling to get involved with people unless certain of being liked” for avoidant personality disorder (p. 665) and “neither desires nor enjoys close relationships, including being part of a family” (p. 641) for schizoid personality disorder. Regarding diagnostic comprehensiveness,

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3 According to Livesley (2001, p. 18), “Overlap is often misleadingly referred to as comorbidity. However comorbidity refers to the co-occurrence of distinct diagnoses, and there is no evidence that personality diagnoses are distinct in this sense. When applied to personality disorder, the term ‘comorbidity’ simply obscures a fundamental flaw in the system.”
DSM-IV experienced modifications to the number of PD disorders as did the previous editions.

Thus, substantial efforts have been made to provide mental/behavioral health practitioners with a taxonomy for personality disorders that has acceptable reliability and validity. However, many acknowledge that the current taxonomy of personality disorders in DSM-IV-TR (American Psychiatric Association, 2000) “remains a troublesome area” in the classification of mental disorders (Livesley, 2003, p. 153). Some of the identified problems include (1) the atheoretical approach of the system, (2) the lack of reliability and validity for the categorical structures as evidenced by the lack of multivariate statistical support for the categories, (3) the confusion regarding the distinction between axis I and axis II disorders, (4) the excessive overlap among the DSM-IV-TR PDs, (5) the arbitrary distinction between normal and abnormal personality, (6) limited disorder coverage, and (7) the lack of empirical documentation for the clinical utility of treatment decisions for most of the personality disorders (e.g., Livesley, 2001, 2003; Westen & Arkowitz-Westen, 1998).

**Noted Problems with the Current Categorical System**

**The atheoretical approach of the system.** As mentioned above, the DSM revision committees deliberately sought to make personality disorder criteria atheoretical in description due to the limited empirical support for etiological speculations. The descriptions of the criteria may be atheoretical, but the origins remain theoretically diverse (Livesley, 2001). For example, the criteria for histrionic personality disorder have theoretical origins in psychoanalytic and phenomenologic principles, and the criteria for avoidant personality disorder have theoretical origins in social learning principles. Livesley (2001) argues that this
lack of a coherent theoretical basis for the personality disorders results in diagnostic overlap and poor reliability.

However, as also noted by Livesley (2001), a unified theory of personality that incorporates all identified dimensions of normal and abnormal personality is not yet available and may never be. As elucidated by Millon and Davis (1995), “... the substantive and professional character of mental health would be simply too multidimensional in structure and too multivariate in function ever to lend itself to a single, fully satisfactory system” (p. 16). They continued by noting that, if and when a unified theory is developed, it would need a consensus endorsement before being accepted as the basis of the DSM taxonomy, which, given the current theoretical diversity among the “experts,” would probably be slow in coming. Therefore, a solution to the concern that the DSM personality disorder classification system is atheoretical does not appear to be forthcoming in the near future.

Moreover, there is some question regarding whether or not the DSM is truly atheoretical, especially pertaining to personality disorders. Follette and Houts (1996) presented a convincing case suggesting the DSM is theoretically based on the medical model, which is evolving into a biological model. They cited the DSM requirement for most disorders to determine that the problem is not due to “the direct physiologic effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition” as evidence of this evolution. Likewise, within the DSM-IV-TR (American Psychiatric Association, 2000), inferences are made indicating the support of a biopsychosocial model for the conceptualization of disorders: “Judgments about personality functioning must take into account the individual’s ethnic, cultural, and social background” (p. 687). The biopsychosocial model provides a venue whereby biological, cognitive, systemic, or other
explanations for maladaptive personality symptomology can be explored and comparatively assessed regarding their utility in the identification and treatment of these symptoms. Therefore, it would seem that systematic adoption of this model would ensure the continued progression of science and perhaps avoid the controversy and difficulty that would be associated with comparing the utility of specific etiology models.

The lack of reliability and validity for the categorical structures. When personality-disordered symptomology has been assessed using more than one form of measurement, research indicated that there is only a modest convergence regarding diagnostic results. In a review conducted by Clark, Livesley, and Morey (1997), median kappa values between structured interviews ranged from .35 to .50; median kappa values between questionnaires and interviews ranged from .08 to .42; median correlation values between questionnaires and interviews ranged from .19 to .54; and median correlation values between different questionnaires ranged from .39 to .68. In a review of personality assessment instruments, Clark and Harrison (2001) reported that structured interviews evidenced test-retest (average 2 months apart) kappa values for diagnoses ranging between .36 for the Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II) and .48 for the Structured Interview for DSM-IV Personality (SIDP); they intimated that personality disorder diagnosis, via these instruments, is unstable. However, the test-retest reliability estimates for self-report inventories were higher (.41 to .91).

Notably, most of this research was conducted using instruments based on DSM III or DSM-III-R criteria. Yet these poor convergent validity and reliability results suggest that the conceptual adequacy of the personality disorder constructs and the operationalization of these constructs in the criterion sets are critical issues for both assessment and diagnosis (Clark &
Harrison, 2001). Unfortunately, research investigating these issues using DSM-IV-TR criteria is sparse (e.g., Ryder et al., 2007, Grilo et al., 2001, & McGlashan et al., 2000). The general consensus of these authors is that the DSM-IV-TR personality disorder symptoms have good convergent validity; conversely, there are mixed opinions regarding the divergent validity of the DSM PD categories. Grilo et al. (2001) reported that the PD categories have "some discriminant validity" (p. 264), while Ryder et al. (2007) stated that the general lack of divergent (discriminant) validity of the PD categories is "problematic" (p. 631). However, with the advent of confirmatory factor analytic techniques, investigators are beginning to present evidence that perhaps the criterion sets of the PDs are adequate representations of these disorders (e.g., Arntz, 1999; Sanislow et al., 2002).

**Excessive diagnostic overlap among the DSM-IV-TR personality disorders.**

Results from the Collaborative Longitudinal Personality Disorders Study, a repeated-measures study of a clinical sample of four DSM-IV personality disorders (schizotypal, borderline, avoidant, and obsessive-compulsive, and major depressive disorder, without a comorbid personality disorder, serving as a control group) evidenced a mean of 1.4 ($SD=1.6; \text{median}=1$) *additional* personality disorders among the participants meeting criteria for the study disorders (McGlashan et al., 2000). This level of axis II overlap matched studies investigating personality-disorder diagnosis overlap utilizing DSM-III-R criteria (1.8 in Oldham et al., 1995 and 1.7 in Stuart, Klimidis, & Minas, 1998). According to Clark and Harrison (2001), diagnostic overlap is problematic for several reasons; it is indicative of (1) inadequate conceptualization of the basic constructs, (2) a failure of the DSM criteria to represent the underlying constructs adequately, and/or (3) a failure of existing assessment devices to reflect the criteria accurately.
It is noteworthy that the number of multiple personality disorders has dropped from a co-occurrence rate of 3-4 per individual using DSM III or DSM-III-R criteria (Widiger & Rogers, 1989; Skodol, Rosnick, Kellman, Oldham, & Hyler, 1990, as cited in Widiger & Sanderson, 1995) to approximately 1.5 per individual using DSM-IV criteria (McGlashan et al., 2000). Although it remains somewhat of a problem, it appears that the DSM-IV axis II criteria revisions have begun to affect the personality disorder diagnostic overlap concerns of practitioners. However, the rate of overlap suggests the categorization method may not be the best taxonomy for identifying and classifying maladaptive personality symptomology.

Confusion regarding the distinction between Axis I and Axis II disorders. First et al. (2002) presented a cogent synopsis of the mental disorders literature that argues in favor of personality disorders as spectrum conditions of axis I disorders. They cited phenomenological, genetic, and biological research that suggests (1) schizotypal personality disorder symptomology is on a continuum with schizophrenia symptomology (e.g. Stein, 1992, as cited in Widiger & Shea, 1991), (2) avoidant personality disorder symptomology is on the same continuum as social phobia symptomology (e.g. Reich et al., 1989, as cited in Widiger & Shea, 1991), and (3) cluster B personality disorder symptomology is on a continuum with the affective instability symptomology associated with the mood disorders (e.g. Pinto & Akiskal, 1998, as cited in Widiger & Shea, 1991). In fact, the spectrum concept may account for the relatively high comorbidity rates between axis I and axis II diagnoses in clinical samples. For example, McGlashan et al. (2000), again reporting results from the Collaborative Longitudinal Personality Disorders Study, stated patients in all groups were assigned a mean of 3.4 (SD=1.7; median = 3.0, range 0-9) lifetime axis I diagnoses.

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4 The reader is also referred to Widiger and Shea (1991) for a more detailed account regarding the differentiation of axis I and axis II disorders, accompanied by DSM revision suggestions to resolve this dilemma.
Thus, the diagnostic dilemma becomes how to conceptualize symptomology (both Axis I clinical disorders and Axis II development/personality disorders) – as a continuum underlying psychopathological syndrome (state)/personality (trait) processes or as distinct dimensions that interact in clinically significant ways (First et al., 2002).

**The arbitrary distinction between normal and abnormal personality.** According to Livesley (2001), research suggests that the features of normal personality and personality disorder are continuous, regardless of sample characteristics (patient or nonpatient) or feature description (diagnostic criteria or traits), and that it is not possible to identify distributions in either description that suggest a discontinuity. Eysenck (1994), in particular, empirically validated this claim using correlational and factor-analytic techniques to test a continuity hypothesis for psychoticism. Moreover, Walton, Robert, Krueger, Blonigen, and Hicks (2008) utilized Item Response Theory in an effort to replicate Eysenck’s findings; they reported, “the primary conclusion based on these findings suggests that measures of normal range personality capture much of the information obtained with a ‘direct’ measure of psychopathy” (p. 1640). Other researchers echo Livesley’s and Eysenck’s contention (e.g., Lynam & Widiger, 2001; O’Connor & Dyce, 1998), providing evidence that normal personality trait measures and their relationship to abnormality may in fact account for the overlap problem currently plaguing the DSM PD categorical system.

**Limited Disorder Coverage.** Westen & Arkowitz-Westen (1998) conducted a study in which randomly selected clinicians were asked to describe their last three nonpsychotic adult clients who were being treated with psychotherapy for “enduring patterns of thought, feeling, motivation, or behavior that are dysfunctional or lead to distress. Their personality problems may or may not be serious enough to qualify for a personality disorder diagnosis”
Of the 714 patient profiles that were submitted for the study, only 39.4% were diagnosed with personality disorders. This diagnosis proportion did not vary by clinician degree (M.D. 35.2% or Ph.D. 38.3%), nor by theoretical orientation (psychodynamic 42.4%, cognitive-behavior 32.5%, and eclectic 35.4%). According to the investigators, comorbid axis I disorders (38% - 42%, depending on category – mood, anxiety, substance abuse, or adjustment) could not account for “the roughly one-half of patients with personality pathology who cannot be diagnosed on axis II” (p. 1768). As a result, Westen and Arkowitz-Westen were led to the conclusion that “the majority of patients with personality pathology significant enough to warrant clinical psychotherapeutic attention (60.6%) are currently undiagnosable on axis II” (p. 1769). These findings corroborated Millon’s (1991) contention that “not only are there problems in assigning many patients to the limited categories available, but clinicians often claim that the more they know patients, the greater the difficulty they have in fitting them into a category” (p. 255).

The lack of empirical documentation for the clinical utility of treatment decisions for most of the personality disorders. This assertion is typically substantiated by the literature addressing psychopharmacology or psychosocial interventions. These interventions usually address a specific feature of a disorder or a cluster of related features (i.e., anxiousness, self-mutilation behavior, suicidal ideation; Livesley, 2001). Moreover, rarely if ever is a categorical diagnosis used to plan treatment strategies. Widiger and Lowe (2008, p. 374) succinctly delineate this concern:

As expressed by the chair of DSM-V, for the existing diagnostic categories, “lack of treatment specificity is the rule rather than the exception” (Kupfer, 2002). It is telling that it has been over 10 years since the American Psychiatric Association began
publishing practice guidelines for the diagnostic categories of DSM-IV-TR and, as yet, treatment guidelines have been developed for only 1 of the 10 personality disorder diagnostic categories. . . . However, what is also evident. . . is that treatment does not address or focus on the entire personality structure.

Widiger and Lowe (2008) then note that dialectical behavior therapy (DBT), utilized with borderline personality disordered clients and the most researched treatment modality for a personality disorder, "is an effective treatment for many of the components of this personality disorder, but it is evident to even the proponents of this clinical approach that the treatment is not entirely comprehensive in its effectiveness" (p. 375).

**Summary.** As is evident from the above discussion, there are legitimate concerns regarding the clinical utility of the DSM personality disorder categories, making it difficult for practitioners to accurately classify their patients’ symptomology and difficult for managed care companies to justify payment for services that address dysfunction described as "pervasive, inflexible, and stable over time" (DSM-IV-TR; American Psychiatric Association, 2000, p. 685). The time has come for a major change to the format of the DSM PD classification system. Although task force teams have worked diligently in the past to improve the categorization system, major revisions need to be accomplished so that practitioners who utilize the DSM in treatment delivery have a resource that will guide and support the correct classification, assessment, treatment, and reimbursement for services that target PD symptomology.
The Exploration of the Clinical Utility and Diagnostic Feasibility of a Dimensional System of Classification

As noted, a substantial literature has developed regarding the shortcomings of the DSM personality disorder categorical system. More important, however, is the acknowledgement by the American Psychiatric Association that the current categorical system is no longer feasible and that a research agenda is needed to explore the clinical utility of a dimensional model of classification (e.g., Bagby, Sellbom, Costa Jr., & Widiger, 2008; Widiger and Lowe, 2008). Typically, dimensional models of maladaptive personality symptomology define symptomology as extremes of normal personality traits or variations on a continuum of a measure of a maladaptive trait (e.g., low, moderate, or high levels of distress).

Since 1994, many researchers have developed alternative models to the current categorical system for personality disorders (the reader is referred to a listing provided by Bagby, Costa Jr., Widiger, Ryder, & Marshall, 2005, p. 308). One popular alternative is to conceptualize personality disordered symptoms as extremes (high or low) of normal personality traits as measured by a five-factor model (FFM) of personality [e.g., NEO Personality Inventory Revised (NEO-PI-R), Costa and McCrae, 1992]. The FFM of personality has a substantial research base validating the factor structure in a variety of language and cultural settings (e.g., McCrae and Costa, 1997). It also has a substantial research base validating its usefulness as a diagnostic tool (e.g., Huprich, 2003; Rossier & Rigozzi, 2008; Shea et al., 2004; Sher, Bartholow, & Wood, 2000; Soldz and Vaillant, 1999).

In a recent article, Krueger, Markon, Patrick, Benning, and Kramer (2007) stated that dimensional representations of personality pathology are "better predictors of functional
impairment when compared with categorical representations of DSM-IV-TR PDs in treatment seeking patients" (p. S65). Moreover, Widiger and Lowe (2008) outlined the clinical and diagnostic advantages of the integrative five factor model, noting that the model would provide a theoretically uniform classification of normal and abnormal personality functioning, giving clinicians the ability to address both strengths and weaknesses. They reported the model has an extensive scientific foundation, in behavior genetics, molecular genetics, childhood antecedents, and universality [see Widiger and Lowe (2008) for listing of research]. These authors argued that the theoretical basis of the five-factor model, in conjunction with the extensive scientific research support, provides a construct validity that has been lacking with the current DSM-IV-TR categories of PD.

Although adapting a dimensional model of personality classification appears to be the preferred method for addressing the current DSM’s clinical validity issues, the chances of it being incorporated into the upcoming revision of the DSM (DSM V) are slim. The substantial research support needed to justify this type of radical change in the diagnostic system is not yet available. Notably, in an effort toward establishing the evidence needed to make this change, Ryder, Costa Jr., and Bagby (2007) attempted to simultaneously investigate the validity of the DSM categorical system for PDs and the clinical validity of a dimensional representation of personality by evaluating the DSM-IV-TR PD symptoms, as represented by the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), with respect to convergent validity (symptom to disorder coherence within a PD to address validity of DSM categorical system), divergent validity (distinctiveness of each PD symptom relative to other PDs, again to address validity of DSM categorical system), relation to general personality traits
(comparison with NEO-PI-R results), and association with functional impairment
(comparison with DSM-IV-TR Global Assessment of Functioning scores). Based on the
results of their analyses, the authors make two general suggestions regarding the current
categorical system: (1) where necessary, add, rewrite, or eliminate PD disorder items to
ensure that each PD encompasses a "coherent and relatively nonoverlapping set of
symptoms" or (2) "abandon the effort to relate PD traits to the existing 10 disorders . . . and
generate a set of more coherent PDs to facilitate categorical diagnosis" (Ryder et al., 2007, p.
631).

**Conclusion**

As described above, the validity of the current DSM categorical system for
personality disorders is questionable at best. However, the American Psychiatric Association
is making a concerted effort to address this weakness of the DSM. Investigation is ongoing
regarding the clinical and diagnostic utility of dimensional models of personality and
personality pathology. Unfortunately, it is unlikely that the empirically validated evidence
based on DSM related research needed by third party payers to justify treatment and payment
for personality disordered diagnoses will be forthcoming in the near future.
Is There a Gold Standard for Maladaptive Personality Assessment?

"... psychological tests act like some of our best psychotherapy supervisors; they alternately help us grasp our clients' inner worlds and then retain a grounded nomothetic perspective on the clients' problems" (Finn & Tonsager, 1997).

Despite the turmoil associated with the DSM diagnostic system, personality assessment can be an integral, informative component of case conceptualization and therapeutic treatment planning. The issue in this circumstance is how to choose an appropriate assessment instrument that is both clinically informative, as well as cost efficient, thereby facilitating the opportunity to realize reimbursement from third-party payers?

Considerations When Choosing a Personality Assessment Instrument

When deciding which personality assessment instrument will be most appropriate for use in a clinical setting, client preferences and abilities, clinician preferences and abilities, measurement device psychometric properties, and clinical utility issues should all be considered (e.g., Maruish, 1999; Rubio-Stipec, Hicks, & Tsuang, 2000; Zarin, 2000; see Appendix A, page 126, for a consolidated list). Important client factors worthy of consideration include (1) the likelihood of omitting important sources of assessment information (i.e., in what circumstances is the behavior or trait most likely to occur, etc.); (2) the ethnic and cultural appropriateness of the instrument; (3) the cost in terms of effort, time, and additional expense; and (4) the potential emotional and psychological impact that completing the instrument may have on respondent.

Clinician preferences and abilities that should be considered when choosing a personality assessment device include (1) the potential impact on initiation or maintenance of rapport, (2) usefulness in guiding treatment decisions, (3) amount of training required to obtain mastery with the instrument, (4) costs in terms of time and money to administer, score,
interpret, and present results, and (5) the tendency to become over-reliant on standardized assessments to the point of exclusion of other clinically relevant information.

A clinician must also be concerned with the psychometric properties and clinical utility of the assessment device. Are the psychometric properties (e.g., reliability, construct validity, discriminative validity, positive predictive power, negative predictive power, etc.) acceptable? Is the reading level appropriate for all manner of clientele? Is the length and level of comprehensiveness appropriate for all parties concerned (e.g., client, agency, third-party payer, etc.)? Is the instrument validated for the populations of interest? Is the empirical support for the instrument sufficient and methodologically sound? Is the method for determining categorization of symptoms (e.g., a scale score or the Diagnostic and Statistical Manual: Mental Disorders, Fourth Edition (DSM-IV; American Psychiatric Association, 1994)) psychometrically validated? In addition, the clinician must also determine the appropriate use of the measure (e.g., screening, diagnostic, prognosis, etc.), the degree to which clinical decision making is enhanced by use of the particular instrument, and whether or not the instrument is the most appropriate means of obtaining the desired information (e.g., client vs. informant, interview vs. questionnaire). Serious deliberation of these issues, when determining the appropriateness or utility of an assessment instrument, can minimize treatment failure (e.g., Finn & Tonsager, 1997; Kubiszyn et al., 2000; Quirk et al., 1995).

In order to maximize the potential of the clinician's review, the issues listed above should be considered within the context of the current debates in the personality assessment field. Erdberg (2004) has suggested each assessment approach accounts for some of the unique aspects of the variance in personality. While this idea may have some merit, its implementation is compromised by the lack of a gold standard by which to judge the utility
and validity of personality measures. Although clinical interviews have been touted as the
gold standard for diagnosing personality disorders (e.g., Clark & Harrison, 2001; Kaye &
Shea, 2000), this assertion has been called into question due to the inadequate
operationalizations of the DSM-IV Axis II criterion sets (e.g., Clark, Livesley, & Morey,
1997).

A second point of contention is the notable lack of situation-specific behavior
assessment in most personality measures. Mischel (1968) and others have suggested that the
situation is a stronger determinant of behavior than personality dispositions or traits;
therefore, it should not be assumed that individuals behave consistently across diverse
situations.

A third debated issue is the degree to which impression management (e.g., fake good,
fake bad, etc.) is assessed in the various personality assessment measures and the impact of
social desirability on the accuracy of the responses (e.g., Morey, 1997). Finally, a fourth
concern is that individuals suffering from personality disorder symptomology may not
possess the insight to accurately self-report their symptoms (e.g., Westen & Shedler, 1999).
Therefore, despite the well-documented need for personality assessment in clinical settings,
significant confounds limit the degree to which clinicians can have confidence in the
reliability, validity, and clinical utility of any given assessment.

**Personality Assessment Instruments**

Currently, there are more than seventy-five empirically validated comprehensive
personality assessment instruments. If instruments that measure only one, two, or some small
portion of the facets of personality are included, this number increases exponentially, well
into the hundreds. Of the seventy-five comprehensive instruments, many address only
selective aspects of personality (i.e., Defense Style Questionnaire, Bond & Wesley, 1996; Diagnostic Interview for Borderline Patients, Gunderson, Kolb, & Austin, 1981; Hare Psychopathy Checklist Revised, Hare, 1991; etc.). These assessment instruments are administered in one of two formats: clinician-administered or self-report. Each format has distinct advantages and disadvantages.

**Clinician-administered questionnaires.** A clinician-administered structured interview based on the DSM-IV-TR personality category symptomology is considered the gold standard for personality assessment. Clinician-administered personality-assessment interviews [e.g., Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II), First et al., 1995, 1997; Personality Assessment Schedule (PAS), Tyrer & Alexander, 1979, 1988] have diagnostic advantages not possessed by self-report inventories, such as the ability to immediately ask follow-up questions for clarification or clinician support if questions trigger emotional distress in the respondent. However, the administrative expenses (e.g., clinician time to administer [typically one to two hours], score, and interpret) prohibit cost-effective use of structured or semi-structured interviews as standardized pre-treatment assessment devices. Moreover, any instrument based on the DSM-IV-TR, as noted earlier, has questionable clinical utility, other than diagnostic guidance. Therefore, inclusion of most clinician-administered, structured interviews in a clinically-valid, cost-effective pre-treatment assessment battery would not be feasible or easily justifiable.

**Clinically Useful Self-Report Questionnaires.** Self-report instruments vary in response format (e.g., sentence completion, evoked word response, true/false, Likert scale, etc.), length (from 15-30 items on checklists to 500+ items on the MMPI-2), administration (paper and pencil, computer generated, etc.), and completion time (anywhere from 5-10
minutes to 2 or more hours). Some assess DSM-IV Axis I symptomology (e.g., anxiety, depression, substance abuse), as well as personality symptomology/traits (e.g., Millon Clinical Multiaxial Inventory III [MCMI-III; Millon, Millon, & Davis, 1994], Personality Assessment Inventory [PAI; Morey, 1991], Schedule for Nonadaptive and Adaptive Personality [SNAP; Clark, 1993]). Many instruments have versions applicable for administration to family members or friends [e.g., Adjective Check List (Gough, 1960) Personality Research Form (Jackson, 1974, 1977)]. Notably, several have foreign language versions, which have been empirically validated (e.g., Eysencyk Personality Questionnaire [Eysencyk & Eysencyk, 1964], MCMI-III [Millon et al., 1994], Minnesota Multiphasic Personality Inventory 2nd Version [MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989], NEO Personality Inventory Revised [NEO-PI-R; Costa & McCrae, 1992]). However, researchers from other countries have questioned the validity of translated assessments and have instead developed instruments validated and normed on their respective populations (e.g., Freiburg Personality Inventory [Fahrenberg, Hampel, & Self, 1985]; Karolinska Scales of Personality [KSP; af Klintebert, Schalling, & Magnusson, 1986], Trier Personality Inventory [TPI; Ellis, Becker, & Kimmel, 1991]).

The main advantages of the self-report format include increased efficiency and reduced administration time for clinicians, inclusion of validity items or scales to detect response styles that may invalidate the results (i.e., exaggeration, faking, acquiescence, social desirability, etc.), and normative data to guide interpretation. The disadvantages of self-report instruments include (1) a general lack of ethnic or cultural norms, (2) the possible unavailability of a clinician to address negative affect invoked by answering the items on the questionnaire, (3) clinician over-reliance on questionnaire data increasing the likelihood of
omitting other important domains of assessment information, and (4) the inability to ask follow-up questions at the time of administration (Kaye & Shea, 2000).

Two compilations of self-report personality instruments considered appropriate for clinical use are listed in Appendix B, page 127. Based primarily on the work of Kaye and Shea (2000) and the American Psychiatric Association’s current exploration of dimensional representations of personality disorders, discussion will be limited to the four trait-based/dimensional instruments from this list with the most research support for their utility: Inventory of Interpersonal Problems-Personality Disorder Scales (IIP-PD; Pilkonis, Kim, Projetti, & Barkham, 1996), Structural Analysis of Social Behavior Intrex Questionnaire (SASB-IQ; Benjamin, 1996), Tridimensional Personality Questionnaire (TPQ; Cloninger, Przybeck, & Svrakic, 1991) or Temperament and Character Inventory (TCI which replaced the Tridimensional Personality Questionnaire; Cloninger, Przybeck, Svrakic, & Wetzel, 1994), and NEO Personality Inventory – Revised (NEO-PI-R; Costa & McCrae, 1992). Please see Appendix C, page 128, for an overview of these instruments.

The IIP-PD is the only trait-based diagnostic self-report inventory recommended for clinical use by Kaye and Shea (2000) and Clark and Harrison (2001). The original version was a 127-item instrument with a 5-point response format. A newer shorter version (64 items) has yet to be empirically validated. Ten-week test-retest reliability coefficients for the older version ranged from .80 to .87. Validity coefficients with the Revised Interpersonal Adjective Scales (IAS-R) ranged from .36 to .38. Although preliminary studies indicate the instrument is useful in treatment development and is sensitive to therapeutic progress, Kaye & Shea (2000) noted the clinical utility of this instrument still needs to be established.
The SASB-IQ, the first of three trait measures of normal personality, was developed to assess an individual's interpersonal and intrapsychic interactions, in order to facilitate the psychotherapy process (Kaye & Shea, 2000). The short form consists of 108 items rated on an 11-point response format. It is very difficult to hand score due to complex mathematical procedures; therefore, computer scoring is highly recommended. The program and accompanying forms are available for $50, with a subsequent $2 cost per administration, making this a very affordable means of assessment. However, due to the complexity of the model, a significant training investment is required. Test-retest reliability conducted with subject samples consisting of 20 or less participants yielded coefficients of .80 or better. Validity coefficients estimated using scores from the Revised Interpersonal Adjectives Scales (Wiggins, Trapnell, & Phillips, 1988) ranged between -0.20 to -0.40, suggesting that additional validity research needs to be conducted. Surprisingly, the manual provides norms derived from a sample of 80 college students taking abnormal psychology classes. According to Kaye and Shea, the average age of the participants was mid-20s, and the volunteers were mostly women. Thus, the interpretation of instrument scores for a clinical population is suspect.

The TCI is a 240-item inventory with a yes/no response format; it is based on Cloninger's biosocial theory of personality. It measures three dimensions – novelty seeking, harm avoidance, and reward dependence. Six-month test-retest reliability coefficients ranged from .70 to .79 for the three dimensions. Validity coefficients determined using the NEO-PI-R and the MCMI-II ranged between -.75 and .71 for specific scales. Costs estimates are approximately $4.50 per protocol. Conflicting reports regarding the clinical utility of the
instrument (Clark and Harrison, 2001) suggest that its usefulness in the clinical setting still needs to be established.

Of the three trait-based measures of normal personality, the NEO-PI-R has the most empirical support. This 240-item inventory, employing a 5-point response format, assesses five major domains (neuroticism, extraversion, openness, conscientiousness, and agreeableness) and six facets in each domain, yielding a total of 30 subscales. It is available in college-age, self-, or other-report formats. Results are obtained by comparing scores with those from an appropriate normative group. The norm groups (500 men and 500 women) were compiled from participants in a variety of studies (i.e., the normative sample for the Augmented Baltimore Longitudinal Study of Aging, participants in a national study of job performance, spouses and peers; Costa & McCrae, 1992). It provides useful information regarding personality strengths and weaknesses associated with the various personality disorders (e.g., Huprich, 2003; Trull & Widiger, 1997), has a relatively low administration cost (approximately $13 per computer scored protocol – based on a minimum of 100 administrations), and takes the average client approximately 20-40 minutes to complete. Test-retest reliability coefficients for a 6-7 year interval ranged from .63 to .93 on the five major domains. Validity coefficients with the Myers-Briggs Type Indicator and the Personality Research form range between .49 and .60 (Kaye & Shea, 2000). A research database, supporting the clinical utility of the NEO-PI-R, is starting to amass (e.g., Egger, De Mey, Derksen, & van der Staak, 2003; Quirk, Christiansen, Wagner, & McNulty, 2003; Saulsman & Page, 2003).
The Utility of the NEO-PI-R in a Clinical Setting

The clinical utility of the NEO-PI-R has been empirically substantiated, especially with regard to it having a solid theoretical foundation and being a source of identification for personality strengths/adaptive traits and personality weaknesses/maladaptive traits. Addressing its theoretical roots, it is interesting to note that the NEO-PI-R (Revised NEO Personality Inventory; Costa and McCrae, 1992) was derived originally from studies based on a cluster analysis of personality characteristics as measured by the 16 PF. The 16 PF (16 Personality Factors; Cattell, 1946) was originally developed based on the hypothesis that language supplies behavior descriptions and that the analysis of language makes it possible to identify personality traits and their organization (Allport & Odbert, 1936, as cited in Rossier, de Stadelhofen, & Berthoud, 2004). This theoretical foundation is also the fundamental theoretical basis for the development of the NEO-PI-R (Costa & McCrae, 1992). The NEO-PI-R has a top-down hierarchal organization; first, five orthogonal higher-level domains were identified [neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C)], then six lower level facets were defined for each domain. Thus, the development and structure of the NEO-PI-R exemplifies a coherent taxonomy that facilitates the understanding of normal personality traits (Miller, Reynolds, & Pilkonis, 2004).

Studies validating the clinical utility of the NEO-PI-R as an identifier of adaptive personality traits are numerous. For example, in a study investigating the utility of personality assessment in predicting medication compliance in a population suffering from psychotic disorder, the NEO-PI-R profiles predicted both insight regarding illness and outpatient medication adherence (Wilson, 2003). In addition, a study conducted to investigate
the predictive utility of the NEO-PI-R for academic examination performance, Chamorro-Premuzic and Furnham (2003) reported that select NEO-PI-R domain facets (i.e., achievement striving, self-discipline, and activity) accounted for almost 30% of the variance in academic examination performance.

The NEO-PI-R is not limited to assessment of normal/adaptive personality characteristics. In a statistical review of data published for 37 personality and psychopathology inventories, O'Connor (2002, p. 962) found “relatively consistent evidence for high levels of similarity between normal and abnormal populations,” concluding that “the dimensional universes of normality and abnormality are apparently the same.” Likewise, in a study conducted by Livesley, Jackson, and Schroeder (1991), the scores on 100 scales, measuring features of personality disorder, for 274 general population participants and 158 personality-disordered participants were combined. The results indicated that there was no evidence of bimodality or points of rarity that would suggest normal and abnormal personality characteristics are categorically separate.

Based on these findings, researchers began to explore the relationship between the NEO-PI-R domain and facet scales and the DSM personality disorder criteria. In a study designed to evaluate Trull and Widiger’s (1997, as cited in Huprich, 2003) five-factor-model predictions of DSM-IV personality disorders, Huprich (2003, p. 33) reported that “facets hypothesized to be associated with a given personality disorder were able to predict variance in their respective SCID-II personality disorder scores for seven of ten personality disorders.” Similarly, in a study that compared results from a structured interview for DSM-IV personality with results from the NEO-PI-R and the SNAP (a true/false self report inventory of nonadaptive and adaptive personality; Clark, 1993), the NEO-PI-R, at the facet level, out-
performed the SNAP for predicting interview-based personality disorder ratings. Remarkably, the facets significantly predicted 12 of the 13 disorders (Reynolds & Clark, 2001). Moreover, Widiger and Mullins-Stewart (2009, p. 199) noted that the “FFM descriptions include the DSM-IV-TR personality disorder features and go beyond the criterion sets to provide fuller, more comprehensive descriptions of each personality disorder.”

In addition, results of a study conducted by Miller, Reynolds, and Pilkonis (2004, p. 317) indicated that the “experts were able to use the five-factor-model facets to describe PDs in an accurate manner.” These studies, in conjunction with studies that substantiate the incremental validity of the NEO-PI-R when added to batteries utilizing the MMPI, MMPI-2 PSY 5, and TCI (e.g., Ball, Tennen, Poling, Kranzler, & Rounsaville, 1997; Quirk et al., 1995; Sharpe & Desai, 2001), suggest that, when the five-factor-model facet scores are utilized, meaningful relationships between dimensional personality characteristics and psychopathology can be established. This implies that assessments such as the NEO-PI-R may have clinical utility.

For example, in a study investigating the incremental validity of the NEO-PI-R in the prediction of social and vocational adjustment for hospitalized female patients with a clinical diagnosis of borderline personality disorder (Clarkin, Hull, Cantor, & Sanderson, 1993, p. 476), the authors noted that the DSM criteria in combination with the NEO-PI traits made a unique contribution to the prediction of social and vocational adjustment; the fact that both “in combination predict an important variable such as social functioning better than either alone” suggests the importance of both sources of information. In a study investigating the utility of the NEO-PI-R in predicting treatment responsiveness in an outpatient drug-
rehabilitation population (Piedmont & Ciarrocchi, 1999, p. 224), the authors noted that the results of their study support “our contention that broad-based personality inventories may be useful for identifying motivational patterns that are consistent with the demands of certain treatment modalities. Tests that measure only emotional adaptation or symptomology may miss these broader motivational links with treatment responsiveness.”

Beyond being a valid measure of adaptive personality characteristics and possessing the potential to identify maladaptive personality characteristics, the NEO-PI-R has many administration advantages as a pre-treatment assessment device. It has 240 statements for which respondents rate their level of agreement on a 5-point Likert scale, requiring approximately 30 to 40 minutes to complete. Thus, the instrument is comprehensive, yet does not require an exorbitant amount of time to answer. As noted previously, the cost is approximately $13 for 100 paper and pencil administrations that are computer scored. As such, the instrument is relatively inexpensive. The computer-scored version provides a profile that is easily interpreted by the therapist, thus minimizing scoring and interpretation time requirements.

Because the NEO-PI-R profile highlights personal strengths and potential weaknesses, its developers portend that it may provide the clinician with information that can assist in the rapid development of empathy (Costa & McCrae, 1992). In addition, the computer-generated summary provides non-technical and non-threatening feedback of results. If used appropriately, the NEO-PI-R results may allow the therapist to provide a client with personalized feedback; such feedback has been shown empirically to aid in the establishment of rapport (Allen, Montgomery, Tubman, Frazier, & Escovar, 2003) and to enhance the therapeutic alliance (Hilsenroth, Peters, & Ackerman, 2004). In addition, the
developers provide empirical support suggesting that the NEO-PI-R can aid the therapist in anticipating the course of therapy and selecting optimal treatments (Costa & McCrae, 1992).

Moreover, due to its substantial research support for identifying adaptive and maladaptive personality characteristics, the NEO-PI-R may be the needed bridge to aid behavioral/mental health practitioners through the transition from a categorical to a dimensional diagnostic classification system.

Thus, this measure has strong empirical support for its clinical utility. This suggests that the NEO-PI-R has the potential to yield clinically-relevant information and more valid clinical diagnoses, which in turn may yield shorter treatment duration with greater effectiveness, ultimately saving time and money. Therefore, if proven as an effective pre-treatment assessment protocol, the potential to convince third-party payers to approve reimbursement for its administration, scoring, and interpretation may exist.

Conclusions

Relative to semi-structured/structured interviews, self-report measures of trait-based and diagnostic-based personality characteristics appear to have adequate reliability and validity psychometric properties, with a few notable exceptions (e.g., SASB-IQ). They are also cost effective to administer. However, due to high sensitivity, coupled with the inability to ask follow-up questions for positive responses, most self-report, diagnostic-based inventories yield high false-positive rates (Guthrie & Mobley, 1994). This has prompted researchers to recommend that these instruments be used as screening devices only. Due to limited correspondence with DSM-IV personality disorders, researchers also suggest that the SASB-IQ and TPI not be used for clinical purposes until additional research supports this venue.
Notably, the NEO-PI-R has been empirically proven to be useful in a clinical setting and is one of the most economically feasible instruments to administer. In addition, it provides information on normal and abnormal aspects of personality, allowing the clinician to assess both strengths and weaknesses of a client, as opposed to popular assessments such as the MMPI-2, which offers little with regard to identifying personality strengths. Moreover, the NEO-PI-R is comprehensive with regard to assessing the various aspects of normal personality and identifying constellations of normal personality trait variants that are reflective of personal disordered symptomology. These attributes, in combination with the NEO-PI-R’s dimensional basis of assessment, make it the most easily justifiable measure of personality evaluation. However, a research base establishing the cost-effectiveness, in terms of facilitating shorter treatment duration and greater therapeutic effectiveness, of utilizing the NEO-PI-R as a pre-assessment measure needs to be established.
Purpose of the Study and Hypotheses

Purpose

The purpose of this study was twofold. The first objective was to replicate the analyses conducted by Ryder, Costa Jr., and Bagby (2007) utilizing a distinctively different client population. The Ryder et al. analyses were conducted on a sample consisting of inpatients and outpatients being seen for treatment at a medical-school affiliated, psychiatric facility. The sample utilized for this study consisted of clients being seen at university-based outpatient training clinics. Results could be used to address the generalizability of the Ryder and colleagues’ results with regard to the clinical validity of the DSM PD categorical system.

The second objective was to determine the impact of pre-treatment personality assessment, as well as therapeutic alliance, on treatment outcome during the first six sessions of therapy for clients receiving services at university-based psychology training clinics. Personality was assessed utilizing the NEO-PI-R (Costa Jr. & McCrae, 1992). Treatment outcome was measured utilizing the total symptom score from the Outcome Questionnaire (OQ45.2; Lambert, Hansen, Umpress, et al., 2001). Therapeutic alliance was assessed utilizing the Working Alliance Inventory – Short Form (WAI-S; Tracey & Kokotovic, 1989).

Hypotheses

The study tested the following hypotheses:

a. Hypothesis 1: It was hypothesized that replication analyses to determine the symptom-to-disorder diagnostic validity of the DSM-IV-TR personality disorder criterial traits in terms of (a) convergent validity, (b) divergent validity, and (c) association with the Five Factor Model personality traits would yield results similar to those of Ryder, Costa Jr., and Bagby (2007).
b. Hypothesis 2: It was hypothesized that ratings of functional impairment, as measured by the OQ 45.2, would be more strongly associated with impairment as measured by the SCID-II-SR than the Global Assessment of Functioning (GAF) scores utilized in the Ryder et al analyses.

c. Hypothesis 3: It was hypothesized that more clients whose therapists received NEO-PI-R reports would report clinically significant change in OQ 45.2 total symptom scores by session 6 than clients whose therapists did not receive NEO-PI-R reports.

d. Hypothesis 4: It was hypothesized that there would be a significant difference in OQ 45.2 change scores between experimental groups (main effect for feedback).

e. Hypothesis 5: It was hypothesized that the therapeutic alliance would be rated higher by clients whose therapists received NEO-PI-R reports than by clients whose therapists did not receive these reports.

f. Hypothesis 6: It was hypothesized that there would be no interaction between the feedback condition and the strength of the therapeutic alliance on OQ 45 change scores.
Method

The aim of this dissertation was to explore psychotherapy outcome as a function of practicum therapists’ access to pre-treatment client personality information. Thus, practicum therapists, their supervisors, and potential therapy clients were recruited for participation in the investigation. This multilevel recruitment process, in conjunction with the dual-nature of the inquiry (parallel studies: one systems oriented, the other treatment-outcome oriented), made it necessary to implement the dissertation in a series of phases:

1. Therapist and Supervisor Recruitment,
2. Client Recruitment and Baseline Assessment, and
3. Treatment Outcome.

The following describes the methodology utilized to execute each of these phases.

Phase 1: Therapist and Supervisor Recruitment

When the dissertation was initially proposed, the Eastern Michigan University Psychology Clinic (EMU PC) was designated as the primary data collection site. This clinic is the training facility for students in the EMU doctoral clinical psychology program. Clientele seen at the EMU PC consisted primarily of referrals from health care practitioners and clinics in the local geographical area. A substantial number of the clients were unable to qualify for services at the local Community Mental Health clinic and were unable to afford private-practice services. Thus, to accommodate this population, the clinic utilized a sliding fee payment plan based on income.

As a means of introducing the studies to EMU PC therapists and supervisors, a training workshop to facilitate mastery of the NEO-PI-R (a measure of normal personality characteristics described in greater detail in the Phase I section) was conducted. All therapists
scheduled to see clients at the EMU PC, in addition to all supervisors, were invited to participate in the workshop. The workshop was designed to familiarize attendees with the utility of the NEO-PI-R and to provide a feedback protocol that would facilitate clients’ understanding and utility of the questionnaire results. Before the start and upon completion of the workshop, therapists and supervisors were asked to complete questionnaires (See Appendices K and L, pages 136-137). These questionnaires were developed to assess participants’ self-efficacy regarding NEO-PI-R assessment and interpretation and to assess the quality of the presentation.

Following the workshop, therapists and supervisors were provided with an outline of the project. Therapists interested in participating were then asked to complete a consent form (see Appendix N, pages 139-140) and Therapist Demographics questionnaire (see Appendix G, page 132). The Therapist Demographics questionnaire included questions about age, gender, ethnicity, and primary theoretical orientation, as well as therapy, assessment, and assessment feedback experience. Supervisors interested in participating were also asked to complete a consent form (see Appendix P, page 143).

At the time of the proposal, data collection, based on previous therapists’ case load assignments, was estimated to take approximately one year. However, due to unexpected administrative anomalies, such as reduced therapist case load, and increasing number of transfer clients, data collection proved to be more difficult than originally anticipated. Consequently, practicum therapists and supervisors from two additional independent clinics were approached to participate in the studies; the clinics included the EMU Counseling and Psychological Services (CAPS; students receive free counseling services at this facility) and Wentworth and Associates, a private practice located in Utica, Michigan. Due to clinic-
affiliated time constraints, an abridged version of the training workshop was conducted at the respective staff meetings. The pre- and post-workshop questionnaires (described above) were not administered at these presentations. Supervisor and therapist consent forms and Therapist Demographic questionnaires were distributed at the CAPS presentation. However, due to therapist time and caseload constraints, consent to participate and data were unable to be collected at the Wentworth and Associates clinic (see appendices N through Q, pages 139-148).

Moreover, as a result of the extended time frame associated with data collection (25 non-consecutive months due to internship interruptions), new practicum therapists and supervisors joining staff at the participating clinics were approached individually, via telephone/email and recruitment flier, to participate in the project (see Appendix M, page 138). One-on-one training sessions were conducted with those who agreed to participate after receiving a description of the study.

In summary, all student therapists completing practica at the two EMU clinics, in addition to all clinic supervisors, were asked to participate in the dissertation protocol, via a recruitment flier, training involvement, and consent form. Participation was predicated on the following therapist and supervisor inclusion criteria:

- Signed a written consent form, which included paperwork completion requirements (two questionnaires per client for therapists, one questionnaire per client for supervisors; questionnaires described in the Treatment Outcome section).

- Attended a training presentation/in-service to develop the skills necessary to interpret the results of the NEO-PI-R, had previous NEO-PI-R
training/experience, or were briefed individually regarding the skills necessary to utilize the results of the NEO-PI-R.

Therapists and supervisors refusing to participate or unwilling to sign the informed consent form were not included in the project.

Phase 2: Client Recruitment and Baseline Assessment

Client-participant recruitment and assessment procedures. Therapy clients considered for recruitment in the study included individuals 18 years or older seeking treatment at the EMU Psychology Clinic (EMU PC) or EMU Counseling and Psychological Services (CAPS).

Clients from EMU PC and CAPS were asked to participate in the one or both phases of the project in accordance with the inclusion criteria below:

- Signed a written consent form, which included paperwork completion requirements (several questionnaires through the course of treatment, if the participant was eligible for inclusion in that phase of the project; questionnaires are described in the Treatment Outcome section).
- Were willing to complete the baseline assessment battery before being seen for a second treatment session at the clinic.
- Had the cognitive capability and willingness to complete all routine clinic paperwork.

Clients were excluded from participation based on the following criteria:

- Had cognitive impairments that impeded the ability to provide valid data, as noted in the initial clinic paperwork (i.e., initial contact form) or via therapist report.
• Were deaf or blind; exclusion was dictated by the lack of NEO-PI-R questionnaire validity studies for these populations.

**Client-participant recruitment.** When potential clients were contacted by a member of the clinic staff to complete a phone intake interview (EMU PC) or during the in-person intake (CAPS), the interviewer asked the client if he/she would be willing to be contacted regarding possible participation in a study. If the potential client agreed to be called, either orally or by completing an interest form, the interviewer recorded the name and phone number in the appropriate study-specified data fields on the intake form.

**Potential client-participant contact.** Therapy clients who expressed an interest in project participation were contacted by a research assistant (see Appendix R, page 147, for contact protocol). An overview of the project was given, and the potential participant was asked if he/she would like to schedule an appointment with a research team member before his/her second therapy appointment to complete the baseline assessment. This assessment consisted of a review and signage of a consent form (see Appendices S through U, pages 149-152) and completion of a questionnaire battery (which included a demographics form, NEO-PI-R, SCID-II-SR, and OQ45.2 described below in the Measures section). In addition, the research assistant informed the potential participant at the time of the recruitment phone call whether or not he/she met inclusion criteria for the project and, if eligible, what form of compensation he/she would receive for participation. If eligible and the client chose to participate in the study, he/she was given $10 cash (CAPS) or a $10 credit to his/her clinic account (EMU PC) upon completion of the questionnaire battery.

Potential participants were also told that the project protocol included the possibility of some participants being contacted, following termination of therapy, to complete of a
follow-up questionnaire battery. If the participant was contacted to complete the follow-up questionnaires, he/she was informed that, upon receipt (at the EMU PC) of the completed questionnaires (SCID II SR and OQ 45.2 described below in the Measures Section), a monetary compensation of $10 would be mailed to him/her for his/her time and effort.

**Personality questionnaire battery completion.** If eligible to participate in the study, the client was met by a research assistant at a pre-determined place and time. First, the consent form was reviewed with the participant. Upon completion of the consent form, the assistant explained the directions for completing the questionnaire battery. The participant was then left alone in a private space to complete the paperwork. If the participant had any questions, the research assistant was available to answer them. Upon completion of the questionnaire battery, the research assistant compensated the participant as previously outlined, placed the completed questionnaires in an envelope, and deposited the envelope in the principal investigator’s mailbox at the EMU PC.

**Measures.** The following measures were included in the questionnaire battery.

**Client demographics questionnaire.** Salient client characteristics were identified via queries about age, gender, ethnicity, marital status, annual household income, and so on (see Appendix F, page 131).

**NEO Personality Inventory Revised (NEO-PI-R; Costa & McCrae, 1992).** This is a 240-item questionnaire designed to provide a summary of individual’s personality characteristics. It was developed using rational and factor analytic methods to determine five major factors of personality: Neuroticism (N), Extraversion (E), Openness to Experience (O), Agreeableness (A), and Conscientiousness (C). For each factor, there are six facet scales, which are designed to capture more specific traits. Items are answered using a 5-point
response format, ranging from 1—strongly agree to 5—strongly disagree. The items are simple
statements describing general tendencies (e.g., “I am efficient and effective in my work”).
There are two versions of this measure: the self-report form and the observer rating form.
The self-report form was utilized in this study.

Reliability. In an employment sample utilizing the self-report version (Costa &
McCrae, 1992), internal consistencies (coefficient alpha) for the individual facet scales
ranged from .56 to .81; the factor scales had coefficient alphas ranging from .86 to .95.
Similar values were reported for a clinical sample (Fagan et al., 1991). Test-retest reliability
scores for a small sample (31 men and women) ranged from .66 to .92 for the facet scales and
from .86 to .91 for the N, E, & O factors.

Validity. The developers of the measure provide multiple examples of convergent and
discriminant validity for all of the facets and factors (Costa & McCrae, 1992).

Appropriate populations. The NEO-PI-R has been validated for use with individuals
who are 17 years or older and is available in a wide variety of languages. It is recommended
that individuals suffering from a disorder that may affect their ability to complete the
measure (e.g., dementia, psychosis, etc.) should not be administered the instrument.

Scoring. If 41 or more responses are missing, it is recommended that the protocol not
be scored. If fewer than 41 items are missing, and the respondent is not available to answer
questions, it is recommended that the missing items be scored as if the “neutral” response
option was selected. If more than 3 responses are missing on any particular facet scale, the
developers recommend that scale be interpreted with caution. The NEO-PI-R contains six
validity checks: honesty and accuracy, completeness, acquiescence, nay-saying, and random
responding. Following the manual recommendations, T scores above 55 were considered high, and scores below 45 were considered low.

For purposes of this investigation, the computer scoring software, purchased with the inventory, was utilized to provide the therapists with a standardized feedback report on their client’s results. Standardized feedback was provided, when applicable (Phase 3), in two formats: a client summary (a brief summarization of the respondent’s profile with regard to the five factors) and an interpretive report (a comprehensive report that details factor and facet scores and provides a clinical hypotheses section which lists possible DSM-IV-TR Axis II disorders the client may be experiencing). It should be noted that the NEO-PI-R interpretive report only listed PDs for which the participant scored 90% or higher than the normative sample.

*Structured Clinical Interview for DSM-IV Axis II Disorders Self Report Questionnaire (SCID-II-SR; First et al., 1997).* The SCID-II-SR is a 119-item questionnaire (see Appendix X, pages 157-162). Items are answered in a yes/no format. The SCID-II-SR was developed as a screening questionnaire for the clinician-administered Structured Clinical Interview for DSM-IV Axis II Disorders. The questionnaire is scored for the number of endorsed criteria for each personality disorder. It is recommended that a follow-up interview be conducted to verify the presence of any disorder for which a minimum number of criteria were endorsed on the questionnaire. For the purposes this investigation, a follow-up interview was not conducted, and the questionnaire was modified to included an additional 21 items associated with Antisocial Personality Disorder.

*Reliability and Validity.* The developers direct users to the research literature that established reliability and validity for the DSM-III-R version of the SCID-II-SR (e.g.,
Ekselius, Lindstrom, von Knorring, Bodlund, & Kullgren, 1994). Currently, there is a paucity of reliability or validity data for the self-report version of the SCID-II, DSM-IV version; and no reliability or validity data have been obtained for the modified version utilized in this investigation.

**Outcome Questionnaire 45 (OQ 45.2; Lambert, Hansen, Umpress, et al., 2001).** The OQ 45.2 is a 45 item self-report inventory that measures client progress in therapy. It is designed to be repeatedly administered during the course of treatment, in addition to being used as a baseline-screening instrument to aid with treatment decisions. The developers stress that it was not designed for client diagnosis. The questionnaire has three subscales: symptom distress, interpersonal relationships, and social role performance. The utilization advantages of the OQ 45.2 include low cost, sensitivity to change over short periods of time, and brevity, while maintaining high levels of reliability and validity.

**Reliability.** In university student and employee assistant program samples (Lambert, Hansen, Umpress, et al., 2001), internal consistencies (coefficient alpha) for the subscales ranged from .70 to .92; the total scale score had coefficient alphas of .93 for both samples. Test-retest reliability scores ranged from .78 to .82 for the subscales and .84 for the total score, with the college sample.

**Validity.** Construct validity coefficients were computed using scores from the Symptom Checklist 90 Revised Global Severity Index subscale score (SCL-90-R; Derogatis, 1977), Inventory of Interpersonal Problems total scale score (IIP; Horowitz, Rosenberg, Baer, Ureno, & Villasenor, 1988), and Social Adjustment Scale total scale score (SAS; Weissman & Bothwell, 1976), and ranged from .45 to .92.
Scoring. Scale items are totaled to yield 4 scores: Total Scale (all items), Symptom Distress (25 items), Interpersonal Relationship (11 items), and Social Roles (9 items). If an item is left blank, the subscale mean item score is inserted for that item. Total Scale scores above 63 are considered in the clinical range. Total Scale scores that are originally above 63 and decrease by 14 points are indicative of clinically significant change.

Summary. In this phase of the investigation, clients were recruited from each of the previously-listed participating clinics. If they met inclusion criteria, they were asked to complete the pre-therapy questionnaire battery consisting of four measures: demographics form, NEO-PI-R, SCID-II-SR, and OQ 45.2. All the information collected in this phase was utilized in the data base for Study 1; portions of this information provided data for Study 2.

Phase 3: Treatment Outcome

Participant recruitment. Clients who completed the pre-treatment questionnaire battery before the second session of therapy and were assigned to practicum therapists at the respective clinics were included in this phase of the investigation. Thus client exclusion criteria for this phase included:

- Inability to complete the questionnaire battery before the second therapy session.
- Receiving treatment from a non-practicum therapist.

Protocol. The study protocol for this phase of the project is described below.

Study design and experimental condition assignment. A quasi-experimental design was utilized in this phase. Upon completion of the pre-treatment questionnaire battery, the participants were randomly assigned to treatment condition via a random numbers table. An exception to the random assignment protocol was made if the therapist’s supervisor declined
to participate in the study; clients in this situation were automatically assigned to the control group.

In the experimental condition, the therapist and the therapist’s supervisor received a narrative report of the NEO-PI-R results (TR); in the control condition, the therapist did not have access to the NEO-PI-R results (NR). For participants in the experimental condition, copies of the NEO-PI-R results and narrative reports were placed in a sealed envelopes and deposited in the therapist’s and supervisor’s mailbox at the respective clinic before the participant’s second therapy appointment. Note: Participating clients, therapists, and supervisors were told orally, and in writing via the informed consent, that the NEO-PI-R results would be available for control-condition clients after their sixth session of therapy, if requested.

Study protocol during treatment. During the course of treatment, all participants completed the OQ 45.2 just prior to each session, as part of the routine clinical procedure (see Table 1, p. 65, for a time table). At the EMU PC, therapists entered the OQ 45.2 data into a computer scoring program and received a cumulative graphic representation of the participant’s progress. For clients participating in treatment at CAPS, OQ45.2 forms were regularly collected by a research assistant, scored, graphed, and returned to the clinic for distribution to the therapist before the next therapy session with the respective client. Regarding review of the OQ 45.2 results with the client, therapists were highly encouraged, as part of the clinic procedure, to review the OQ 45.2 at the beginning of the session with a client and to attend to critical items (e.g., suicide ideation, drug use, etc.) during the session.

Just prior to the fourth scheduled appointment, a WAI-S was provided for completion by both the therapist and the client (see the Working Alliance Inventory section below for
description of the WAI-S). Therapists were given the therapist version (WAI-S-T), while client-participants were provided the client version (WAI-S-C).

At the time of each client’s sixth session, therapists were asked to complete the Therapist Questionnaire (E or C form as appropriate). In addition, supervisors of the therapists, if participating in the study, were asked to complete a Supervisor Questionnaire.

*Post treatment study protocol.* The project protocol included a follow-up to be conducted three months after the participant’s last therapy session or upon termination of the study. Participants were asked, via mail, to complete a follow-up questionnaire battery consisting of the SCID-II-SR and the OQ 45.2. A cover letter was included in the mailing, explaining the compensation procedure for completion of battery (see Appendix V, page 155). Participants who returned the completed questionnaires, in the provided stamped, addressed envelope, received a $10 compensation for their effort upon receipt at the EMU Psychology Clinic of the completed questionnaires.

**Measures.** Additional measures for this phase of the project are listed below.

*Working Alliance Inventory – therapist and client versions (WAI; Horvath & Greenberg, 1989).* The Working Alliance Inventory is a 36-item, 3-subscale measure of the therapist-client alliance. It has two versions: client and therapist. Numerous empirical studies have shown the WAI scores to be predictive of psychotherapy outcome (e.g., Constantino, Castonguay, & Schut, 2002; Martin, Garske, & Davis, 2000). An abbreviated version of the WAI (12-items, WAI-S; see Appendices D and E, pages 129 and 130) was developed by Tracey and Kokotovic (1989) using confirmatory factor analysis. The original three subscales (Goal – extent to which therapy goals are mutual, important, and capable of being accomplished; Task – agreement about steps taken to improve the presenting problem; and
Bond – measures empathy, mutual attachment, and comfort exploring intimate issues) were preserved; however, the number of items for each was reduced from 12 to 4, with each of the 4 items being the highest that loaded on their respective factors.

The Working Alliance Inventory long (WAI) and short (WAI-S) versions have comparable internal consistencies (.95 long, .91 short), predictive validity (e.g., for improvement: client long version had a .36 correlation coefficient, client short version .34), and subscale intercorrelations (Busseri & Tyler, 2003). Therefore, for the purposes of this investigation, the WAI-S was utilized.

Reliability. Based on an initial validation sample (Tracey & Kokotovic, 1989), total score internal consistency reliability coefficient estimates were .98 (client version) and .95 (therapist version). For the three subscale scores, internal consistency estimates ranged from .90 to .92 for the client version and .83 to .91 for the therapist version.

Validity. Validity for the short version of the WAI was established with significant correlations between WAI-S ratings and client characteristics (Kokotovic & Tracey, 1990).

Scoring. Each subscale is scored on a 7-point Likert response format ranging from 1 (never) to 7 (always). Subscale scores can range from 4 to 18 and can be summed for a total score. Higher scores reflect more positive ratings of the alliance.

Therapist Questionnaire – E Form. A therapist questionnaire (see Appendix H, page 133) was developed for this investigation to assess the therapists’ perceptions regarding the usefulness of the NEO-PI-R narrative report in the development of their case formulations. The questionnaire consists of one 11-point Likert format response item and eight open-ended response format questions. This particular questionnaire was given only to therapists whose clients were in the experimental condition (TR).
**Therapist Questionnaire – C Form.** A therapist questionnaire (see Appendix I, page 134), was developed for this investigation to assess whether or not the NEO-PI-R training influenced therapists’ case formulations for clients in the control condition (NR). This questionnaire consisted of one 11-point Likert format response item and three open-ended response format questions.

**Supervisor Questionnaire.** A supervisor questionnaire (see Appendix J, page 135) was developed for this investigation to assess whether or not the NEO-PI-R training influenced supervisors’ case formulations and assessment recommendations for their supervisees’ clients. This questionnaire consisted of one 11-point Likert format response item and four open-ended response format questions.

**Summary.** In this phase of the investigation, eligible participating clients were asked to complete six pre-session OQ45.2 questionnaires and a WAI-S Client Version questionnaire before the fourth session of therapy. Participating practicum therapists were asked to complete a WAI-S Therapist Version questionnaire and a post sixth-session questionnaire. Participating supervisors were also asked to complete a post sixth-session questionnaire. (Please see the Table 1, p. 65, for a timeline depiction of data collection for the project.) Data collected in this phase of the investigation were combined with portions of the data collected in phase I (demographics, NEO-PI-R, and OQ45.2 data) for analysis purposes.

**Human Subjects Approval**

Human subjects approval was obtained for all modifications and time extensions associated with this study. Please see appendices Y through AC, pages 163-167.
Table 1

Assessment Timeline

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time of Assessment&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Pre-Tx</th>
<th>1st Session</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; Session</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; Session</th>
<th>4&lt;sup&gt;th&lt;/sup&gt; Session</th>
<th>5&lt;sup&gt;th&lt;/sup&gt; Session</th>
<th>6&lt;sup&gt;th&lt;/sup&gt; Session</th>
<th>Post-Tx&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCID-II PQ</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>NEO-PI-R</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td>NEO Narrative Report to Therapist</td>
<td>T</td>
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<td></td>
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</tr>
<tr>
<td>Working Alliance Inventory</td>
<td>T</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapist Demographics Questionnaire</td>
<td>T</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post Treatment Questionnaire</td>
<td>C</td>
<td></td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>OQ45.2</td>
<td>C</td>
<td></td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

<sup>a</sup> Data will be collected before the start of the session

<sup>b</sup> Data will be collected 3 months after treatment ends

C = Client; T = Therapist; S = Supervisor
Results

Phase 1: Therapist and Supervisor Recruitment

Seventeen therapists and four supervisors participated in the NEO-PI-R workshop and completed workshop questionnaires. A year later, when the CAPS administration agreed to participate in the study, an abridged version of the workshop was offered during a staff meeting at that facility; six therapists and three supervisors participated, with only the therapists completing questionnaires.

Responses for the questionnaire items, as reported by therapists from each clinic and EMU Psychology Clinic supervisors, are listed in Table 2 below. Yes/No responses are reported in proportions. Eleven-point Likert scale responses (from 0 for “no confidence,” “not useful,” or “no expertise” ratings to 10 for “extremely confident,” “extremely useful,” or “expert” ratings) are reported in averages (mean scores).

Aggregated results indicated therapists averaged 1 year of clinical experience, while supervisors averaged 19.75 years. Responses on the questionnaire administered before the workshop indicated therapists felt they possessed little or no NEO-PI-R expertise ($M = 0.65$), while supervisors felt they possessed a moderate level of NEO-PI-R expertise ($M = 4.75$). Responses on the questionnaire administered following the workshop revealed supervisors felt confident about giving clients feedback regarding NEO-PI-R results ($M = 8.0$), while therapists reported feeling moderately confident ($M = 6.27$). Both groups reported similar confidence levels regarding perceived clinical utility of the NEO-PI-R ($M = 6.75$ for supervisors; $M = 6.5$ for therapists).
Table 2

Workshop Questionnaire Results

<table>
<thead>
<tr>
<th>Question</th>
<th>EMU PC Supervisors N = 4</th>
<th>EMU PC Therapists N = 17</th>
<th>CAPS Therapists N = 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years of clinical experience</td>
<td>M = 19.75 (SD = 7.2)</td>
<td>M = 0.88 (SD = 0.99)</td>
<td>M = 1.33 (SD = 0.86)</td>
</tr>
<tr>
<td>Expertise with assessment feedback</td>
<td>M = 8.25 (SD = 2.2)</td>
<td>M = 3.59 (SD = 2.24)</td>
<td>M = 3.5 (SD = 2.7)</td>
</tr>
<tr>
<td>Expertise with NEO-PI-R</td>
<td>M = 4.75 (SD = 3.7)</td>
<td>M = 0.29 (SD = 0.77)</td>
<td>M = 1.67 (SD = 1.97)</td>
</tr>
<tr>
<td>Expertise using NEO-PI-R with clinical population</td>
<td>M = 4.25 (SD = 3.8)</td>
<td>M = 0.18 (SD = 0.73)</td>
<td>M = 1.0 (SD = 1.27)</td>
</tr>
<tr>
<td>Usefulness of workshop material</td>
<td>M = 9.0 (SD = .81)</td>
<td>M = 7.82 (SD = 2.79)</td>
<td>M = 6.4 (SD = 3.36)</td>
</tr>
<tr>
<td>Received enough information about NEO-PI-R</td>
<td>Yes = 100%</td>
<td>Yes = 64% (n = 14)</td>
<td>Yes = 83% (n = 5)</td>
</tr>
<tr>
<td>Confidence giving feedback on NEO-PI-R results</td>
<td>M = 8.0 (SD = 2.5)</td>
<td>M = 6.06 (SD = 1.85)</td>
<td>M = 7.0 (SD = 1.23)</td>
</tr>
<tr>
<td>Confidence about clinical utility of NEO-PI-R results</td>
<td>M = 6.75 (SD = 3.4)</td>
<td>M = 6.53 (SD = 1.80)</td>
<td>M = 6.4 (SD = 3.13)</td>
</tr>
<tr>
<td>Enough time to discuss issues</td>
<td>Yes = 100%</td>
<td>Yes = 100%</td>
<td>Yes = 83% (n = 5)</td>
</tr>
</tbody>
</table>

Therapists and supervisors who did not attend one of the two workshops, due to the timing of the start of practica or supervision, were provided workshop materials and, if requested, given an overview of the workshop. These therapists and supervisors were not asked to complete workshop-related questionnaires.

Phase 2: Client Recruitment and Baseline Assessment

Over 250 individuals seeking therapy services at the two university-based clinics were contacted to participate in the study. Of those who responded (n = 78), 77 completed the baseline assessment battery; one respondent was excluded due to cognitive impairment.
and subsequent inability to complete the questionnaire battery. In addition, one of the batteries (1.3%) was not included in the analyses due to sizeable amounts of missing data (the battery had a page of missing data in the SCID-II-SR questionnaire). For batteries that had incomplete item responses, the items were addressed according to the guidelines listed in the respective questionnaire scoring manual.

**Demographic data.** The 76 therapy clients included in the final analyses for this phase of the study were primarily Caucasian, single, and enrolled in university classes. The mean age was 28 years, with 36.8% of participating clients being male and 63.2% being female. Demographic data are presented in Table 3. SCID-II-SR responses indicated an average of 3.05 ($SD = 1.99$) PDs per client for this population (range 0 to 7), with 7 clients not meeting screening criteria for a PD, whereas, the NEO-PI-R responses indicated an average of 2.28 ($SD = 1.82$) PDs per client (range 0 to 7), with 16 clients not meeting screening criteria for a PD.\(^5\)

**Hypothesis testing.** The following are the results associated with hypotheses linked to the Phase 2 of the study.

**Hypothesis 1.** Hypothesis 1 stated that replication analyses to determine the symptom-to-disorder diagnostic validity of the DSM-IV-TR personality disorder criteria in terms of (a) convergent validity, (b) divergent validity, and (c) association with the Five Factor Model personality traits would yield results similar to those of Ryder, Costa Jr., and Bagby (2007). Boot-strapping analyses, a nonparametric technique for setting approximate

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\(^5\) As mentioned in the introduction, the NEO-PI-R and the SCID-II-SR are only screening instruments for personality disorder symptomatology and diagnosis. Any personality disorder identified by these instruments should be, at the very least, verified with a therapist follow-up interview before being given as an official diagnosis.
confidence intervals for a calculated value, were conducted to determine if the proportion of SCID-II-SR symptoms that met a pre-determined correlation-coefficient standard for an

Table 3

Demographic Characteristics of Phase 2 Participating Clients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean and (SD; Mode) or Proportions</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>$M = 28$ (SD = 10.1; 23)</td>
<td>18 to 59</td>
</tr>
<tr>
<td>Gender - Male</td>
<td>36.8% ($n = 28$)</td>
<td></td>
</tr>
<tr>
<td>Years of College</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>18.4% ($n = 14$)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>6.6% ($n = 5$)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>15.8% ($n = 12$)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>18.4% ($n = 14$)</td>
<td></td>
</tr>
<tr>
<td>4 or more</td>
<td>39.4% ($n = 30$)</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/Live with Partner</td>
<td>27.6% ($n = 21$)</td>
<td></td>
</tr>
<tr>
<td>Single/Separated/Divorced</td>
<td>68.4% ($n = 52$)</td>
<td></td>
</tr>
<tr>
<td>Widowed/Other</td>
<td>4.0% ($n = 3$)</td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>European-American</td>
<td>65.8% ($n = 50$)</td>
<td></td>
</tr>
<tr>
<td>Black or African-American</td>
<td>7.9% ($n = 6$)</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>26.3% ($n = 9$)</td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>30.3% ($n = 23$)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>26.3% ($n = 20$)</td>
<td></td>
</tr>
<tr>
<td>Student&lt;sup&gt;a&lt;/sup&gt;</td>
<td>43.4% ($n = 33$)</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 150k</td>
<td>3.9% ($n = 3$)</td>
<td></td>
</tr>
<tr>
<td>50k-150k</td>
<td>11.8% ($n = 9$)</td>
<td></td>
</tr>
<tr>
<td>10k-50k</td>
<td>31.6% ($n = 24$)</td>
<td></td>
</tr>
<tr>
<td>&lt; 10k</td>
<td>28.9% ($n = 22$)</td>
<td></td>
</tr>
<tr>
<td>Don’t Know/Missing</td>
<td>23.7% ($n = 18$)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>It should be noted that if a participant was a student and checked more than one employment option, "student" was entered as the primary option for this question.
identified criterion (criteria listed below) in this study was significantly different from the proportion obtained by Ryder and colleagues.

Criterion I. The first criterion analyzed determined whether or not a DSM-IV-TR symptom of a PD was coherent within that particular disorder (convergent validity). This was determined by correlating the symptom score with the total score of the remaining symptoms in that particular disorder (i.e., the corrected item-total \( r \)). Ryder and colleagues utilized correlation coefficients \( \geq .20 \) as indication of coherence based on recommendations made by Nunnally and Bernstein (1994, as cited in Ryder et al., 2007, p. 629). Results from this study are listed in Table 4 below. The first two columns in the table indicate the proportion of symptoms for the particular disorder that met the .20 or above correlation coefficient cutoff for each respective study. The third column is the estimated bootstrap 95% confidence interval for the present study, calculated by taking 500 (of 76 from an \( n \) of 76, with replacement) samples from the present study data set and eliminating the extreme 2.5% from each end of the value range. The fourth column indicates whether or not the Ryder and colleagues’ proportion is significantly different from this study’s estimated confidence interval values (i.e., if the Ryder and colleagues value is not contained within the confidence interval, their value is significantly different from the value obtained in this study).

Ryder et al. (2007) reported that 70.6% (approximately 74 of 104) of the SCID-II-SR symptoms met the standard for item-corrected correlation coefficients with their own PD of 0.20 or higher. Results from this study indicated that 69.2% (72 of 104) of the symptoms met the standard. A chi-square analysis of the results from these studies is nonsignificant \( \chi^2(1, N = 104) = 0.092, p = 0.76 \). Thus, this replication analysis corroborated Ryder and
colleagues’ results, namely that most of the PD traits were found to be related to their parent disorder, thereby supporting the generalizability of this contention.

Table 4

Criterion I: PD Symptom Convergent Validity

<table>
<thead>
<tr>
<th>Personality Disorder (number of items)</th>
<th>Ryder &amp; Colleagues</th>
<th>Present Study</th>
<th>95% Confidence Interval</th>
<th>Significantly Different?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial (15)</td>
<td>0.730 (11)</td>
<td>0.867 (13)</td>
<td>(0.67, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Avoidant (7)</td>
<td>0.571 (4)</td>
<td>1.000 (7)</td>
<td>(0.86, 1.00)</td>
<td>Yes</td>
</tr>
<tr>
<td>Borderline (15)</td>
<td>0.800 (12)</td>
<td>0.533 (8)</td>
<td>(0.27, 0.87)</td>
<td>No</td>
</tr>
<tr>
<td>Dependent (8)</td>
<td>0.625 (5)</td>
<td>0.500 (4)</td>
<td>(0.00, 0.75)</td>
<td>No</td>
</tr>
<tr>
<td>Histrionic (7)</td>
<td>0.429 (3)</td>
<td>0.857 (6)</td>
<td>(0.428, 0.86)</td>
<td>No</td>
</tr>
<tr>
<td>Narcissistic (17)</td>
<td>0.649 (11)</td>
<td>0.588 (10)</td>
<td>(0.29, 0.71)</td>
<td>No</td>
</tr>
<tr>
<td>Obsessive-Compulsive (9)</td>
<td>1.000 (9)</td>
<td>0.143 (1)</td>
<td>(0.00, 0.71)</td>
<td>Yes</td>
</tr>
<tr>
<td>Paranoid (8)</td>
<td>0.625 (5)</td>
<td>1.000 (8)</td>
<td>(0.00, 0.71)</td>
<td>No</td>
</tr>
<tr>
<td>Schizoid (7)</td>
<td>1.000 (7)</td>
<td>0.714 (5)</td>
<td>(0.29, 0.86)</td>
<td>Yes</td>
</tr>
<tr>
<td>Schizotypal (11)</td>
<td>0.636 (7)</td>
<td>0.909 (10)</td>
<td>(0.55, 1.00)</td>
<td>No</td>
</tr>
</tbody>
</table>

The most notable difference between the two analyses is the proportion of obsessive-compulsive symptoms that correlated with the parent PD; all of the symptoms in the Ryder and colleague sample met the criterion, while only one item in the present sample met this criterion. In addition, the Ryder and colleagues’ sample had two PDs (histrionic and avoidant) evidencing less than 60% of the items meeting the correlation criterion for significance, while this study had three (borderline, narcissistic, and obsessive-compulsive). Significant differences between study results were evident for three PDs (i.e., avoidant, obsessive-compulsive, and schizoid); namely, the Ryder and colleagues’ values for these PDs were outside the confidence interval range calculated with this study’s data.
Criterion II. The second criterion analyzed determined whether or not a DSM-IV-TR PD symptom of a disorder was distinctive relative to other disorders (divergent validity). This was determined by comparing the corrected item-total correlation value calculated in Criterion I with the correlation between the symptom and other PD total symptom scores. “Symptoms correlating more highly (absolute value) with their own PD as compared with other PDs were considered sufficiently discriminating” (Ryder et al., 2007, p. 629). Results are listed in Table 5 below. Again, the first two columns in the table indicate the proportion of symptoms for the particular disorder that met the above correlation requirement for each respective study. The third column is the estimated bootstrap confidence interval for the present study proportions, calculated by taking 500 (of 76 from an \( n \) of 76, with replacement) samples from the present study data set. The fourth column indicates whether or not the Ryder and colleagues’ proportion is significantly different from this study’s estimated confidence interval values (i.e., if the Ryder and colleagues’ value is not contained within the confidence interval, their value is significantly different from the value obtained in this study).

Ryder et al. (2007) reported that 53.2% (approximately 54 of 104) of the SCID-II-SR symptoms met the standard for item-corrected correlation coefficients, with their own PD being higher than the symptom correlation coefficient with other PDs. Results from this study indicated that 33.6% (35 of 104) of the symptoms met the standard. A chi-square analysis of the results from these studies is significant \( \chi^2(1, N = 104) = 7.09, p = 0.008 \). Although the chi-square is significant, because fewer of the symptoms in this study correlated more highly with their own PD than with other PDs, these results corroborate the
results of the Ryder et al. study with regard to the lack of divergent validity for PD symptoms.

Table 5

Criterion II: PD Symptom Divergent Validity

<table>
<thead>
<tr>
<th>Personality Disorder (number of items)</th>
<th>Ryder &amp; Colleagues</th>
<th>Present Study</th>
<th>95% Confidence Interval</th>
<th>Significantly Different?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial (15)</td>
<td>0.600 (9)</td>
<td>0.533 (8)</td>
<td>(0.33, 0.67)</td>
<td>No</td>
</tr>
<tr>
<td>Avoidant (7)</td>
<td>0.571 (4)</td>
<td>0.857 (6)</td>
<td>(0.29, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Borderline (15)</td>
<td>0.467 (7)</td>
<td>0.133 (2)</td>
<td>(0.00, 0.28)</td>
<td>Yes</td>
</tr>
<tr>
<td>Dependent (8)</td>
<td>0.500 (4)</td>
<td>0.125 (1)</td>
<td>(0.00, 0.38)</td>
<td>Yes</td>
</tr>
<tr>
<td>Histrionic (7)</td>
<td>0.286 (2)</td>
<td>0.571 (7)</td>
<td>(0.00, 0.71)</td>
<td>No</td>
</tr>
<tr>
<td>Narcissistic (17)</td>
<td>0.355 (6)</td>
<td>0.176 (3)</td>
<td>(0.00, 0.29)</td>
<td>Yes</td>
</tr>
<tr>
<td>Obsessive-Compulsive (9)</td>
<td>1.000 (9)</td>
<td>0.000 (0)</td>
<td>All estimates were 0</td>
<td>NA</td>
</tr>
<tr>
<td>Paranoid (8)</td>
<td>0.375 (3)</td>
<td>0.500 (4)</td>
<td>(0.00, 0.75)</td>
<td>No</td>
</tr>
<tr>
<td>Schizoid (7)</td>
<td>0.714 (5)</td>
<td>0.286 (2)</td>
<td>(0.00, 0.43)</td>
<td>Yes</td>
</tr>
<tr>
<td>Schizotypal (11)</td>
<td>0.454 (5)</td>
<td>0.182 (2)</td>
<td>(0.00, 0.27)</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Again, the most notable difference between the two analyses was the number of obsessive-compulsive symptoms meeting the criterion; all of the symptoms in the Ryder and colleague sample met the criterion, while none of the items in the present sample met this criterion. Also, Ryder et al. reported that two PDs (obsessive-compulsive and schizoid) showed divergent validity for more than 60% of the constituent items, while only one PD in this study (avoidant) showed a similar level of divergent validity for its constituent items. Similar to Criterion I, significant differences between study results were evident for a number of PDs for this criterion (borderline, dependent, narcissistic, schizoid, and schizotypal).

Criterion III. The third criterion analyzed determined the relation of each DSM-IV-TR PD symptom to one or more personality dimensions of the Five Factor Model as
measured by the NEO-PI-R (relation to general personality traits). This was determined by correlating each PD symptom with each of the 30 facets of the NEO-PI-R. “Symptoms that correlated significantly [Bonferroni corrected (.05/30; p < .002)] with one or more facets were considered adequately related to the universe of general personality traits” (Ryder et al., 2007, p. 630). Results are listed in Table 6 below. Again, the first two columns in the table indicate the proportion of symptoms for the particular disorder that met the above correlation requirement for each respective study. The third column is the estimated bootstrap confidence interval for the present study proportions, calculated by taking 500 (of 76 from an n of 76, with replacement) samples from the present study data set. The fourth column indicates whether or not the Ryder and colleagues’ proportion is significantly different from the confidence interval values.

Table 6

_Criterion III: Proportion of PD Symptoms Related to NEO-PI-R Personality Traits_

<table>
<thead>
<tr>
<th>Personality Disorder (number of items)</th>
<th>Ryder &amp; Colleagues</th>
<th>Present Study</th>
<th>95% Confidence Interval</th>
<th>Significantly Different?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial (15)</td>
<td>0.467 (7)</td>
<td>0.000 (0)</td>
<td>(0.13, 0.87)</td>
<td>No</td>
</tr>
<tr>
<td>Avoidant (7)</td>
<td>0.857 (6)</td>
<td>1.000 (7)</td>
<td>(0.857, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Borderline (15)</td>
<td>0.800 (12)</td>
<td>0.600 (9)</td>
<td>(0.67, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Dependent (8)</td>
<td>0.625 (5)</td>
<td>0.375 (3)</td>
<td>(0.38, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Histrionic (7)</td>
<td>0.857 (6)</td>
<td>0.286 (2)</td>
<td>(0.28, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Narcissistic (17)</td>
<td>0.706 (12)</td>
<td>0.176 (3)</td>
<td>(0.35, 0.88)</td>
<td>No</td>
</tr>
<tr>
<td>Obsessive-Compulsive (9)</td>
<td>0.444 (4)</td>
<td>0.429 (4)</td>
<td>(0.428, 1.00)</td>
<td>No</td>
</tr>
<tr>
<td>Paranoid (8)</td>
<td>0.500 (4)</td>
<td>0.750 (6)</td>
<td>(0.63, 1.00)</td>
<td>Yes</td>
</tr>
<tr>
<td>Schizoid (7)</td>
<td>0.286 (2)</td>
<td>0.571 (4)</td>
<td>(0.43, 1.00)</td>
<td>Yes</td>
</tr>
<tr>
<td>Schizotypal (11)</td>
<td>0.182 (2)</td>
<td>0.273 (3)</td>
<td>(0.182, 0.91)</td>
<td>No</td>
</tr>
</tbody>
</table>
Ryder et al. reported that 57.2% (60 of 104) of the SCID-II symptoms met the standard of correlating at a significance level of less than .002 with NEO-PI-R facets. Conversely, results from this study's sample indicated that only 39.4% (41 of 104) of the PD symptoms were significantly related at the p < .002 level. Chi-Square analysis of this difference in total symptoms reaching correlational significance is significant \( \chi^2(1, N = 104) = 6.95, p = .008 \). Thus, this analysis would not support the generalizability of Ryder and colleagues' results.

It is noteworthy that, for the Ryder et al. (2007) results, 5 of the PDs (antisocial, obsessive-compulsive, paranoid, schizoid, schizotypal) had fewer than 60% of the symptoms associated with NEO-PI-R facets, whereas, for this study, 7 of the PDs had fewer than 60% of the symptoms evidencing an association. However, it should be acknowledged that a significance level less than .002 is very conservative. Moreover, the Ryder and colleague sample size was 203, suggesting a moderate correlation would be significant, whereas this study sample size was 76, suggesting a strong correlation was needed for significance.

**Hypothesis 2.** Hypothesis 2 stated that ratings of functional impairment, as measured by the OQ 45.2, would be more strongly associated with impairment as measured by the SCID-II-SR than the Global Assessment of Functioning (GAF) scores utilized in the Ryder and colleagues' analyses (their Criterion IV). Boot-strapping analyses were again conducted to determine if the proportions of SCID-II-SR symptoms per PD that significantly correlated with OQ45.2 total symptom scores were significantly different from the proportions obtained by Ryder and colleagues utilizing GAF scores. Results are listed in Table 7 below. Again, the first two columns in the table indicate the proportion of symptoms for the particular disorder that met the above correlation requirement for each respective study. The third column is the
estimated bootstrap confidence interval for the present study proportions, calculated by
taking 500 (of 76 from an n of 76, with replacement) samples from the present study data set.
The fourth column indicates whether or not the Ryder and colleagues’ proportion is
significantly different from the confidence interval values.

Table 7

**Criterion IV: Proportion of PD Symptoms Significantly Correlated with Functional
Impairment Scores**

<table>
<thead>
<tr>
<th>Personality Disorder (number of items)</th>
<th>Ryder &amp; Colleagues</th>
<th>Present Study</th>
<th>95% Confidence Interval</th>
<th>Significantly Different?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial (15)</td>
<td>0.133 (2)</td>
<td>0.067 (1)</td>
<td>(0.00, 0.33)</td>
<td>No</td>
</tr>
<tr>
<td>Avoidant (7)</td>
<td>0.286 (2)</td>
<td>1.000 (7)</td>
<td>(0.57, 1.00)</td>
<td>Yes</td>
</tr>
<tr>
<td>Borderline (15)</td>
<td>0.600 (9)</td>
<td>0.800 (12)</td>
<td>(0.40, 0.93)</td>
<td>No</td>
</tr>
<tr>
<td>Dependent (8)</td>
<td>0.125 (1)</td>
<td>0.250 (2)</td>
<td>(0.125, 0.62)</td>
<td>No</td>
</tr>
<tr>
<td>Histrionic (7)</td>
<td>0.000 (0)</td>
<td>0.000 (0)</td>
<td>(0.00, 0.43)</td>
<td>No</td>
</tr>
<tr>
<td>Narcissistic (17)</td>
<td>0.118 (2)</td>
<td>0.176 (3)</td>
<td>(0.06, 0.41)</td>
<td>No</td>
</tr>
<tr>
<td>Obsessive-Compulsive (9)</td>
<td>0.000 (0)</td>
<td>0.288 (3)</td>
<td>(0.14, 0.57)</td>
<td>Yes</td>
</tr>
<tr>
<td>Paranoid (8)</td>
<td>0.125 (1)</td>
<td>0.875 (7)</td>
<td>(0.38, 0.88)</td>
<td>Yes</td>
</tr>
<tr>
<td>Schizoid (7)</td>
<td>0.429 (3)</td>
<td>0.143 (1)</td>
<td>(0.14, 0.86)</td>
<td>No</td>
</tr>
<tr>
<td>Schizotypal (11)</td>
<td>0.364 (4)</td>
<td>0.273 (3)</td>
<td>(0.09, 0.55)</td>
<td>No</td>
</tr>
</tbody>
</table>

Ryder et al. reported that 21.8% of the SCID-II-SR symptoms met the correlation
significance standard set for GAF measures of functional impairment. This proportion does
not appear to accurately reflect what would be expected for their estimated number of
symptoms (25 of 104, calculated 24%); the proportion difference (21.8% vs. 24%) equates to
approximately 2-3 items. However, the Ryder and colleagues’ item total as reported here
matches the item total listed in the appendix of their article, suggesting that the reported
proportion is incorrect.
Notably, 37.5% (39 of 104) of the SCID-II-SR symptoms endorsed in this study significantly correlated with OQ45.2 measures of functional impairment, suggesting a stronger association as hypothesized. A Chi-square analysis for this difference was significant, $\chi^2(1, N = 104) = 4.42, p = .035$, supporting this contention.

**Summary Phase 2 hypotheses results.** In summary, Hypothesis 1 was partially supported in this analysis as evidenced by a (a) nonsignificant chi-square for Criterion I, (b) fewer symptoms in this study correlating more highly with their own PD as opposed to other PDs for criterion II, and (c) 11 out of 20 bootstrap analyses being nonsignificant for these two Criteria. However, Criterion III did not yield results suggestive of support for an association between PD symptoms and NEO-PI-R facets. Thus, replication analyses of the symptom-to-disorder diagnostic validity of the DSM-IV-TR personality disorder criteria traits in terms of (a) convergent validity and (b) divergent validity yielded similar results to those of Ryder, Costa Jr., and Bagby (2007), supporting the generalizability of those results. However, a significant correlational association between NEO-PI-R facets and PD symptomology was not evidenced, thereby not supporting the contention that Criterion III would yield results reflective of the Ryder and colleagues’ results.

In addition, Hypothesis 2 was supported. There was a significant chi-square difference between the number of PD symptoms, as measured by the SCID-II-SR inventory, correlating with the OQ45.2 total symptom score, as opposed to GAF ratings.

**Phase 2 exploratory analysis.** The computer scoring program for the NEO-PI-R produced a comprehensive interpretive report (Costa Jr., McCrae, & PAR Staff, 2000) for each participant; this report, as mentioned previously, listed potential PDs based on responses scoring 90% or higher than the normative sample. Some researchers (e.g., Samuel &
Widiger, 2008; Saulsman & Page, 2003) contend that "all of DSM-IV-TR personality disorder symptomatology are readily understood as maladaptive variants of the domains and facets of the FFM" (Widiger & Mullins-Stewatt, 2009, p. 199). In addition, as mentioned previously, Huprich (2003) stated that facets hypothesized to be associated with a given PD predicted variance in seven of the ten PDs.

To explore the diagnostic agreement between the SCID-II-SR and the NEO-PI-R PD screening assessments for this population sample, a kappa statistical analysis was performed. For a detailed description of the calculation of these Kappa values, the reader is referred to Viera and Garrett (2005). Results are listed in Table 8 below.

Table 8

Comparison of Potential PDs Identified by the NEO-PI-R and SCID-II-SR

<table>
<thead>
<tr>
<th>Personality Disorder (PD)</th>
<th>NEO-PI-R</th>
<th>SCID-II-SR</th>
<th>PDs Identified by both</th>
<th>Kappa Coefficient</th>
<th>Level of Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial</td>
<td>13</td>
<td>39</td>
<td>6</td>
<td>-0.009</td>
<td>Less than chance</td>
</tr>
<tr>
<td>Avoidant</td>
<td>21</td>
<td>33</td>
<td>17</td>
<td>0.441</td>
<td>Moderate&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Borderline</td>
<td>37</td>
<td>45</td>
<td>30</td>
<td>0.424</td>
<td>Moderate&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Dependent</td>
<td>37</td>
<td>5</td>
<td>4</td>
<td>0.084</td>
<td>Slight</td>
</tr>
<tr>
<td>Histrionic</td>
<td>19</td>
<td>2</td>
<td>2</td>
<td>0.150</td>
<td>Slight</td>
</tr>
<tr>
<td>Narcissistic</td>
<td>12</td>
<td>18</td>
<td>7</td>
<td>0.342</td>
<td>Fair</td>
</tr>
<tr>
<td>Obsessive-Compulsive</td>
<td>6</td>
<td>38</td>
<td>5</td>
<td>0.105</td>
<td>Slight</td>
</tr>
<tr>
<td>Paranoid</td>
<td>4</td>
<td>29</td>
<td>3</td>
<td>0.098</td>
<td>Slight</td>
</tr>
<tr>
<td>Schizoid</td>
<td>0</td>
<td>18</td>
<td>0</td>
<td>NA*</td>
<td></td>
</tr>
<tr>
<td>Schizotypal</td>
<td>26</td>
<td>8</td>
<td>3</td>
<td>0.018</td>
<td>Slight</td>
</tr>
</tbody>
</table>

<sup>3</sup> indicates a kappa analysis identified approximate significance < .05 <sup>4</sup>
<sup>4</sup> Based on table provided by Landis & Koch (1977) as cited in Viera & Garrett (2005)
<sup>5</sup> Kappa value could not be computed; no identified disorders for one of the inventories

These results were only slightly analogous to those reported in a meta-analysis conducted by Samuel and Widiger (2008). Based on effect sizes, these authors declared that a
strong confirmation was found to support the FFM conceptualization of the DSM-IV-TR personality disorders for borderline, antisocial, and avoidant disorders; the results from this analysis would support two of those three assertions (avoidant and borderline). They also reported significant correlations for the remainder of the PDs, with the weakest results being attributed to histrionic PD; only two of the remaining PDs in this analysis yielded an approximate significant agreement (histrionic and narcissistic).  

**Phase 3: Treatment Outcome**

Originally, the study design for this phase of the project stipulated 36 participants resulting from six therapists treating six clients through six sessions of therapy, so that therapist variability could be addressed in statistical data analyses. As mentioned previously, various uncontrollable factors prevented the timely implementation of this design. At the time of the project termination, 27 participants had completed 6 sessions of therapy. However, in an effort to minimize therapist variability in the data, the participant pool for the hypotheses’ analyses of this phase of the project was limited to one client per therapist, resulting in a data set of 18 subjects. Since six therapists had treated more than one participant in this phase of the study, it was determined that each therapist’s first client, whom had completed all the study paperwork requirements, would be the client included in this subject set.

With regard to random assignment to condition, there were 6 clients in the group of 27 6-session completers and 4 clients in the final group of 18 participants that defaulted to the control condition. Default to the control group condition occurred when the therapist or supervisor was not assigned at the time of the battery administration and, upon assignment, it was discovered that the therapist or supervisor opted not to participate in the study.

---

6Significance is listed in the SPSS kappa output as “approximate significance.”
Demographic data. The demographic data for participating clients and therapists are described below.

Table 9
Demographic Characteristics of Phase 3 Client Participants

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean and (SD) or Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$N = 27$</td>
</tr>
<tr>
<td>Age</td>
<td>$M=30.1 (SD=11.6)$</td>
</tr>
<tr>
<td>Gender – Male</td>
<td>37.0% ($n = 10$)</td>
</tr>
<tr>
<td>Years of College</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>22.2% ($n = 6$)</td>
</tr>
<tr>
<td>1</td>
<td>7.4% ($n = 2$)</td>
</tr>
<tr>
<td>2</td>
<td>14.8% ($n = 4$)</td>
</tr>
<tr>
<td>3</td>
<td>11.2% ($n = 3$)</td>
</tr>
<tr>
<td>4 or more</td>
<td>44.4% ($n = 12$)</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
</tr>
<tr>
<td>Married/Live with Partner</td>
<td>18.5% ($n = 5$)</td>
</tr>
<tr>
<td>Single/Separated/Divorced</td>
<td>74.0% ($n = 20$)</td>
</tr>
<tr>
<td>Widowed/Other</td>
<td>7.5% ($n = 2$)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
</tr>
<tr>
<td>European-American</td>
<td>74.1% ($n = 20$)</td>
</tr>
<tr>
<td>Black or African-American</td>
<td>3.7% ($n = 1$)</td>
</tr>
<tr>
<td>Other</td>
<td>18.5% ($n = 5$)</td>
</tr>
<tr>
<td>Employment</td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>29.6% ($n = 8$)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>26.0% ($n = 7$)</td>
</tr>
<tr>
<td>Student</td>
<td>44.4% ($n = 12$)</td>
</tr>
<tr>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>&gt; 150k</td>
<td>3.7% ($n = 1$)</td>
</tr>
<tr>
<td>50k-150k</td>
<td>7.4% ($n = 2$)</td>
</tr>
<tr>
<td>10k-50k</td>
<td>29.6% ($n = 8$)</td>
</tr>
<tr>
<td>&lt; 10k</td>
<td>29.7% ($n = 8$)</td>
</tr>
<tr>
<td>Don’t Know/Missing</td>
<td>29.6% ($n = 8$)</td>
</tr>
</tbody>
</table>
**Participating clients' demographic data.** Demographic data are presented in Table 9 (above); data for all those completing this phase \((n = 27)\), for those utilized in the hypotheses analyses \((n = 18)\), and for those eliminated from the final hypotheses analyses \((n = 9)\) are listed in the table. For this phase, the participants were primarily Euro-American, single, educated, and of low socioeconomic status. Chi-square analyses to identify potential demographic differences between the groups of those included and deleted from the final analyses were nonsignificant for all variables; likewise, comparison of participants in this phase of the study \((n = 18)\) with the participants completing only phase 1 \((n = 58)\) yielded nonsignificant chi-squares for all demographic variables.

**Participating clients’ personality assessment results.** The NEO-PI-R results, for the group of 18 participants included in the following hypotheses analyses, yielded a total of 41 possible personality disorders (range 0 to 7), with four participants evidencing no personality disorders and one participant evidencing seven. Table 10 lists the number of PDs identified by the NEO-PI-R.

Table 10

<table>
<thead>
<tr>
<th>Personality Disorder</th>
<th>NEO-PI-R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antisocial</td>
<td>2</td>
</tr>
<tr>
<td>Avoidant</td>
<td>7</td>
</tr>
<tr>
<td>Borderline</td>
<td>8</td>
</tr>
<tr>
<td>Dependent</td>
<td>11</td>
</tr>
<tr>
<td>Histrionic</td>
<td>3</td>
</tr>
<tr>
<td>Narcissistic</td>
<td>1</td>
</tr>
<tr>
<td>Obsessive-Compulsive</td>
<td>1</td>
</tr>
<tr>
<td>Paranoid</td>
<td>1</td>
</tr>
<tr>
<td>Schizoid</td>
<td>0</td>
</tr>
<tr>
<td>Schizotypal</td>
<td>7</td>
</tr>
</tbody>
</table>
Participating therapists’ demographic data. Of the 18 therapists included in this phase of the study, 39% were male. The average age was 26.5 years, with a mode of 24 years old, and a range of 22 to 43 years old. The primary ethnicity was Caucasian (94%).

Primary theoretical orientations for this group of therapists were cognitive-behavioral (40%), eclectic (40%), and psychodynamic (16%). Experience data are listed in Table 11.

Table 11

<table>
<thead>
<tr>
<th>Therapy and Assessment Experience Data for Therapists</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire Items</td>
</tr>
<tr>
<td>---------------------</td>
</tr>
<tr>
<td># of Therapy Clients</td>
</tr>
<tr>
<td># of Personality Assessment Clients</td>
</tr>
<tr>
<td># of Assessment Clients</td>
</tr>
<tr>
<td># of Therapy Feedback Sessions</td>
</tr>
<tr>
<td># of Assessment Feedback Sessions</td>
</tr>
</tbody>
</table>

Hypothesis testing. The results associated with the hypotheses linked to this phase of the study are described below.

Hypothesis 3. Hypothesis 3 stated that more clients in the TR condition (NEO-PI-R results to therapists) would report clinically significant change in OQ 45.2 total symptom scores by session 6 than clients in the NR condition (no NEO-PI-R results to therapists). As noted previously, if scores on the OQ45.2 total symptom distress scale decrease by fourteen points, the client is considered to have experienced clinically significant change in their symptomology. Only four of the eighteen reported clinically significant change in their symptomology, two for each condition. Chi-square results were nonsignificant, $\chi^2(1, N = 4) = 0, p = 1.0$. Therefore, Hypothesis 3, that more clients in the TR condition would report
clinically significant change in OQ 45.2 total symptom scores by session 6 compared with clients in the NR condition, was not supported.

**Hypothesis 4.** Hypothesis 4 stated that there would be a significant difference in OQ 45.2 change scores between experimental groups (main effect for having/not having NEO-PI-R results). At the time of the initial battery or first session, the TR group evidenced a mean OQ45.2 total symptom distress score of 74.3 ($SD = 22.93$), while the NR group evidenced a mean of 76.3 ($SD = 29.12$). At the start of the sixth session of therapy, the TR group evidenced a mean OQ 45.2 total symptom distress score of 65.6 ($SD = 19.07$), while the NR group evidenced a mean score of 69.3 ($SD = 22.93$). Repeated measures ANOVA results demonstrated nonsignificant effect for session ($F_{(1,5)} = 1.675$, $p = .150$, $\eta^2_p = .095$), as well as a nonsignificant main effect for group assignment ($F_{(1,16)} = .316$, $p = .582$, $\eta^2_p = .019$). Therefore, Hypothesis 4, that there would be a significant difference in OQ45.2 change scores between experimental groups, was not supported.

**Figure 1.** Baseline through Session 6 OQ45.2 Total Symptom Distress Scores
Hypothesis 5. Hypothesis 5 stated that the therapeutic alliance would be rated higher by clients in the TR group than by clients in NR group. As mentioned previously, the Working Alliance Inventory Short Form Client Version (WAI-S-C) was administered at the beginning of the fourth session of therapy. On most occasions, this measure was distributed to the client by reception personnel at the respective clinic, with the client being asked to return it upon completion to the front desk personnel. Of the fourteen WAI-S-C distributed at this collection point, twelve were returned. The mean score (based on a range from 0 to 120) for the clients in the TR group was 91.6 ($SD = 17.2$); the mean for the clients in the NR group was 93.8 ($SD = 7.6$). Results of an independent samples t-test were not significant ($t_{(10)} = -.268, p = .794$). Therefore, Hypothesis 5, that clients in the TR group would rate the working alliance higher than clients in the NR group, was not supported.

Hypothesis 6. Hypothesis 6 stated that there would be no interaction between the feedback condition and the strength of the therapeutic alliance on OQ45 change scores. A factorial ANOVA was conducted. For this analysis, the WAI-S Client Version (WAI-S-C) results were grouped into high and low scores. Since the developers of the WAI-S (Tracey & Kokotovic, 1989) do not provide cut-off scores, nor is there a definitive study in the literature providing this information, a median split for this population was utilized to group scores into high and low categories. Thus, WAI-S-C scores of 98 and below were categorized as low ($n = 7$), with scores above 98 categorized as high ($n = 5$).

OQ45.2 change score means, standard deviations, and cell counts for this analysis were as follows: (a) TR/low alliance $M = 18.5$ ($SD = 12.45$), $n = 4$; (b) NR/low alliance $M = 3.0$ ($SD = 17.44$), $n = 3$; (c) TR/high alliance $M = -1.33$ ($SD = 7.57$), $n = 3$; and, (d) NR/high alliance $M = 24.5$ ($SD = 37.48$), $n = 2$. Again, the experimental group main effect was non-
significant \( F(1, 8) = .233, p = .643, \eta^2_p = .028 \). Likewise, the main effect for the categorized working alliance was also non-significant \( F(1, 8) = .006, p = .940, \eta^2_p = .001 \). Although Figure 2 below would suggest otherwise, the statistical analysis indicated that the interaction between the feedback condition and the strength of the therapeutic alliance was also non-significant \( F(1, 8) = 3.722, p = .090, \eta^2_p = .318 \). Thus, Hypothesis 6, that there would be no interaction between the feedback condition and the strength of the therapeutic alliance on OQ45.2 change scores, was supported.

![Figure 2](image)

**Figure 2.** Strength of the Therapeutic Alliance on OQ45.2 Change Score per Experimental Group.

**Summary of Phase 3 hypotheses results.** In summary, three of the four hypotheses for this phase of the study, investigating whether or not therapist access to NEO-PI-R personality assessment information impacted treatment outcome during the first six sessions of therapy, were not supported. Results indicated that there were no group differences for (a) clinically significant change in OQ45.2 Total Symptom Distress scores, (b) general OQ45.2 Total Symptom Distress change scores, and (c) client rating of the therapeutic alliance. The
final hypothesis (Hypothesis 6), that there would be no interaction between feedback condition and the strength of the therapeutic alliance on OQ 45.2 change scores, was supported, although the graphical representation of the data appears to suggest otherwise.

**Qualitative analyses.** A qualitative analysis was conducted utilizing questionnaires administered to therapists and supervisors after the client-participants completed six sessions of therapy. As noted in the Methods Section, the purpose of the questionnaires was to assess the impact of NEO-PI-R training and/or NEO-PI-R report information on the therapists’ and supervisors’ case conceptualizations. Of the 18 clients completing 6 sessions of therapy, 14 clients’ therapists, and respective supervisors, received copies of the questionnaires; of those 14, 5 therapists and 6 supervisors opted not to return the forms. Questionnaires were not administered to participating therapists and supervisors for the other 4 clients due to the researcher being out of town on internship and research assistance becoming unavailable after the researcher’s departure.

**Therapist Questionnaires.** Those therapists in the NR condition were asked to complete the C-Form version of the questionnaire. Those therapists in the TR condition were asked to complete the E-Form version of the questionnaire.

**C-Form questionnaires.** Of the eight clients assigned to the NR condition, three were assigned to therapists who did not receive forms. Of the five remaining clients, three respective therapists returned questionnaires, resulting in a return rate of 60%. There were four questions on the C-Form that these therapists completed; please see Appendix W, page 156, for a synopsis of the results, including mean, standard deviation, median, mode, and range of responses for the first three questions. Note: abbreviated versions of the questions
are listed in the table for practicality. Please see Appendix I, page 134, for a full version of this questionnaire.

Question 4 asked the therapist to identify any assessment instruments that the client completed, other than the NEO-PI-R and OQ 45.2, during the first six sessions of therapy. Of the six, one reported that the Beck Depression Inventory and the Rorschach had been administered.

_E-Form questionnaires._ Of the ten clients in the TR condition, three were assigned to therapists who did not receive forms. Of the seven remaining clients, six respective therapists returned questionnaires, resulting in a return rate of 86%. There were eight questions on the E-Form that these therapists completed; please see Appendix W, p. 156 for a synopsis of the results, including mean, standard deviation, median, mode, and range of responses for questions 1, 5 and 6. Note: abbreviated versions of the questions are listed in the table for practicality. Please see Appendix H, page 133 for a full version of this questionnaire.

Question 2 read, “Did you share the results with your client?” Of the six respondents, one shared the results with his/her client; the other five chose not to share the results. The therapist who shared the results reported giving the client the computer-generated client narrative supplied by the researcher (question 3: “If you shared the results, how did you present them?”). In addition, this therapist felt that sharing the narrative results had a very positive influence (question 7; 5 on a scale of -5 to 5) on the client’s response to therapeutic intervention.

Question 4 read, “If you did not share the results with your client, what influenced your decision?” One therapist opted not to answer this question. One therapist reported that it was clinically-contraindicated, stating, “Didn’t believe we were at a point where the client
could make use of the info.” Two therapists felt it was irrelevant to case conceptualization. One therapist stated that it was unimportant. The final therapist wrote that he/she has difficulty determining “what the NEO-PI-R describes as ‘personality’ and what actually may be more changeable in the client” and noted a reluctance to share information early in treatment regarding a characteristic that may be changeable.

Question 8 asked the therapist to identify any assessment instruments that the client completed, other than the NEO-PI-R and OQ 45.2, during the first six sessions of therapy. Of the seven, one reported administering the Anxiety Disorder Interview Schedule (ADIS); another reported administering the Behavioral Health Questionnaire (BHQ) and the HANDS screening tool.

**Supervisor Questionnaire.** Supervisor questionnaires were not condition specific. Of the twelve questionnaires provided to supervisors, ten were received for a return rate of 83%; please see Appendix w, p. 156 for a synopsis of the results, including mean, standard deviation, median, mode, and range of responses for the first three questions. Note: abbreviated versions of the questions are listed in the table for practicality. Please see Appendix J, p. 135 for a full version of this questionnaire.

Question 4 read, “If your supervisee received NEO-PI-R results for this client, did you encourage your supervisee to share the results with their client?” Four responded “yes,” three responded “no,” two responded “not applicable,” and one responded that the narrative had not yet been read. For the four who did encourage their supervisee to share results with the client, one indicated that no specific feedback suggestions were given to the therapist, while three recommended that feedback be given as suggested during the training (e.g., share a copy of the client narrative and review as desired). Of the three who did not encourage the
therapist to share the results, one stated he/she felt the results were irrelevant to the case; another stated that “it is not useful given the time constraints of the setting.”

Question 5 asked the supervisor to identify any assessment instruments that the client completed, other than the NEO-PI-R and OQ 45.2, during the first six sessions of therapy. The results reported by therapists were reported by supervisors (i.e., two Beck Depression Inventories, one each of ADIS, BHQ, and HANDS).

In summary, supervisors reported that the NEO-PI-R training/intervention influenced their attention to the impact of the clients’ personality traits on therapeutic interventions at a slightly higher, but not clinically significant, rate than the responses of the therapists on the C-Form ($M = 3.90$ versus $M = 1.67$, respectively). Supervisors also reported that the NEO-PI-R report/training had a modicum of higher influence on their conceptualization of client strengths and weaknesses compared to therapists in both treatment conditions ($M = 1.7$, $M = 1.0$, $M = 1.0$ respectively). With regard to recommendations made to their supervisees, supervisors reported that the NEO-PI-R report/training had little influence on recommendations ($M = 1.4$). Moreover, supervisors reported mixed results with regard to encouraging their supervisees to share the results of the assessment with their clients, whereas most therapists who received reports opted not to share the results with their clients.

Therapists in both groups indicated that the NEO-PI-R training and/or report had little influence on their conceptualization of their clients’ strengths and weaknesses ($M = 1.0$ for both groups). Conversely, therapists in the TR group indicated that the NEO-PI-R was moderately useful in the development of their case conceptualizations ($M = 5.83$).

**Follow-up questionnaire analyses.** Due to unexpected data collection delays and the prolonged data collection period, this portion of the study could not be reliably administered.
In addition, follow-up analyses were not included in the hypotheses for this study. For these reasons, this portion of the study, although included in the consent form, was deleted.

**Phase 3 exploratory analyses.** Two exploratory analyses were conducted with data from this phase of the study.

*Exploratory Analysis 1.* The Working Alliance Inventory Short Form (WAI-S) was administered to both therapists (WAI-S-T) and the clients (WAI-S-C). Hypothesis 5 results indicated that, for the twelve clients returning WAI-S inventories, there was not a significant difference between the two experimental groups for client ratings. A t-test was conducted to determine if this non-significant group difference held for therapists’ ratings of the working alliance. Results indicated that, although therapists in the NR group rated the alliance slightly higher than therapists in the TR group, the difference was not significant. The mean score for the therapists in the TR group was 79.7 ($SD = 9.8$); the mean for the therapists in the NR group was 84.0 ($SD = 9.1$); $t_{(10)} = -.767$, $p = .461$.

*Exploratory Analysis 2.* As noted in the introduction, fifty percent of clients typically need eleven to twenty-one sessions of therapy before realizing clinically significant change, as reported on a symptom distress measure (Lambert, Hansen, & Finch, 2001). Therefore, it may not be surprising that Hypothesis 3, which stated more clients in the TR group would realize clinically significant change by the sixth session than clients in the NR group, was not supported.

In an effort to ascertain if having NEO-PI-R results had any impact on treatment outcome, an exploratory analysis was conducted to determine if more clients in the TR group reported symptom improvement when compared with clients in the NR group. For this analysis, OQ45.2 change scores between session 1 and session 6 were grouped according to
total distress score deterioration or improvement (note: there were no clients who reported no change in total distress scores). Chi-square results approached significance, $\chi^2(1, N = 18) = 3.545, p = 0.059$. When all 27 clients who completed six sessions of therapy are included in the analysis, chi-square results become significant, $\chi^2(1, N = 27) = 4.34, p = 0.037$. For chi-square cell counts, see Table 12.

Table 12

*Clients Reporting OQ 45.2 Total Symptom Score Improvement or Decline by Session 6.*

<table>
<thead>
<tr>
<th>OQ45.2 Score Group</th>
<th>n = 18</th>
<th>n = 27</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NEO-PI-R results to therapist</td>
<td>No NEO-PI-R results to therapist</td>
</tr>
<tr>
<td>OQ45.2 decrease in symptom score</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>OQ45.2 no change or increase in symptom score</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
Discussion

The primary aims of this study were (1) to replicate the analysis conducted by Ryder et al. (2007) regarding the clinical validity of the DSM PD categorical system, utilizing questionnaire responses from a distinctively different population, and (2) to determine the clinical utility of a pre-treatment assessment battery, that included a measure of normal personality characteristics, on treatment outcome during the first six sessions of therapy. The overarching objective was to add to the psychological literature regarding the clinical utility of a dimensional assessment of personality, as well as the fiscal feasibility of pre-treatment personality assessment, in the context of MBHOS reluctance to reimburse for personality assessment and treatment.

Discussion of the Replication Analysis Results

As noted previously, the validity of the current DSM PD categorical diagnostic system is questionable, at best. Moreover, the American Psychiatric Association has acknowledged that this issue needs to be addressed. Although a number of empirical studies have shown that a dimensional representation of personality disordered symptomology would be an improvement over the current system, more research to support the drastic change from a categorical system to a dimensional system is needed. Forefront in this research effort is the need to establish the clinical validity of a dimensional PD diagnostic system, especially one based on normal personality assessment, such as the NEO-PI-R.

Ryder et al. (2007) recently conducted a study to add support to the research base that indicates the convergent validity of the current DSM PD symptoms is well established and the divergent validity is problematic compromising the clinical validity of the PD categorical system. They also sought to authenticate the correlation between the currently perceived PD
symptomology and the FFM model of dimensional personality (in particular, the NEO-PI-R) and to investigate the relation of individual PD symptoms to impairment in the context of clinical utility. Since only one other published study (Bagby, Costa Jr., Widiger, Ryder, & Marshall, 2005) has compared the FFM dimensional assessment system against the SCID-II-SR, their study was timely. (Note: Huprich, 2003, compared the NEO-PI-R with the structured interview SCID-II.) However, they made recommendations based on results from a distinct sample, thus compromising the validity of their recommendations. Data collected in this study, employing a characteristically different population, were utilized to replicate Ryder and colleagues’ results. The purpose of this effort was to address the generalizability of their results and thereby possibly add credence to their recommendations.

Results from this study were mixed. The results of the Ryder et al. (2007) study, suggesting (a) the overall convergent validity of the PD symptoms with their own parent disorder is empirically established and (b) the divergent validity of the PD symptoms with other PD disorders is problematic, were replicated. However, a cursory review of the difference between the studies regarding the number of symptoms that met correlation-coefficient cutoffs for convergent validity for each PD suggests that the characteristics of the sample may have some influence on the results of the analysis (as indicated by three PDs evidencing significantly different results from the Ryder and colleagues’ values). This possibility was made more obvious by the difference in results for the divergent validity analysis, where five of the ten PDs yielded significantly different results between the two studies. It is especially noteworthy that the difference in the obsessive-compulsive PD results, for Criterion I and II, is so distinctive with regard to these two dissimilar samples.
This will be discussed in more detail later in this section when the results of the exploratory analysis are reviewed.

Regarding the association between the SCID-II-SR PD symptoms and the NEO-PI-R facets, Ryder et al. (2007, p. 631) purported “many of the PD traits were related to FFM personality traits.” They based their conclusion on 60 of the 104 SCID-II-SR symptoms meeting the strict 0.002 correlation criterion. The results of this study (only 41 symptoms meeting criterion) did not support the Ryder and colleagues’ contention; however, this difference, in all likelihood, is due to the smaller sample size for this study (n = 76 versus n = 203). As noted in the Results section, the size of this study’s sample would dictate that a correlation between two variables would need to be strong for it to have significance at the p ≤ .002 level, whereas it would only need to be moderate for a significant correlation in a sample size of 203. This in all likelihood attenuated the number of symptoms that correlated with one or more facets, thereby affecting the proportion of symptoms per PD that correlated with NEO-PI-R facets.

With regard to the association between SCID-II-SR symptoms and functional impairment, Ryder et al. (2007, p. 628) noted that “most, if not all, of the individual PD traits are written in such a way to imply maladjustment and clinicians will in part decide whether a trait should be recorded as present or absent based on the extent to which it interferes with normal functioning.” Based on the results of their findings, that “every diagnosis other than Borderline PD showed a lack of association with impairment for a majority of its constituent items” (p. 630-631), the authors claimed that the low number of PDs symptoms related to impairment “compromised the clinical utility” of PD symptoms. Although the results of this study revealed a statistically significant difference between the number of PD symptoms that
correlated with GAF scores, as compared to those that correlated with OQ45.2 total symptom distress scores (with OQ 45.2 results yielding a higher number), 39 of 104 symptoms would not be considered clinically significant, if indeed the clinical utility of PD symptoms should be based on the relationship with impairment.

Some researchers argue that impairment should not be taken into consideration when defining a mental/behavioral disorder (Lehman, Alexopoulos, Goldman, Jeste, & Ustin, 2002). More importantly, Lenzenweger, Lane, Loranger, and Kessler (2006), reporting on results from the National Comorbidity Survey Replication (NCS-R), stated that findings suggested the associations between PDs and functional impairment are largely accounted for by comorbid Axis I disorders. This contention was supported thusly:

Functional impairment might influence help-seeking more strongly among patients with pure PDs than among those with Axis I disorders (mindful that such help-seeking might be prompted by spouses, other family members, or employers rather than by the patients themselves), whereas distress affects help-seeking more among patients with Axis I disorders than among those with pure PDs. . . . This possibility is indirectly consistent with our finding that help-seeking among people with PDs is strongly affected by Axis I comorbidity (p. 562).

Returning to the issue of the noteworthy difference between the studies with regard to obsessive-compulsive results for Criterion I and Criterion II, in a study investigating the psychometric and diagnostic efficiency properties of the DSM-IV PD criteria as assessed by the Structured Clinical Interview for DSM-IV Personality Disorders (SCID-II; First et al., 1997), Farmer and Chapman (2002) commented that obsessive-compulsive PD criteria, as
assessed by the SCID-II, demonstrated low internal consistency. They continued by stating, “This finding suggests that the [obsessive-compulsive] concept is essentially a chimera, or compromised of a collection of weakly related features that have been melded together to form a diagnostic concept” (p. 296). They further maintained that obsessive-compulsive PD has typically performed different than other PDs, citing literature to support this contention and noting that in factor analyses it loads mostly highly on a factor defined by it alone. They summarized their discourse of the validity of the obsessive-compulsive PD symptomology by stating that the disorder “may well benefit from additional conceptual, theoretical, and empirical development” (p. 297). This could account for the vastly different results obtained in this study.

It is interesting to note that when addressing the clinical utility of the NEO-PI-R, via studies investigating its capability to conceptualize DSM-IV-TR PDs utilizing Widiger and colleagues’ FFM descriptions of prototypic PDs, researchers tend to attribute the FFM’s weaker predictive ability for obsessive-compulsive PD and dependent PD to shortcomings in the NEO-PI-R (e.g., Miller et al., 2004; Rossier & Rigozzi, 2008). However, the above citation would suggest that the shortcomings may be associated with the DSM conceptualizations, not NEO-PI-R conceptualizations. Another rarely cited reason for the poor conceptualization issue being more associated with the DSM rather than with the NEO-PI-R, that was mentioned previously, is the fact that “the FFM descriptions include DSM-IV-TR personality disorder features and go beyond the criterion sets to provide fuller, more comprehensive descriptions of each personality disorder” (Widiger & Mullins-Stewart, 2009; p. 199).
These conceptualization issues may also, in part, account for the notable differences in identified PDs between the NEO-PI-R and SCID-II-SR listed in Table 8 (p. 78) of the phase 2 exploratory analysis. However, any suppositions regarding this issue must be made cautiously given the SCID-II-SR’s empirically demonstrated production of high rates of false-positive PD diagnoses relative to SCID-II findings (i.e., 67% as noted in Farmer & Chapman, 2002, p. 295).

Upon reviewing the overall results from Phase 2 of this study, it is remarkable that Ryder et al. (2007) doubted that a set of more coherent PDs to facilitate categorical diagnosis could be generated, given the results of just their analyses. Results from this study’s analyses suggest that the Ryder and colleagues’ results need to be replicated with a variety of populations before total abandonment of the current diagnostic system is suggested. However, the problematic divergent validity of the current system will definitely have to be addressed if reimbursement from MBHOs for personality assessment is a goal.

Moreover, the clinical utility of a dimensional PD diagnostic system, as assessed by the statistical procedures utilized in the Ryder and colleagues study, was not clearly established in this study. More investigations with larger and more diverse sample populations will need to be conducted to justify their assertions that “most PDs are composed of symptoms that reflect personality,” that qualitative differences exist between some PDs and normal personality “raising the possibility that they should be moved to Axis I,” and that a symptom’s relation to impairment does in fact compromise its clinical validity (2007, p. 631).

It appears that the Personality and Personality Disorder Work Group of the American Psychiatric Association concurs with these assertions. In an editorial by Skodol and Bender
(2009), the authors stated, “The challenge of the work group is to formulate a system that allows for meaningful representation of a patient’s personality characteristics and psychopathology most pertinent for clinical care, while not taxing the clinician with an excessively complicated or burdensome assessment that would inhibit its use” (p. 390).7 These authors also noted that the current proposal under consideration by the work group consists of five parts, which in essence is a combination of the current system with a personality trait assessment “on which the prototypes are based but that can also be used to describe major personality characteristics of patients who either do not have a personality disorder or have a personality disorder that does not conform to one of the prototypes” (p. 390).

Discussion of the Utility of Pre-Treatment Personality Assessment on Treatment Outcome

Although it could be fiscally feasible to administer the NEO-PI-R on a regular basis (less than $13.00 based on parameters previously listed), the results from this study suggest that more investigation is needed before it can be definitively determined whether or not administration of a pre-treatment dimensional measure of normal personality has any clinical validity with regard to facilitating therapeutic change in client distress symptomology. The most telling outcome warranting the additional research on this topic is the notable effect sizes associated with results of two of the hypotheses.

In particular, Hypothesis 4, regarding OQ45.2 change scores differences between groups, was not supported; however, the partial eta squared (\(\eta^2_p\)) effect size for the repeated

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7 This comment was made by Skodol and Bender (2009) in reference to a recent article by Rottman, Ahn, Sanislow, and Kim (2009) in which these authors stated that clinical psychologists, psychiatrists, and clinical social workers, when presented with case profiles based on symptom formats from the FFM, had difficulty identifying correct diagnoses from FFM profiles.
measures ANOVA was 0.019, suggesting a moderate relationship between the variables, one that may become more evident with a larger sample size. In addition, the large effect size ($\eta^2_p = .318$) associated with the nonsignificant factorial ANOVA assessing the interaction between the feedback condition and the strength of the therapeutic alliance on treatment outcome scores also implies that the sample size was not large enough to detect a significant interaction.

As will be discussed in greater detail in the limitations of the study section of this discourse, there were a number of uncontrolled variables that may have negatively influenced this outcome. However, the most influential study characteristic that may have had the strongest effect on the ability to determine if the intervention was clinically significant, other than sample size, was the relatively short treatment outcome assessment period. As previously noted in the introduction, Lambert and colleagues (2001 studies) have discovered that 50% of clients do not evidence clinically significant decreases in symptom distress until the 11th to 20th session of treatment. The fact that only 22% of this study sample evidenced clinically significant decreases in symptom distress by the sixth session is commensurate with their findings.

The working alliance, which has been shown to rate positively with therapy outcome, was also investigated in this study with regard to its influence, or lack thereof, on experimental group differences. Study findings indicated that there were no significant group differences with regard to the clients’ or the therapists’ rating of the alliance. In addition, the twelve and ten point differences between the client [91.6 (no results) and 93.8 (results)] and therapist (79.7 and 84.0, respectively) ratings of the working alliance are not unusual. According Tryon, Blackwell, and Hammel (2007) who conducted the meta analysis
investigating client-therapist perspectives of the working alliance that produced the above results, clients' ratings of the alliance were typically found to be higher than ratings by their therapists ($d = .63, SD = .42; p. 629$).

What is unusual about the present study's therapist-client dyad population is the correlation between the client-therapist alliance ratings. In the Tryon et al. meta-analysis (2007), the correlation between these ratings was found to be moderate ($r = .36$), whereas the significant correlation for the ratings in this study was relatively large ($r = .714, p = .009$). One reason for this difference may be the fact that alliance ratings were solicited at the beginning of the fourth session of treatment. In all probability, dyads with lower alliances would have already terminated therapy, given the fact that 76 clients began therapy in this study and only 27 made it through six sessions. Another possibility for this correlation difference could be the relative lack of experience of the therapists' regarding their ability to accurately judge the alliance. Tyron and colleagues (2007) list a number of articles that reported clients generally giving higher alliance ratings than practiced therapists.

With regard to therapists' and supervisors' post-sixth-session questionnaire responses, it is interesting to note that therapists rated the personality assessment results as being moderately useful in the development of case formulation (mean of 6 on a scale of 0 to 10), yet tended to report the results were "unimportant" or "irrelevant to case conceptualization" when asked if they shared the results with their clients. Another interesting juxtaposition reported by a few therapists who received NEO-PI-R results was their rating of the influence of the reports on client interaction as neutral, yet commenting that the results prompted them to be "more empathic" with the client. Overall, supervisors and therapists reported that the NEO-PI-R training/intervention had little influence on the
attention they paid to the impact of the client’s personality on therapeutic interactions. More importantly, however, is the indication that therapists tended not to share the results of the assessment, when they received it, with their clients. Since the therapists participating in this study were all in training, it could be surmised that the apparent perceived lack of the NEO-PI-R’s clinical utility could stem from lack of familiarity and training with this instrument. Again, more investigation would be needed to substantiate this assertion.

**Discussion of the Phase 3 Exploratory Analyses**

The results of the non-parametric analyses of the sixth-session change scores for all participants advancing to Phase 3 of the study are noteworthy for two reasons. It appears that clients of therapists in training report more improvement in distress symptomology when the therapist has access to non-routine personality assessment information. This is not surprising given the extensive psychological literature supportive of the assertion that access to assessment information facilitates improvement in treatment, treatment planning processes (e.g., Finn & Tonsager, 1992), and treatment outcome evaluation (e.g., Lambert, Hansen, & Finch, 2001; Lambert, Whipple, et al., 2001) – all of which impact the course of therapy.

A second reason for the noteworthiness of these results is the notion that psychologists should “do no harm.” If, as suggested by the data presented in Table 12 (p. 91), approximately half of the clients whose therapists did not receive NEO-PI-R results reported an increase in distress by the sixth session, as opposed to relatively few clients whose therapists did receive results, psychologists should be advocating for pre-treatment routine personality assessment based on the American Psychological Ethics Code (American Psychological Association, 2002, p. 3) which states, “Psychologists strive to benefit those
with whom they work and take care to do no harm.” This would be especially true for therapists in training, as this was the context in which these results were acquired.

To summarize the findings from phase 3 of the study, most hypotheses were not supported. However, effect sizes from statistical analyses, in combination with the significant chi-square results from the exploratory analyses, suggest that additional investigation needs to be done with larger sample sizes before any definitive conclusions can be made. Moreover, if a dimensional personality assessment instrument is to be utilized in clinical settings, substantial training on how to use and interpret the assessment should be provided to therapists.

Limitations of the Study

Maruish (2004), in an attempt to answer the question “why has the cost-effectiveness of psychological testing never been proven,” succinctly stated:

One reason is the difficulty of implementing the type of methodology that would be required – particularly with regard to controlling variables related to the psychologists’ skill, the patients’ symptoms, the instrumentation used, and the therapeutic process employed. (p.14)

He continued by commenting, “A well controlled study is not impossible, but it would be very difficult and quite costly to complete” (p. 14).

Maruish’s contentions were echoed in a recent article by Perepletchikova, Hilt, Chereju, & Kazdin (2009). These authors stressed that treatment integrity, defined as the implementation of interventions as intended, is critical for experimental validity and drawing valid inferences. They reported that, despite the critical significance of treatment integrity, less than 4% of a group of evaluated randomized controlled trials adequately implemented
treatment integrity procedures (Perepletchikova et al., 2007, as cited in Perepletchikova et al., 2009). The top three barriers to treatment integrity, as identified by treatment outcome researchers, were: (1) there is a considerable time requirement in obtaining accurate representation of integrity data (collection of data across therapists, situations, cases, and sessions, (2) designing and validating integrity measures is labor intensive and time consuming, and (3) it is expensive and time consuming to provide direct training of therapists.

Major limitations of this study involved all of the above cited barriers. In particular, this study was time and data collection intensive, requiring an average of four to five hours of research assistant time per participant. Thus, lack of time and a dedicated research team were obstacles to study integrity and timely completion.

Inadvertently, therapist turnover became an issue impeding data collection. Both data collection sites are training clinics, with therapists completing practica lasting from eight to twelve months at each site. Transfer clients and client drop out severely curtailed a therapist's opportunity to see six study-participating clients through six sessions of therapy, in the given time frame of the practicum, as originally intended.

More than 250 therapy-seeking individuals, who expressed a willingness to be contacted to participate in research, were referred to the study. The total number of individuals seeking therapy services during the time of the study at the two data collection clinics is unknown. Of the 250, 78 completed some portion of the initial assessment battery, with only 27 completing six sessions of therapy and 18 included in the final hypotheses analysis. Thus, less than ten percent of the individuals seeking psychotherapy services at
these clinics are represented in phase 3 of this study, requiring additional studies to be conducted before the generalizability of any results could be established.

Several other limitations associated with this study include (a) the small compensation for participation which may have had a negative impact on the decision to participate in the study, (b) the lack of compensation for therapists and clinic staff (who played an integral role in the implementation of this study) which also may have influenced their decision to participate in the study, (c) the inability to systematically collect post-treatment follow-up data which thwarted the ability to analyze the long-term effects of the intervention, (d) the compromised random assignment to condition that resulted from defaulting clients to the control condition which may have impacted outcome results, (e) the inability to meet the requirements of the original design (6 therapists, seeing 6 clients through 6 sessions of therapy) which would have allowed statistical analyses that accounted for excess variance resulting from therapist differences, and (f) the lack of assessment regarding how the knowledge of personality disorder information may have impacted novice therapists' confidence in their ability to adequately meet the therapeutic needs of their clients – to name a few.

Needless to say, self-selection bias and client drop out, in addition to the treatment integrity issues and other limitations mentioned previously, imply that results should be regarded as tenuous. Clearly, additional studies implementing methodologically rigorous protocols are needed to give credence to any conclusions that could be drawn from this project.
Strengths of the Study

With regard to the replication analysis conducted in phase 2, the results from this study reiterate the need to replicate any study’s findings with diverse populations before assertions about the generalizability of findings can be made. In addition, results add to the very sparse literature regarding the SCID-II-SR’s and NEO-PI-R’s capabilities of correctly identifying personality disordered symptomology. Given the American Psychiatric Association's working group decision to investigate Axis II revisions that modify the current categorical diagnostic system, this study is timely.

Another major strength of this study was the implementation of the phase 3 protocol in clinic settings without any major administrative procedural changes at either of the data collection sites. The only administrative procedure change occurred at the CAPS clinic and was minimal in nature; a form inquiring about willingness to be contacted to participate in research was added to the intake protocol. Most administrative staff support was limited to responding to participants’ requests for study forms left at reception desks and placement of reports and treatment outcome charts in therapists’ and supervisors’ clinic mailboxes. Moreover, therapists and supervisors were not required to do anything with any report information (NEO-PI-R reports and/or OQ45.2 cumulative result charts) that they were provided. The impetus for the “hands off” attitude was the desire to be able to interpret the results of the study, regarding the utility of the pre-treatment assessment protocol, in the context of business as usual.

An equally important, but perhaps not as obvious, strength of this study is the hint that the key to facilitating pre-treatment personality assessment reimbursement from MBHOs may not lie in exploring the intervention's capability to facilitate/speed recovery from
symptomology. Rather, it may lie in identifying the preventive medicine effects associated with clients' therapists have access to this type of pre-treatment information - tendencies to show improvement and avoid decline. The implications for decreased utilization of additional medical services by these clients are numerous (e.g., Clark, 2007).

**Recommendations for Future Research**

Replications of this study, incorporating treatment integrity adherence checks, are required in order to empirically establish the treatment utility and cost effectiveness of pre-treatment personality assessment in a clinical setting. To case the cost associated with implementing these types of treatment outcome studies, study-specific assessment measures should be incorporated into the routine administrative protocol of the clinics utilized for data collection. For example, the personality assessment could become part of the routine intake packet, the OQ 45.2 should be completed by clients at the beginning of each session regardless of study participation status, and working alliance inventories should be completed by clients and therapists on a monthly basis.

In addition, treatment outcome data (i.e., OQ45.2 results) should be collected as long as the client is in treatment. This will allow for accountability of any statistical variance in treatment outcome associated with weekly feedback to therapists regarding client report of distress symptomology. Lambert and colleagues (e.g., Harmon et al., 2007; Lambert, Hansen, & Finch, 2001; Lambert, Whipple, et al., 2001; Whipple et al., 2003) have conducted several studies that indicated timely feedback of treatment outcome to therapists can improve outcomes for clients indicating decline. However, these researchers admitted that 75% of nonresponders to treatment remained unchanged or deteriorated when they left treatment despite feedback to therapists (Lambert, Hansen, & Finch, 2001). Interestingly, as part of the
protocol for phase 3 of the present study, OQ45.2 feedback was given to therapists in both conditions. Since group differences were noted in the exploratory analysis, additional information regarding how the therapists utilized the provided OQ45.2 feedback would prove beneficial with regard to the influence of OQ45.2 feedback on treatment outcome.

Regarding the clinical utility of the NEO-PI-R, as mentioned previously, more research needs to be conducted to investigate therapists’ and supervisors’ perceptions of the treatment utility of this measure. A direct comparison of these perceptions with actual outcome measures would be beneficial, given that most therapists’ and supervisors’ in this study reported that the NEO-PI-R results had little influence on their interactions with clients and case conceptualizations.

Conclusions

In summary, the purpose of this study was twofold: first, to replicate the findings of Ryder et al. (2007) study, investigating the validity of the DSM PD symptoms and their relationship to normal personality traits and ratings of impairment functioning, utilizing results for a distinctly different population, so that generalizability of the results could be addressed; and second, to investigate the clinical utility of a pre-treatment personality assessment with regard to facilitating productive treatment outcome.

Results from the replication analyses corroborated Ryder and colleagues’ findings regarding the empirically proven convergent validity of the DSM PD symptoms. Results also supported their contention that the divergent validity of the symptoms is not supported and extended that concern to encompass the notion that the divergent validity problems associated with DSM PD symptoms may be population specific. In addition, results from this phase of the study supported Ryder and colleagues’ contention that functional impairment is
not clinically associated with current PD symptomology (although this study's results were statistically different from the Ryder and colleague results). Conversely, results from this study did not support Ryder and colleagues' assertion that many of the DSM PD symptoms were related to normal personality traits.

Results from the pre-treatment personality assessment phase of the study indicated that therapists' access to personality information early in treatment did not influence treatment outcome during the first six sessions as measured by change scores in client report of total symptom distress. Moreover, therapists reported that access to personality assessment information did not influence their interactions with clients, nor did it appear to have an influence on the clients' perception of the therapeutic alliance.

On a more positive note, results from the replication analysis conducted in phase 2 will add to a very sparse literature regarding the clinical utility of the SCID-II-SR measure. In addition, results from this phase will add to the literature regarding the diagnostic differences between the SCID-II-SR and the NEO-PI-R, as well as the screening potential of the NEO-PI-R with regard to identifying maladaptive personality symptomology. Moreover, a compelling exploratory analysis result from phase 3 could provide a new direction for psychology assessment researchers—that of investigating the "preventive medicine" nature of the intervention.
References


Jackson, D. N. (1977). Reliability of the Jackson Personality Inventory. *Psychological Reports, 40*(2), 613-614.


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### Appendix A: Checklist for Personality Assessment Instruments

<table>
<thead>
<tr>
<th><strong>Consideration</strong></th>
<th><strong>Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>What are the psychometric properties of the instrument?</td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td></td>
</tr>
<tr>
<td>Construct Validity</td>
<td></td>
</tr>
<tr>
<td>Discriminant Validity</td>
<td></td>
</tr>
<tr>
<td>Positive Predictive Power</td>
<td></td>
</tr>
<tr>
<td>Negative Predictive Power</td>
<td></td>
</tr>
<tr>
<td>Is the reading level appropriate for clientele?</td>
<td></td>
</tr>
<tr>
<td>Is the instrument ethnically, culturally, or developmentally appropriate?</td>
<td></td>
</tr>
<tr>
<td>Is the length or level of comprehensiveness appropriate for diagnostic purposes?</td>
<td></td>
</tr>
<tr>
<td>Is there a sufficient quantity of methodologically sound research studies available on the instrument?</td>
<td></td>
</tr>
<tr>
<td>Does the instrument have impression management items or scales?</td>
<td></td>
</tr>
<tr>
<td>Is the instrument appropriate in terms of cost and time commitment for the client?</td>
<td></td>
</tr>
<tr>
<td>How much training is required to develop mastery with the instrument?</td>
<td></td>
</tr>
<tr>
<td>How much will utilization of the instrument cost in terms of purchase price, time to administer, and time to score, interpret, and present results?</td>
<td></td>
</tr>
<tr>
<td>Are important domains of assessment information omitted?</td>
<td></td>
</tr>
<tr>
<td>Will administration or review of results facilitate rapport?</td>
<td></td>
</tr>
<tr>
<td>Will instrument results improve diagnostic accuracy?</td>
<td></td>
</tr>
<tr>
<td>Will instrument results facilitate determining the appropriate treatment or level of care?</td>
<td></td>
</tr>
<tr>
<td>Will use of the instrument foster a disregard of symptomology that may be difficult to objectively measure?</td>
<td></td>
</tr>
<tr>
<td>Is the instrument used appropriately (e.g., as a screening device, diagnostic measure, prognostic measure, etc.)?</td>
<td></td>
</tr>
<tr>
<td>Is clinical decision-making enhanced due to use of the instrument?</td>
<td></td>
</tr>
<tr>
<td>Is the administrative format the most appropriate means of gathering the desired information?</td>
<td></td>
</tr>
<tr>
<td>Will the results facilitate shorter treatment duration, with greater effectiveness?</td>
<td></td>
</tr>
<tr>
<td>How will the results shorten the treatment protocol?</td>
<td></td>
</tr>
<tr>
<td>Can you substantiate your clinical assertions with empirical support?</td>
<td></td>
</tr>
<tr>
<td>What is the potential emotional and psychological impact that completion of the instrument may evoke in the respondent?</td>
<td></td>
</tr>
<tr>
<td>What are the consequences of true or false results?</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Self-Report Personality Instruments Listed in Recent Compilations

<table>
<thead>
<tr>
<th>Measure</th>
<th>Clark &amp; Harrison, 2001 Compilation</th>
<th>Kaye &amp; Shea, 2000 Compilation</th>
<th>Research Base for Measure[^e]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostically Based</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coolidge Axis II Inventory</td>
<td>✓</td>
<td>✓</td>
<td>32</td>
</tr>
<tr>
<td>Millon Clinical Multiaxial Inventory III</td>
<td>✓</td>
<td>✓</td>
<td>724</td>
</tr>
<tr>
<td>Minnesota Multiphasic Personality Inventory</td>
<td>✓</td>
<td>✓</td>
<td>10,222/2</td>
</tr>
<tr>
<td>MMPI Personality Disorder Scales</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Personality Assessment Inventory[^b]</td>
<td>✓</td>
<td>✓</td>
<td>176</td>
</tr>
<tr>
<td>Personality Diagnostic Questionnaire IV[^c]</td>
<td>✓</td>
<td>✓</td>
<td>126</td>
</tr>
<tr>
<td>Schedule for Nonadaptive and Adaptive Personality[^d]</td>
<td>✓</td>
<td>✓</td>
<td>28</td>
</tr>
<tr>
<td>Wisconsin Personality Inventory</td>
<td>✓</td>
<td>✓</td>
<td>9</td>
</tr>
<tr>
<td><strong>Trait Based</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensional Assessment of Personality Pathology – Basic Questionnaire</td>
<td>✓</td>
<td></td>
<td>17</td>
</tr>
<tr>
<td>Extended Interpersonal Adjective Scales</td>
<td>✓</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Inventory of Interpersonal Problems-Personality Disorder Scales</td>
<td>✓</td>
<td>✓</td>
<td>137</td>
</tr>
<tr>
<td>NEO Personality Inventory – Revised</td>
<td>✓</td>
<td>✓</td>
<td>601</td>
</tr>
<tr>
<td>Personality Adjective Check List</td>
<td>✓</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>Structural Analysis of Social Behavior Intrex Questionnaire</td>
<td>✓</td>
<td>✓</td>
<td>144</td>
</tr>
<tr>
<td>Temperament – Character Inventory</td>
<td>✓</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Tridimensional Personality Questionnaire</td>
<td>✓</td>
<td></td>
<td>209</td>
</tr>
</tbody>
</table>

[^a]: This self-report measure is considered both a diagnostic instrument and a trait-based instrument
[^b]: Addresses major clinical constructs rather than specific diagnoses
[^c]: Source: PsychInfo Data Base 2003
Appendix C: Comparison of Recommended Self-Report Personality Assessment Instruments

<table>
<thead>
<tr>
<th>Instrument</th>
<th># of Items</th>
<th>Format of Items</th>
<th>Time to complete</th>
<th>Cost to Hand Score</th>
<th>Cost to Computer Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIP-PD</td>
<td>127</td>
<td>5-pt response</td>
<td>NA</td>
<td>out of print</td>
<td>out of print</td>
</tr>
<tr>
<td>SASBQ-IQ</td>
<td>108</td>
<td>11-pt response</td>
<td>NA</td>
<td>cost prohibitive</td>
<td>$2.00+</td>
</tr>
<tr>
<td>TPV/TCI</td>
<td>240</td>
<td>yes/no</td>
<td>30-40 min</td>
<td>NA</td>
<td>$4.50</td>
</tr>
<tr>
<td>NEO-PI-R</td>
<td>240</td>
<td>5-pt response</td>
<td>20-40 min</td>
<td>$3.00</td>
<td>$13.00</td>
</tr>
</tbody>
</table>
Appendix D: Working Alliance Inventory – Client Form

Below is a list of statements about your relationship with your therapist. Please consider each item carefully and indicate your level of agreement with each by circling the appropriate number.

1. My therapist and I agree about the things I will need to do in therapy to help improve my situation.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

2. What I am doing in therapy gives me new ways of looking at my problem.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

3. I believe my therapist likes me.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

4. My therapist does not understand what I am trying to accomplish in therapy.

   Always 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Not at all

5. I am confident in my therapist’s ability to help me.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

6. My therapist and I are working towards mutually agreed upon goals.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

7. I feel my therapist appreciates me.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

8. We agree on what is important for me to work on.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

9. My therapist and I trust one another.

   Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

10. My therapist and I have different ideas on what my problems are.

    Always 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Not at all

11. We have established a good understanding of the kind of changes that would be good for me.

    Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always

12. I believe the way we are working with my problem is correct.

    Not at all 0 ----- 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 ----- 8 ----- 9 ----- 10  Always
Appendix E: Working Alliance Inventory – Therapist Form

Working Alliance Inventory 12 – Therapist Form

Below is a list of statements about your relationship with your client. Please consider each item carefully and indicate your level of agreement for each by circling the appropriate number.

1. My client and I agree about the things he/she will need to do in therapy to help improve his/her situation.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
2. What my client is doing in therapy gives him/her new ways of looking at his/her problem.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
3. I believe my client likes me.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
4. My client does not understand what I am trying to accomplish in therapy.
   Always 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Not at all
5. I am confident in my client’s ability to help him/herself.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
6. My client and I are working towards mutually agreed upon goals.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
7. I feel my client appreciates me.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
8. We agree on what is important for my client to work on.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
9. My client and I trust one another.
   Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
10. My client and I have different ideas on what his/her problems are.
    Always 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Not at all
11. We have established a good understanding of the kind of changes that would be good for him/her.
    Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
12. I believe the way we are working with my client’s problem is correct.
    Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Always
Appendix F: Client Demographics Form

DEMOGRAPHICS

Please first provide us with some background information:

Your age: ____ years
Your sex: □ Male □ Female

Some people identify themselves as belonging to one or several racial or ethnic group(s). Please check which group(s) you identify most strongly with:

□ European-American □ Black or African-American □ Hispanic/Latino-American □ Asian-American
□ American Native or Alaskan Native □ Pacific Islander-American □ Middle Eastern-American
□ Mixed □ Other - please list ___________________________

Number of years of college completed: _____ years

Marital status:
□ Married □ Live with partner □ Single □ Separated/Divorced
□ Widowed □ Other - please list ___________________________

Employment (please check all that apply):
□ Employed □ Unemployed □ Retired □ Disability
□ Student □ Homemaker □ Military Service

Annual household income: Are you a dependent on your parents’ tax return? □ Yes □ No
If yes, please indicate his/her/their income level; if no, please indicate your income level:
□ ≥$150,000 □ $100,000-$149,999 □ $75,000-$99,999 □ $50,000-$74,999
□ $25,000-$49,999 □ $10,000-$24,999 □ <$9,999 □ Don’t know, or prefer not to say

How would you describe the economic situation of your family as you were growing up? (Check one)

We had barely enough to get by
We had enough to get by, but no more
We were solidly middle class
We had plenty of “extras”
We had plenty of “luxuries”
Don’t know/unsure/prefer not to say

Which of the following is most true for you?
□ I do not have any friends or relatives that I can talk to about my troubles and sorrows.
□ I have one or two friends or family members that I can talk to about my troubles and sorrows.
□ I have a few friends or family members that I can talk to about my troubles and sorrows.
□ I have many friends or family members that I can talk to about my troubles and sorrows.
Appendix G: Therapist Demographics Questionnaire

Therapist Demographics

Thank you for agreeing to participate in this study. Please complete the following and return to the research coordinator.

Date: ________________________________

Your age: ______ years         Your sex: □ Male    □ Female

Some people identify themselves as belonging to one or several racial or ethnic group(s). Please check which group(s) you identify most strongly with:

□ White or Caucasian      □ Black or African-American       □ Hispanic or Latino    □ Asian
□ American Native or Alaskan Native □ Pacific Islander □ Middle Eastern □ Mixed
□ Other - please list __________________________________________________________

1. What is your primary theoretical orientation?
   □ Behavioral          □ Biological        □ Cognitive
   □ Cognitive-Behavioral □ Ecosystems        □ Family
   □ Humanistic          □ Pragmatic         □ Psychodynamic
   □ Other: ________________________________________________________________

2. Please indicate the number of clients you have seen for the following:

   Therapy: ___________________________ (approximate total number)

   Assessment:
   Personality ________________________ (approximate total number)
   LD _______________________________ (approximate total number)
   ADHD _______________________________ (approximate total number)
   Functional Analysis ___________ (approximate total number)
   Other ____________________________ Type: ______________________________________

3. Please indicate the number of assessment feedback sessions you have conducted:

   Therapy: ___________________________ (approximate total number)

   Assessment: ___________________________ (approximate total number)
Appendix H: Therapist Questionnaire – E Form

After your sixth session with ____________________________, please answer the following questions. Thank you for returning your completed form to the research assistant. Your participation in this study is appreciated more than you know!

Date: ____________________________

1. How helpful was the NEO-PI-R narrative report in the development of your case formulation?
   Not at all 0------1------2------3------4------5------6------7------8------9------10 Very

2. Did you share the NEO-PI-R results with your client? □ Yes □ No

3. If you shared the results with your client, how did you present them?
   □ Per in-service training
   □ Slight modification to in-service training. Please explain: ____________________________
   □ Considerable modification to in-service training. Please explain: ____________________________
   □ Gave the client the report with minimal or no discussion of results.
   □ Other. Please explain: __________________________________________________________

   If you did not share the results with your client, what influenced your decision?
   □ No time □ Clinically contraindicated □ Forgot
   □ Inconsistent attendance by client □ Irrelevant to case conceptualization
   □ Other. Please explain: __________________________________________________________

4. How has the narrative influenced your conceptualization of your client’s personality strengths and weaknesses?
   Very negatively -5 -4 -3 -2 -1 0 1 2 3 4 5 Very positively
   Comment: ____________________________

5. How has the narrative influenced your interaction with your client?
   Very negatively -5 -4 -3 -2 -1 0 1 2 3 4 5 Very positively
   Comment (i.e., you became more conservative, more empathic, less empathic, reconsidered your intervention strategy, etc.):
   ________________________________________________________________

6. If you shared the results with your client, how did they influence your client’s response to therapeutic interventions?
   Very negatively -5 -4 -3 -2 -1 0 1 2 3 4 5 Very positively
   Comment: ____________________________

7. Other than the OQ 45.2, please list all assessment instruments you have given to your client to complete or your client has received during the course of therapy, including any form of questionnaire, rapid assessment inventories, personality inventories, intelligence testing, etc:
   □ MMPI □ TAT □ MCMI-III □ 16PF □ Rorschach
   □ Beck Depression Inventory (BDI) □ State Trait Anxiety Scale (STAI)
   □ WISC-IV □ WAIS-III □ WIAT II □ WMS □ CPT

   Any other assessment instruments (i.e., gambling, assertiveness, structured interviews, etc.)?
   □ Other: ________________________________________________________________
   □ Other: ________________________________________________________________
   □ Other: ________________________________________________________________
Appendix I: Therapist Questionnaire – C Form

Therapist Questionnaire – C Form

After your sixth session with ________________________, please answer the following questions. Thank you for returning your completed form to the research assistant. Your participation in this study is appreciated more than you know!

Date: __________________________

1. How much has the NEO-PI-R training/intervention influenced your attention to the impact of this client’s personality traits on therapeutic interactions?

Not at all 0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10 Very

2. How has the training/intervention influenced your conceptualization of your client’s personality strengths and weaknesses?

Very negatively -5 -4 -3 -2 -1 0 1 2 3 4 5 Very positively

Comments:

3. How has the training/intervention influenced your interaction with your client?

Very negatively -5 -4 -3 -2 -1 0 1 2 3 4 5 Very positively

Comment (i.e., you became more conservative, more empathic, less empathic, reconsidered your intervention strategy, etc.):

4. Other than the OQ 45.2, please list all assessment instruments you have given to your client to complete or your client has received during the course of therapy, including any form of questionnaire, rapid assessment inventories, personality inventories, intelligence testing, etc:

☐ MMPI ☐ TAT ☐ MCMI-III ☐ 16PF ☐ Rorschach
☐ Beck Depression Inventory (BDI) ☐ State Trait Anxiety Scale (STAI)
☐ WISC-IV ☐ WAIS-III ☐ WIAT II ☐ WMS ☐ CPT

Any other assessment instruments (i.e., gambling, assertiveness, structured interviews, etc.)?

☐ Other: ________________________________________________

☐ Other: ________________________________________________
Appendix J: Supervisor Questionnaire

For your supervisee, ________________ seeing ________________, would you please answer the following questions? Thank you for placing your completed form in Shauncie’s mailbox. Your participation in this study is appreciated more than you know!

Date: ______________________________

1. How much has the NEO-PI-R training/intervention influenced your attention to the impact of this client’s personality traits on therapeutic interventions?

   Not at all  0-------1-------2-------3-------4-------5-------6-------7-------8-------9-------10  Very

2. How has the training/intervention influenced your conceptualization of this client’s personality strengths and weaknesses?

   Very negatively  -5 -4 -3 -2 -1 0 1 2 3 4 5 Very Positively

Comment: ____________________________________________________________

3. How has the training/intervention influenced your recommendation/suggestions regarding therapeutic interventions with this client?

   Very negatively  -5 -4 -3 -2 -1 0 1 2 3 4 5 Very Positively

Comment: ____________________________________________________________

4. If your supervisee received NEO-PI-R results for this client, did you encourage your supervisee to share the results with the client?

   □ Yes  □ No  □ Not Applicable

If yes, which of the following best describes your suggestions about the feedback?

   □ No specific feedback suggestions were given
   □ As suggested in the in-service training
   □ Slight modification to in-service training. Please explain:________________________
   □ Considerable modification to in-service training. Please explain:_____________________
   □ Gave the client the report with minimal or no discussion of results.
   □ Other. Please explain:________________________________________________________

If not, what influenced you decision?

   □ No time  □ Clinically contraindicated  □ Forgot
   □ Inconsistent attendance by client  □ Irrelevant to case conceptualization
   □ Other. Please explain:________________________________________________________

5. Other than the OQ 45.2, please list all assessment instruments you have recommended that your supervisee administer to this client, including any form of questionnaire, rapid assessment inventory, personality inventory, intelligence testing, etc.:

   □ Not Applicable
   □ MMPI  □ TAT  □ MCMI-III  □ 16PF  □ Rorschach
   □ Beck Depression Inventory (BDI)  □ State Trait Anxiety Scale (STAI)
   □ WISC-IV  □ WAIS-III  □ WIAT II  □ WMS  □ CPT

Any other assessment instruments (i.e., gambling, assertiveness, structured interviews, etc.)?

   □ Other: ________________________________________________________________

   □ Other: ________________________________________________________________
Appendix K: NEO-PI-R Pre In-Service Questionnaire

Thank you for choosing to participate in this in-service. Thank you, also, for taking the time to complete this questionnaire.

1. How many years of clinical psychology experience/education do you have? __________

2. How would you rate your level of expertise with assessment feedback to clients?
   - No Expertise 0----1----2----3----4----5----6----7----8----9----10 Expert

3. How would you rate your level of expertise with the NEO-PI-R?
   - No Expertise 0----1----2----3----4----5----6----7----8----9----10 Expert

4. How would you rate your level of expertise regarding utilization of the NEO-PI-R with a clinical population?
   - No Expertise 0----1----2----3----4----5----6----7----8----9----10 Expert

5. Did you have any specific expectation regarding this in-service? Is yes, please explain:

   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________

6. Any additional comments:

   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
Appendix L: NEO-PI-R Post In-Service Questionnaire

Thank you again for choosing to participate in this in-service. Thank you, also, for taking the time to complete this questionnaire.

1. How many years of clinical psychology experience/education do you have? 

2. How useful was the information presented today?
   
   Not at all Useful 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10 Very Useful

3. Do you feel you received enough information about the NEO-PI-R?
   
   □ YES  □ NO  □ DON'T KNOW

4. How confident do you feel about giving clients feedback regarding their NEO-PI-R results?
   
   Not at all Confident 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10 Extremely Confident

5. How confident do you feel about the clinical utility of the NEO-PI-R results?
   
   Not at all Confident 0-----1-----2-----3-----4-----5-----6-----7-----8-----9-----10 Extremely Confident

6. Do you feel you given enough opportunity to discuss the issues you wanted to discuss?
   
   □ YES  □ NO  □ DON'T KNOW

6. Comments:

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________
Appendix M: Therapist and Supervisor Recruitment Flier

Dear Fellow Therapists & Supervisors

*Your Participation Will Be Greatly Appreciated!!!!*

Shauncie’s dissertation, a study investigating the usefulness of administering a personality assessment to clients before they are seen for therapy, will begin the next week. *The success of the study is dependent on therapist and supervisor participation. Therefore, your help would be greatly appreciated.*

The details of the study are listed in the attached consent form. Note: This applies to new clients only, and the NEO-PI-R will be administered, by a research assistant, before the client is seen for therapy. The table below indicates the time line and needed paperwork for each client.

Therapist Tasks:
1) a one-time completion of a 6-item demographics questionnaire,
2) if you receive a copy of the NEO-PI-R, discuss/review the results with your supervisor,
3) if your supervisor agrees, give the results of NEO-PI-R report to the client,
4) completion of a 12-item Working Alliance Inventory for each client, and
5) completion of a 4 or 8-item, post-treatment-plan questionnaire for each client.

Supervisor Tasks:
1) if the therapist is given the NEO-PI-R for a client, discuss/review the results with the therapist, and
2) completion of 4-item, post-treatment-plan questionnaire.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Demographics</td>
<td>Pre-Tx</td>
</tr>
<tr>
<td>SCID-II PQ</td>
<td>Client</td>
</tr>
<tr>
<td>NEO-PI-R</td>
<td>Client</td>
</tr>
<tr>
<td>NEO Narrative Report to Therapist</td>
<td>Therapist</td>
</tr>
<tr>
<td>Working Alliance Inventory</td>
<td>Therapist &amp; Client</td>
</tr>
<tr>
<td>Therapist Demographics Questionnaire</td>
<td>Therapist</td>
</tr>
<tr>
<td>Post Treatment Plan Questionnaire</td>
<td>Therapist &amp; Supervisor</td>
</tr>
<tr>
<td>OQ45.2</td>
<td>Client, Client, Client</td>
</tr>
</tbody>
</table>

If you have any questions or would like additional information, please feel free to contact me or Dr. Saules (sskidmor@cmich.edu or 734-255-7691; ksaules@cmich.edu or 734-487-4988).

*If you would like to participate, please complete the informed consent and place it in my mailbox.*

Thanks so much for your time and consideration of this request.

Shauncie
Appendix N: Therapist Consent Form for EMU PC & CAPS

**Therapist Informed Consent**

**Project Title:** The Effect of Pre-Treatment Assessment on Therapy Outcome

**Investigator:** Shauncie Skidmore, M.S., Eastern Michigan University

**Co-Investigator:** Karen Saules, Ph.D., EMU Psychology Clinic Director

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** Please read this consent form. If you have any questions about the study, please contact either Shauncie Skidmore (487-4987; sskidmor@emich.edu) or Karen Saules (487-4988; ksaules@emich.edu).

Your clients, who consent to participate in this study, will be asked to complete five questionnaires: a demographics questionnaire, the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the Outcome Questionnaire 45.2, which is a measure of symptomology, and the Working Alliance Inventory 12 – Client Version, which is a measure of the quality of the relationship with the therapist. The first four measures will be administered before your client sees you for the first time. The fifth measure will be administered just prior to the fourth session. In addition, your client will be asked to complete an Outcome Questionnaire (OQ 45.2) just prior to their first six sessions.

For this study, each client participant will be randomly assigned to one of two conditions, either to a group in which the therapist will be given a report describing the results of the NEO-PI-R questionnaire data (results condition), or to a group in which the therapist is not given any information about the NEO-PI-R questionnaire results (no results condition). Therapists will not be given feedback on the results of the SCID II Questionnaire or Working Alliance Inventory for either condition.

If you consent to participate in this study, you will be asked to complete a demographics questionnaire (one time only) and a Working Alliance Inventory 12 – Therapist Version just prior to the fourth session with each client. In addition, if your client has been assigned to the results condition, you will be given a narrative report of the NEO-PI-R results (to use at your discretion) prior to the second session with your client. Also, you will be asked to complete a therapist questionnaire (containing 6 items) after the 6th session with your client. The approximate total time to complete the questionnaires should be about 15 minutes.

Also, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separate from your client’s clinic chart.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, you might be given information that may influence the course of therapy with your client.
VOLUNTARY PARTICIPATION: Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative consequences.

USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator’s dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist’s knowledge of the questionnaire results, for any of your clients that may have been assigned to the no-results-to-therapist group, a description of their questionnaire responses will be provided to you upon request after, but not before, the 6th session or upon completion of the study.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

- Snow Counseling Services: (734) 487-1118 (services are for EMU students only)
- EMU Psychology Clinic: (734) 487-4987
- University of Michigan 24-Hour Psychiatric Emergency Services: (734) 996-4747

HUMAN SUBJECTS REVIEW BOARD: This research protocol and informed consent document have been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from 15 June 07 to 15 June 08. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC, human.subjects@emich.edu).

CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ______________________________

Signatures:

Participant (your signature) ___________________________ Date 
Witness: ___________________________ Date

Investigator or Specified Designee ___________________________ Date
Appendix O: Therapist Consent Form for Wentworth and Associates

**THERAPIST INFORMED CONSENT**

Project Title: The Effect of Pre-Treatment Assessment on Therapy Outcome

Investigator: Shauncie Skidmore, M. S., Eastern Michigan University
Co-Investigator: Karen Saules, Ph.D., EMU Psychology Clinic Director

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** Please read this consent form. If you have any questions about the study, please contact either Shauncie Skidmore (487-4987; sskidmor@emich.edu) or Karen Saules (487-4988; ksaules@emich.edu).

Your clients, who consent to participate in this study, will be asked to complete five questionnaires: a demographics questionnaire, the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the Outcome Questionnaire 45.2, which is a measure of symptomology, and the Working Alliance Inventory 12 – Client Version, which is a measure of the quality of the relationship with the therapist. The first four measures will be administered before your client sees you for the first time. The fifth measure will be administered just prior to the fourth session. In addition, your client will be asked to complete an Outcome Questionnaire (OQ 45.2) just prior to their first six sessions.

For this study, each client participant will be randomly assigned to one of two conditions, either to a group in which the therapist will be given a report describing the results of the NEO-PI-R questionnaire data (results condition), or to a group in which the therapist is not given any information about the NEO-PI-R questionnaire results (no results condition). Therapists will not be given feedback on the results of the SCID II Questionnaire or Working Alliance Inventory for either condition.

If you consent to participate in this study, you will be asked to complete a demographics questionnaire (one time only) and a Working Alliance Inventory 12 – Therapist Version just prior to the fourth session with each client. In addition, if your client has been assigned to the results condition, you will be given a narrative report of the NEO-PI-R results (to use at your discretion) prior to the second session with your client. Also, you will be asked to complete a therapist questionnaire (containing 6 items) after the 6th session with your client. The approximate total time to complete the questionnaires should be about 15 minutes.

Also, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separate from your client’s clinic chart.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, you might be given information that may influence the course of therapy with your client.
VOLUNTARY PARTICIPATION: Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative consequences.

USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator’s dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist’s knowledge of the questionnaire results, for any of your clients that may have been assigned to the no-results-to-therapist group, a description of their questionnaire responses will be provided to you upon request after, but not before, the sixth session or upon completion of the study.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

- Wentworth and Associates: (586) 997-3153
- Harbor Oaks: (586) 725-5777
- St John’s Oakland Hospital: (248) 997-3153

HUMAN SUBJECTS REVIEW BOARD: This research protocol and informed consent document have been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from 15 June 07 to 15 June 08. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC, human.subjects@emich.edu).

CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ____________________________________________________________

Signatures:

_________________________ Date
Participant (your signature)

Witness:

_________________________ Date
Investigator or Specified Designee
Appendix P: Supervisor Informed Consent for EMU PC and CAPS

**SUPERVISOR INFORMED CONSENT**

**Project Title:** The Effect of Pre-Treatment Assessment on Therapy Outcome

**Investigator:** Shauncie Skidmore, M.S., Eastern Michigan University  
**Co-Investigator:** Karen Saules, Ph.D., EMU Psychology Clinic Director

**Please read this consent form in its entirety.** If you have any questions about the study, please contact either Shauncie Skidmore (487-4987; sskidmor@emich.edu) or Karen Saules (487-4988; ksaules@emich.edu).

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** Your supervisees' clients, who consent to participate in this study, will be asked to complete five questionnaires: a demographics questionnaire, the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the Outcome Questionnaire 45.2, which is a measure of distress symptomology, and the Working Alliance Inventory 12 – Client Version, which is a measure of the quality of the relationship with the therapist. The first four measures will be administered before your supervisees’ clients are seen by the supervisees for the first time. The fifth measure will be administered just prior to the fourth session. In addition, your supervisees’ clients will be asked an Outcome Questionnaire (OQ 45.2) before each of their first six sessions.

For this study, each client participant will be randomly assigned to one of two conditions, either to a group in which your supervisees will be given a report describing the results of the NEO-PI-R questionnaire data (results condition), or to a group in which they are not given any information about the NEO-PI-R questionnaire results (no results condition). They will not be given feedback on the results of the SCID II Questionnaire or Working Alliance Inventory for either condition. If your supervisee’s client has been assigned to the results condition, they will be given a narrative report of the NEO-PI-R results (to use at your and their discretion) prior to the second session with the client.

If you consent to participate in this study, you will be asked to complete a Supervisor’s Questionnaire after your supervisee has had time to refine the case conceptualization and treatment plan for their study-participating client (typically following the 6th session). The approximate total time to complete the questionnaires should be about 15 minutes.

Also, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separate from the client’s clinic chart.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, you might be given information that may influence the course of therapy with the client.

**VOLUNTARY PARTICIPATION:** Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative consequences.
USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator’s dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist’s knowledge of the questionnaire results, for any of the clients that may have been assigned to the no-results-to-therapist group, a description of their questionnaire responses will be provided to your supervisees upon request after, but not before, the 6th session or upon completion of the study.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

- Snow Counseling Services: (734) 487-1118 (services are for EMU students only)
- EMU Psychology Clinic: (734) 487-4987
- University of Michigan 24-Hour Psychiatric Emergency Services: (734) 996-4747

HUMAN SUBJECTS REVIEW BOARD: This research protocol and informed consent document have been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from 15 June 07 to 15 June 08. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC, human.subjects@emich.edu).

CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ________________________________

Signatures:

Participant (your signature) Date
Witness: Date
Investigator or Specified Designee Date
Appendix Q: Supervisor Informed Consent for Wentworth and Associates

SUPERVISOR INFORMED CONSENT

Project Title: The Effect of Pre-Treatment Assessment on Therapy Outcome

Investigator: Shauncie Skidmore, M. S., Eastern Michigan University
Co-Investigator: Karen Saules, Ph.D., EMU Psychology Clinic Director

Please read this consent form in its entirety. If you have any questions about the study, please contact either Shauncie Skidmore (487-4987; sskidmor@emich.edu) or Karen Saules (487-4988; ksaules@emich.edu).

PURPOSE OF THIS RESEARCH STUDY: To evaluate factors that may influence the course of individual psychotherapy.

PROCEDURE: Your supervisees’ clients, who consent to participate in this study, will be asked to complete five questionnaires: a demographics questionnaire, the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the Outcome Questionnaire 45.2, which is a measure of distress symptomology, and the Working Alliance Inventory 12 - Client Version, which is a measure of the quality of the relationship with the therapist. The first four measures will be administered before your supervisees’ clients are seen by the supervisees for the first time. The fifth measure will be administered just prior to the fourth session. In addition, your supervisees’ clients will be asked an Outcome Questionnaire (OQ 45.2) before each of their first six sessions.

For this study, each client participant will be randomly assigned to one of two conditions, either to a group in which your supervisees will be given a report describing the results of the NEO-PI-R questionnaire data (results condition), or to a group in which they are not given any information about the NEO-PI-R questionnaire results (no results condition). They will not be given feedback on the results of the SCID II Questionnaire or Working Alliance Inventory for either condition. If your supervisee’s client has been assigned to the results condition, they will be given a narrative report of the NEO-PI-R results (to use at your and their discretion) prior to the second session with the client.

If you consent to participate in this study, you will be asked to complete a Supervisor’s Questionnaire after your supervisee has had time to refine the case conceptualization and treatment plan for their study-participating client (typically following the 6th session). The approximate total time to complete the questionnaires should be about 15 minutes.

Also, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed.

CONFIDENTIALITY: All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separate from the client’s clinic chart.

EXPECTED RISKS: There are no known risks or side effects associated with participation in this study.

EXPECTED BENEFITS: All participants will receive educational benefits concerning the nature of psychological research. In addition, you might be given information that may influence the course of therapy with the client.

VOLUNTARY PARTICIPATION: Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative consequences.
USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator's dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist's knowledge of the questionnaire results, for any of the clients that may have been assigned to the no-results-to-therapist group, a description of their questionnaire responses will be provided to your supervisees upon request after, but not before, the 6th session or upon completion of the study.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

- Wentworth and Associates: (586) 997-3153
- Harbor Oaks: (586) 725-5777
- St John's Oakland Hospital: (248) 997-3153

HUMAN SUBJECTS REVIEW BOARD: This research protocol and informed consent document have been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from 15 June 07 to 15 June 08. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC, human.subjects@emich.edu).

CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ____________________________________________

Signatures:

________________________________________________________
Participant (your signature) Date

Witness:

________________________________________________________
Investigator or Specified Designee Date
Appendix R: Scripted Phone Contact Protocol

Phone Contact Protocol for OQ 45.2 / NEO-PI-R Study

Hi, May I speak to _____________________________

If individual is not home, do not leave a message.
If answering machine response, just hang up.
If someone else answers phone, just say you will call back at another time.

If individual is available:

I am calling from the _______________ Psychology Clinic.

My name is ________________________________

I am calling to find out if you would be willing to participate in a study.
If you choose to participate, you will receive ($10 or $10 credit toward account).

At this point, the callee will probably ask what the study is about.

The purpose of the study is to determine if it would be useful to administer questionnaires to clients before they see their therapist for the first time.

If you choose to participate in the study, you will be asked to come to the clinic sometime BEFORE your first scheduled appointment with a therapist. **You will not see a therapist at this time.**

When you come to the clinic to participate in the study, a research assistant will explain the purpose of the study to you, review a consent form with you, ask you to sign the consent form, and have you complete four questionnaires about personality characteristics.

The benefit to you for participating in this study will be educational benefits concerning the nature of psychological research and the monetary award previously mentioned. Would you be willing to participate in this study?

If they say **no:** Thank you for your time.

If they say **YES:** It takes about 1 hour to complete the questionnaires. When would be a convenient time for you to come to the clinic to complete this paperwork?

After a time has been scheduled: **When you come to the clinic, please tell the receptionist you are here to participate in the study.**

After a time has been agreed upon: **Do you need directions to the clinic?** - see attached for directions.

Do you have any questions?

See list of FAQs.

________________________, thank you very much for being willing to participate in our (name) study.
We will see you (scheduled date and time).

Thanks again. Bye

Frequently Asked Questions (FAQs)

Will my name be on the paperwork?

No, each person that participates in the study is assigned a number. Only the number is on the questionnaires. The list of names and numbers is kept under lock and key in a separate place from the rest of the questionnaires.

What kind of personality information is being asked in the questionnaires?

The questions concern aspects of personality, such as openness, extraversion, agreeableness, etc.

What happens to the results of the questionnaires I answer?

Because the purpose of the study is to determine if it is useful to give questionnaires to clients before they are seen by a therapist, some participants' results will be given to the therapist to discuss with the client, some will not. We cannot determine at this time whether your results will be given to your therapist.

Can I get a copy of the questionnaire results?

If you would like a written narrative of your questionnaire results, we will have you complete a form at the time of your appointment that requests permission to mail the results to you at the end of the study.
Appendix S: Client Informed Consent for EMU PC

**Participant Informed Consent**

**Project Title:** The Effect of Pre-Treatment Assessment on Therapy Outcome

**Investigator:** Shauncie Skidmore, M.S., Eastern Michigan University

**Co-Investigator:** Karen Saules, Ph.D., EMU Psychology Clinic Director

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** A research assistant will explain the study to you, answer any questions you may have, and witness your signature to this consent form.

Participation tasks include: completion of 4 questionnaires pre-treatment, completion of the OQ45.2 prior to each therapy session for six consecutive sessions, completion of the Working Alliance Inventory before the 4th session of therapy, and possible completion of a follow-up questionnaire packet. Total time commitment is approximately 4 hours over the course of 2 to 8 months.

In particular, you will be asked to complete four questionnaires before your first session of therapy: the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the OQ 45.2, which is a measure of everyday functioning, and a brief demographics questionnaire that asks age, gender, etc. Upon completing the questionnaires, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed. The approximate total time to complete the questionnaires should be about 1 hour.

Before the 4th session of therapy, you will be asked to complete the Working Alliance Inventory 12 - Client Version, which is a measure of the quality of the relationship with your therapist. You will also be asked to complete an OQ 45.2 before each session of therapy. Each should only take 5 to 10 minutes to complete.

For this study, each participant will be randomly assigned to one of two conditions, either to a group in which the therapist will be given a report describing the results of your NEO-PI-R questionnaire data, or to a group in which the therapist is not given any information about your questionnaire results. If you are assigned to the "no results" condition, your therapist may request a NEO-PI-R report after the sixth session of therapy.

Also, participants may be contacted 3 months after they finish therapy. If contacted, you will be asked to complete an Outcome Questionnaire (OQ45.2) and a SCID II SR Questionnaire, total completion time approximately 30 minutes. A return envelope with postage will be provided at that time.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separated from your clinic chart. As mentioned previously, your therapist may or may not have access to your questionnaire results.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study. However, the questionnaires contain items about symptoms that may be troubling to you. You may experience some emotional discomfort when answering these items, but it is not expected to last longer than it takes you to complete the questionnaires. If, however, you experience emotional reactions that are difficult for you to manage, please mention your reactions to your therapist or contact the principal investigator of this research study. It is expected that your therapist will be able to address any concerns you have regarding your reactions to the questionnaires. However, you will be provided referral information for additional appropriate services, if needed.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, each participant will be given a $10 credit to their clinic account upon completion of the questionnaires, to compensate for their time. Likewise, if you are contacted to complete the follow-up questionnaires, upon receipt (at the EMU Psychology Clinic) of your completed questionnaires, you will be forwarded a monetary compensation of $10 for your time and effort.

**VOLUNTARY PARTICIPATION:** Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative
PD Pre-Treatment Assessment

consequences. Regardless of whether you decide to participate or not to participate, your decision will not affect your course of treatment or eligibility for services at the clinic in any way.

USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator's dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist's knowledge of the questionnaire results, therapists will be given a description of questionnaire responses, upon completion of the study (or upon request after, but not before, the sixth session as mentioned previously), for any clients that may have been assigned to the no-results-to-therapist group.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

- Snow Counseling Services: (734) 487-1118 (services are for EMU students only)
- EMU Psychology Clinic: (734) 487-4987
- University of Michigan 24-Hour Psychiatric Emergency Services: (734) 996-4747

HUMAN SUBJECTS REVIEW BOARD: This research protocol and informed consent document have been reviewed and approved by the Eastern Michigan University Human Subjects Review Committee for use from 15 June 07 to 15 June 08. If you have any questions about the approval process, please contact Dr. Deb de Laski-Smith (734.487.0042, Interim Dean of the Graduate School and Administrative Co-chair of UHSRC, human.subjects@emich.edu).

CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained, and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ____________________________

Signatures:

Participant (your signature) ____________________________ Date __________

Also, I consent to participate in the follow-up mailing 3 months after my last session or at the end of the study, whichever comes first. Signature ____________________________ Date __________

Witness:

Investigator or Specified Designee ____________________________ Date __________
Appendix T: Client Informed Consent EMU CAPS

**PARTICIPANT INFORMED CONSENT**

**Project Title:** The Effect of Pre-Treatment Assessment on Therapy Outcome

**Investigator:** Shauncie Skidmore, M.S., Eastern Michigan University

**Co-Investigator:** Karen Saules, Ph.D., EMU Psychology Clinic Director

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** A research assistant will explain the study to you, answer any questions you may have, and witness your signature to this consent form.

Participation tasks include: completion of 4 questionnaires pre-treatment, completion of the OQ45.2 prior to each therapy session for six consecutive sessions, completion of the Working Alliance Inventory before the 4th session of therapy, and possible completion of a follow-up questionnaire packet. Total time commitment is approximately 4 hours over the course of 2 to 8 months.

In particular, you will be asked to complete four questionnaires before your first session of therapy: the NEO-PI-R, which is a measure of personality, the SCID II Questionnaire, which is a measure of personality patterns, the OQ 45.2, which is a measure of every day functioning, and a brief demographics questionnaire that asks age, gender, etc. Upon completing the questionnaires, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed. The approximate total time to complete the questionnaires should be about 1 hour.

Before the 4th session of therapy, you will be asked to complete the Working Alliance Inventory 12 – Client Version, which is a measure of the quality of the relationship with your therapist. You will also be asked to complete an OQ 45.2 before each session of therapy. Each should only take 5 to 10 minutes to complete.

For this study, each participant will be randomly assigned to one of two conditions, either to a group in which the therapist will be given a report describing the results of your NEO-PI-R questionnaire data, or to a group in which the therapist is not given any information about your questionnaire results. If you are assigned to the “no results” condition, your therapist may request a NEO-PI-R report after the sixth session of therapy.

Also, participants may be contacted 3 months after they finish therapy. If contacted, you will be asked to complete an Outcome Questionnaire (OQ45.2) and a SCID II SR Questionnaire, total completion time approximately 30 minutes. A return envelope with postage will be provided at that time.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separated from your clinic chart. As mentioned previously, your therapist may or may not have access to your questionnaire results.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study. However, the questionnaires contain items about symptoms that may be troubling to you. You may experience some emotional discomfort when answering these items, but it is not expected to last longer than it takes you to complete the questionnaires. If, however, you experience emotional reactions that are difficult for you to manage, please mention your reactions to your therapist or contact the principal investigator of this research study. It is expected that your therapist will be able to address any concerns you have regarding your reactions to the questionnaires. However, you will be provided referral information for additional appropriate services, if needed.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, each participant will be given $10 upon completion of the questionnaires, to compensate for their time. Likewise, if you are contacted to complete the follow-up questionnaires, upon receipt (at the EMU Psychology Clinic) of your completed questionnaires, you will be forwarded a monetary compensation of $10 for your time and effort.

**VOLUNTARY PARTICIPATION:** Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative
consequences. Regardless of whether you decide to participate or not to participate, your decision will not affect your course of treatment or eligibility for services at the clinic in any way.

**USE OF RESEARCH RESULTS:** The results of this study may be included in the principal investigator’s dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist’s knowledge of the questionnaire results, therapists will be given a description of questionnaire responses, upon completion of the study (or upon request after, but not before, the sixth session as mentioned previously), for any clients that may have been assigned to the no-results-to-therapist group.

**FUTURE QUESTIONS:** If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

**EMERGENCY CONTACT INFORMATION:** If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:
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**CONSENT TO PARTICIPATE:** I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained, and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

**PRINT NAME:** ________________________________

Signatures:

Participant (your signature) Date

Also, I consent to participate in the follow-up mailing 3 months after my last session or at the end of the study, whichever comes first.

Signature Date

Witness:

Investigator or Specified Designee Date
Appendix U: Client Informed Consent for Wentworth and Associates

**PARTICIPANT INFORMED CONSENT**

**Project Title:** The Effect of Pre-Treatment Assessment on Therapy Outcome

**Investigator:** Shauncie Skidmore, M.S., Eastern Michigan University

**Co-Investigator:** Karen Saules, Ph.D., EMU Psychology Clinic Director

**PURPOSE OF THIS RESEARCH STUDY:** To evaluate factors that may influence the course of individual psychotherapy.

**PROCEDURE:** A research assistant will explain the study to you, answer any questions you may have, and witness your signature to this consent form.

Participation tasks include: completion of 4 questionnaires pre-treatment, completion of the OQ45.2 prior to each therapy session for six consecutive sessions, completion of the Working Alliance Inventory before the 4th session of therapy, and possible completion of a follow-up questionnaire packet. Total time commitment is approximately 4 hours over the course of 2 to 8 months.

In particular, you will be asked to complete four questionnaires before your first session of therapy: the NEO-PI-R, which is a measure of personality; the SCID II Questionnaire, which is a measure of personality patterns, the OQ 45.2, which is a measure of every day functioning, and a brief demographics questionnaire that asks age, gender, etc. Upon completing the questionnaires, you will be given a duplicate copy of this informed consent, which includes follow-up contact information, if needed. The approximate total time to complete the questionnaires should be about 1 hour.

Before the 4th session of therapy, you will be asked to complete the Working Alliance Inventory 12 – Client Version, which is a measure of the quality of the relationship with your therapist. You will also be asked to complete an OQ 45.2 before each session of therapy. Each should only take 5 to 10 minutes to complete.

For this study, each participant will be randomly assigned to one of two conditions, either to a group in which the therapist will be given a report describing the results of your NEO-PI-R questionnaire data, or to a group in which the therapist is not given any information about your questionnaire results. If you are assigned to the "no results" condition, your therapist may request a NEO-PI-R report after the sixth session of therapy.

Also, participants may be contacted 3 months after they finish therapy. If contacted, you will be asked to complete an Outcome Questionnaire (OQ45.2) and a SCID II Questionnaire, total completion time approximately 30 minutes. A return envelope with postage will be provided at that time.

**CONFIDENTIALITY:** All study data will be kept in a locked file cabinet at the EMU Psychology Clinic, separated from your clinic chart. As mentioned previously, your therapist may or may not have access to your questionnaire results.

**EXPECTED RISKS:** There are no known risks or side effects associated with participation in this study. However, the questionnaires contain items about symptoms that may be troubling to you. You may experience some emotional discomfort when answering those items, but it is not expected to last longer than it takes you to complete the questionnaires. If, however, you experience emotional reactions that are difficult for you to manage, please mention your reactions to your therapist or contact the principal investigator of this research study. It is expected that your therapist will be able to address any concerns you have regarding your reactions to the questionnaires. However, you will be provided referral information for additional appropriate services, if needed.

**EXPECTED BENEFITS:** All participants will receive educational benefits concerning the nature of psychological research. In addition, each participant will be given $10 upon completion of the questionnaires, to compensate for their time. Likewise, if you are contacted to complete the follow-up questionnaires, upon receipt (at the EMU Psychology Clinic) of your completed questionnaires, you will be forwarded a monetary compensation of $10 for your time and effort.

**VOLUNTARY PARTICIPATION:** Participation in this study is voluntary. You may choose not to participate. If you do decide to participate, you can change your mind at any time and withdraw from the study without negative
consequences. Regardless of whether you decide to participate or not to participate, your decision will not affect your course of treatment or eligibility for services at the clinic in any way.

USE OF RESEARCH RESULTS: The results of this study may be included in the principal investigator's dissertation, may be included in a research publication, and/or may be presented at conferences. You will not be identified in any publication or report of this study.

If the results of this study indicate that the course of treatment is improved with the therapist's knowledge of the questionnaire results, therapists will be given a description of questionnaire responses, upon completion of the study (or upon request after the sixth session as mentioned previously), for any clients that may have been assigned to the no-results-to-therapist group.

FUTURE QUESTIONS: If, at any time, you have questions about study procedures or your participation in the study, please contact the principal investigator, Shauncie Skidmore, at 734-487-4987.

EMERGENCY CONTACT INFORMATION: If you feel the need to consult with someone regarding your reactions to participating in this study, the following agencies offer services:

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Harbor Oaks: (586) 725-5777
St John’s Oakland Hospital: (248) 967-3153

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CONSENT TO PARTICIPATE: I have read or had read to me all the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained, and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: ____________________________________________

Signatures: ________________________________ Date ____________

Participant (your signature) Date

Also, I consent to participate in the follow-up mailing 3 months after my last session or at the end of the study, whichever comes first. Signature ________________________________ Date ____________

Witness: ________________________________ Date ____________

Investigator or Specified Designee Date
Appendix V: Study Follow-Up Cover Letter for Post Treatment Questionnaire Packets

(Date)

(Addressee Information)

Subject: Participation in Personality Study

Dear ________________________________,

Thank you so much for agreeing to participate in our post-treatment personality assessment study. Enclosed you will find a copy of the consent form you signed at the beginning of the study, one personality questionnaire, and an OQ 45.2.

Please remember, your name will not be listed on the questionnaires (a number will be used to track questionnaire return) and will not be included in any data analyses. Your answers are completely confidential.

Participation in this study is completely voluntary. You may choose not to participate. Your decision will not affect your eligibility for any future services in any way.

Please complete both questionnaires. Also, please check to make sure you did not skip any pages. If you have any questions regarding the questionnaires, please call the EMU Psychology Clinic, 734-487-4987, and ask for Shauncie Skidmore or her research assistant.

After you complete the questionnaires, please mail them in the stamped, addressed envelope provided. Once the completed forms are received by a research assistant, you will be sent a check for $10 for your participation.

If you would prefer, you can deliver the completed questionnaires to the EMU Psychology Clinic and receive your $10 check at that time. If you choose this option, we request that you call and make prior arrangements with a research assistant so that we can make sure your money is available at the front desk.

Again, thank you so much for participating in our study. We look forward to receiving your responses.

Sincerely,

Shauncie Skidmore, MS, LLP, PhD Candidate
## Appendix W: Results of Therapist and Supervisor Post Session 6 Questionnaires

<table>
<thead>
<tr>
<th>Question</th>
<th>Therapist C Form (No Results Group)</th>
<th>Therapist E Form (Results to Therapist Group)</th>
<th>Supervisor Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. NEO-PI-R training influence on attention to impact of client’s personality on therapeutic interaction</td>
<td>Mean ($SD$) 1.67 ($SD = 2.1$)</td>
<td>Mean ($SD$) 5.83 ($SD = 1.7$)</td>
<td>Mean ($SD$) 3.90 ($SD = 2.1$)</td>
</tr>
<tr>
<td>Q2. NEO-PI-R training influence on conceptualization of client’s personality strengths and weaknesses</td>
<td>Median 2.0</td>
<td>Median 6.0</td>
<td>Median 4.0</td>
</tr>
<tr>
<td>Q3. NEO-PI-R training influence interaction with the client</td>
<td>Mode 0</td>
<td>Mode 6</td>
<td>Mode 3, 5</td>
</tr>
<tr>
<td>Q4. Usefulness of NEO-PI-R report in development of case formulation</td>
<td>Actual Range [Range Choices] 0 to 3 [0 (not at all) to 10 (very)]</td>
<td>Actual Range [Range Choices] 3 to 8 [0 (not at all) to 10 (very)]</td>
<td>Actual Range [Range Choices] 0 to 7 [0 (not at all) to 10 (very)]</td>
</tr>
<tr>
<td>Q5. NEO-PI-R influence on conceptualization of client’s personality strengths and weaknesses</td>
<td>Actual Range [Range Choices] 0 to 3 [-5 (very neg) to +5 (very pos)]</td>
<td>Actual Range [Range Choices] 0 to 3 [-5 (very neg) to +5 (very pos)]</td>
<td>Actual Range [Range Choices] 0 to 3 [-5 (very neg) to +5 (very pos)]</td>
</tr>
<tr>
<td>Q6. NEO-PI-R influence interaction with client</td>
<td>Actual Range [Range Choices] 0 to 2 [-5 (very neg) to +5 (very pos)]</td>
<td>Actual Range [Range Choices] 0 to 2 [-5 (very neg) to +5 (very pos)]</td>
<td>Actual Range [Range Choices] 0 to 2 [-5 (very neg) to +5 (very pos)]</td>
</tr>
</tbody>
</table>

**Note:** The table above contains the results of Therapeut Post Session 6 Questionnaires, showing the mean, median, mode, and actual range for each question.
Appendix X: SCID-II-SR Questionnaire

**STATEMENT**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have you avoided jobs or tasks that involved having to deal with a lot of people?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>2. Do you avoid getting involved with people unless you are certain they will like you?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>3. Do you find it hard to be “open” even with people you are close to?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>4. Do you often worry about being criticized or rejected in social situations?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>5. Are you usually quiet when you meet new people?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>6. Do you need a lot of advice or reassurance from others before you can make everyday decisions — like what to wear or what to order at a restaurant?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>7. Do you believe that you are not as good, as smart, or as attractive as most people?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>8. Are you afraid to try new things?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>9. Do you depend on other people to handle important areas in your life such as finances, childcare, or living arrangements?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>10. Do you find it hard to disagree with people even when you think they are wrong?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>11. Do you find it hard to start or work on tasks when there is no one to help you?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>12. Have you often volunteered to do things that are unpleasant?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>13. Do you usually feel uncomfortable when you are by yourself?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>14. When a close relationship ends, do you feel you immediately have to find someone else to take care of you?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>15. Do you worry a lot about being left alone to take care of yourself?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>16. Are you the kind of person who focuses on details, order, and organization or likes to make lists and schedules?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>17. Do you have trouble finishing jobs because you spend so much time trying to get things exactly right?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>18. Do you or other people feel that you are so devoted to work (or school) that you have no time left for anyone else or for just having fun?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td>19. Do you have very high standards about what is right and what is wrong?</td>
<td>No □ Yes □</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>20</td>
<td>Do you have trouble throwing things out because they might come in handy some day?</td>
</tr>
<tr>
<td>21</td>
<td>Is it hard for you to let other people help you of they don't agree to do things exactly the way you want?</td>
</tr>
<tr>
<td>22</td>
<td>Is it hard for you to spend money on yourself and other people even when you have enough?</td>
</tr>
<tr>
<td>23</td>
<td>Are you often so sure you are right that it doesn't matter what other people say?</td>
</tr>
<tr>
<td>24</td>
<td>Have other people told you that you are stubborn or rigid?</td>
</tr>
<tr>
<td>25</td>
<td>When someone asks you to do something that you don't want to do, do you say “yes” but then work slowly or do a bad job?</td>
</tr>
<tr>
<td>26</td>
<td>If you don't want to do something, do you often just “forget” to do it?</td>
</tr>
<tr>
<td>27</td>
<td>Do you often feel that other people don't understand you, or don't appreciate how much you do?</td>
</tr>
<tr>
<td>28</td>
<td>Are you often grumpy and likely to get into arguments?</td>
</tr>
<tr>
<td>29</td>
<td>Have you found that most of your bosses, teachers, supervisors, doctors, and others who are supposed to know what they are doing really don't?</td>
</tr>
<tr>
<td>30</td>
<td>Do you think that it's not fair that other people have more than you do?</td>
</tr>
<tr>
<td>31</td>
<td>Do you often complain that more than your share of bad things have happened to you?</td>
</tr>
<tr>
<td>32</td>
<td>Do you often angrily refuse to do what others want and then later feel bad and apologize?</td>
</tr>
<tr>
<td>33</td>
<td>Do you usually feel unhappy or feel like life is no fun?</td>
</tr>
<tr>
<td>34</td>
<td>Do you believe that you are basically an inadequate person and don't feel good about yourself?</td>
</tr>
<tr>
<td>35</td>
<td>Do you often put yourself down?</td>
</tr>
<tr>
<td>36</td>
<td>Do you keep thinking about bad things that have happened in the past or worry about bad things that might happen in the future?</td>
</tr>
<tr>
<td>37</td>
<td>Do you often judge others harshly and easily find fault with them?</td>
</tr>
<tr>
<td>38</td>
<td>Do you think that most people are basically no good?</td>
</tr>
<tr>
<td>39</td>
<td>Do you almost always expect things to turn out badly?</td>
</tr>
<tr>
<td>40</td>
<td>Do you often feel guilty about things you have or haven't done?</td>
</tr>
<tr>
<td>41</td>
<td>Do you often have to keep an eye out to stop people from using you or hurting you?</td>
</tr>
<tr>
<td>42</td>
<td>Do you spend a lot of time wondering if you can trust your friends or the people you work with?</td>
</tr>
<tr>
<td>43</td>
<td>Do you find that it is best not to let other people know much about you because they will use it against you?</td>
</tr>
<tr>
<td>44</td>
<td>Do you often detect hidden threats or insults in things people say or do?</td>
</tr>
<tr>
<td>45</td>
<td>Are you the kind of person who holds grudges or takes a long time to forgive people who have insulted or slighted you?</td>
</tr>
<tr>
<td></td>
<td>Question</td>
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<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>46</td>
<td>Are there many people you can’t forgive because they did or said something to you a long time ago?</td>
</tr>
<tr>
<td>47</td>
<td>Do you often get angry or lash out when someone criticizes or insults you in some way?</td>
</tr>
<tr>
<td>48</td>
<td>Have you often suspected that your spouse or partner has been unfaithful?</td>
</tr>
<tr>
<td>49</td>
<td>When you are out in public and see people talking, do you often feel that they are talking about you?</td>
</tr>
<tr>
<td>50</td>
<td>Do you often get the feeling that things that have no special meaning to most people are really meant to give you a message?</td>
</tr>
<tr>
<td>51</td>
<td>When you are around people, do you often get the feeling that you are being watched or stared at?</td>
</tr>
<tr>
<td>52</td>
<td>Have you ever felt that you could make things happen just by making a wish or thinking about them?</td>
</tr>
<tr>
<td>53</td>
<td>Have you had personal experiences with the supernatural?</td>
</tr>
<tr>
<td>54</td>
<td>Do you believe that you have a “sixth sense” that allows you to know and predict things that others can’t?</td>
</tr>
<tr>
<td>55</td>
<td>Do you often think that objects or shadows are really people or animals or that noises are actually people’s voices?</td>
</tr>
<tr>
<td>56</td>
<td>Have you had the sense that some person or force is around you, even though you cannot see anyone?</td>
</tr>
<tr>
<td>57</td>
<td>Do you often see auras or energy fields around people?</td>
</tr>
<tr>
<td>58</td>
<td>Are there very few people that you’re really close to outside of your immediate family?</td>
</tr>
<tr>
<td>59</td>
<td>Do you often feel nervous when you are with other people?</td>
</tr>
<tr>
<td>60</td>
<td>Is it NOT important to you whether you have any close relationships?</td>
</tr>
<tr>
<td>61</td>
<td>Would you almost always rather do things alone than with other people?</td>
</tr>
<tr>
<td>62</td>
<td>Could you be content without ever being sexually involved with anyone?</td>
</tr>
<tr>
<td>63</td>
<td>Are there really very few things that give you pleasure?</td>
</tr>
<tr>
<td>64</td>
<td>Does it not matter to you what people think of you?</td>
</tr>
<tr>
<td>65</td>
<td>Do you find that nothing makes you very happy or very sad?</td>
</tr>
<tr>
<td>66</td>
<td>Do you like to be the center of attention?</td>
</tr>
<tr>
<td>67</td>
<td>Do you flirt a lot?</td>
</tr>
<tr>
<td>68</td>
<td>Do you often find yourself “coming on” to people?</td>
</tr>
<tr>
<td>69</td>
<td>Do you try to draw attention to yourself by the way you dress or look?</td>
</tr>
<tr>
<td>70</td>
<td>Do you often make a point of being dramatic and colorful?</td>
</tr>
<tr>
<td>71</td>
<td>Do you often change your mind about things depending on the people you’re with or what you have just read or seen on TV?</td>
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<tr>
<td>Q.</td>
<td>Question</td>
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<td>-----</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>72</td>
<td>Do you have lots of friends that you are very close to?</td>
</tr>
<tr>
<td>73</td>
<td>Do people often fail to appreciate your very special talents or accomplishments?</td>
</tr>
<tr>
<td>74</td>
<td>Have people told you that you have too high an opinion of yourself?</td>
</tr>
<tr>
<td>75</td>
<td>Do you think a lot about power, fame, or recognition that will be yours someday?</td>
</tr>
<tr>
<td>76</td>
<td>Do you think a lot about the perfect romance that will yours someday?</td>
</tr>
<tr>
<td>77</td>
<td>When you have a problem, do you almost always insist on seeing the top person?</td>
</tr>
<tr>
<td>78</td>
<td>Do you feel it is important to spend time with people who are special or influential?</td>
</tr>
<tr>
<td>79</td>
<td>Is it very important to you that people pay attention to you or admire you in some way?</td>
</tr>
<tr>
<td>80</td>
<td>Do you think that it's not necessary to follow certain rules or social conventions when they get in your way?</td>
</tr>
<tr>
<td>81</td>
<td>Do you feel that you are the kind of person who deserves special treatment?</td>
</tr>
<tr>
<td>82</td>
<td>Do you often find it necessary to step on a few toes to get what you want?</td>
</tr>
<tr>
<td>83</td>
<td>Do you often have to put your needs above other people’s?</td>
</tr>
<tr>
<td>84</td>
<td>Do you often expect other people to do what you ask without question because of who you are?</td>
</tr>
<tr>
<td>85</td>
<td>Are you not really interested in other people’s problems or feelings?</td>
</tr>
<tr>
<td>86</td>
<td>Have people complained to you that you don’t listen to them or care about their feelings?</td>
</tr>
<tr>
<td>87</td>
<td>Are you often envious of others?</td>
</tr>
<tr>
<td>88</td>
<td>Do you feel that others are often envious of you?</td>
</tr>
<tr>
<td>89</td>
<td>Do you find that there are very few people that are worth your time and attention?</td>
</tr>
<tr>
<td>90</td>
<td>Have you often become frantic when you thought that someone your really cared about was going to leave you?</td>
</tr>
<tr>
<td>91</td>
<td>Do your relationships with people you really care about have lots of extreme ups and downs?</td>
</tr>
<tr>
<td>92</td>
<td>Have you all of a sudden changed your sense of who you are and where you are headed?</td>
</tr>
<tr>
<td>93</td>
<td>Does your sense of who you are often change dramatically?</td>
</tr>
<tr>
<td>94</td>
<td>Are you different with different people or in different situations so that you sometimes don’t know who you really are?</td>
</tr>
<tr>
<td>95</td>
<td>Have there been lots of sudden changes in your goals, career plans, religious beliefs, and so on?</td>
</tr>
<tr>
<td>96</td>
<td>Have you often done things impulsively?</td>
</tr>
<tr>
<td>97</td>
<td>Have you tried to hurt or kill yourself or threatened to do so?</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
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<tr>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td>98</td>
<td>Have you ever cut, burned, or scratched yourself on purpose?</td>
</tr>
<tr>
<td>99</td>
<td>Do you have a lot of sudden mood changes?</td>
</tr>
<tr>
<td>100</td>
<td>Do you often feel empty inside?</td>
</tr>
<tr>
<td>101</td>
<td>Do you often have temper outbursts or get so angry that you lose control?</td>
</tr>
<tr>
<td>102</td>
<td>Do you hit people or throw things when you get angry?</td>
</tr>
<tr>
<td>103</td>
<td>Do even little things get you very angry?</td>
</tr>
<tr>
<td>104</td>
<td>When you are under a lot of stress, do you get suspicious of other people or feel especially spaced out?</td>
</tr>
<tr>
<td>105</td>
<td>Before you were 15, would you bully or threaten other kids?</td>
</tr>
<tr>
<td>106</td>
<td>Before you were 15, would you start fights?</td>
</tr>
<tr>
<td>107</td>
<td>Before you were 15, did you hurt or threaten someone with a weapon, like a bat, brick, broken bottle, knife, or gun?</td>
</tr>
<tr>
<td>108</td>
<td>Before you were 15, did you deliberately torture someone or cause someone physical pain and suffering?</td>
</tr>
<tr>
<td>109</td>
<td>Before you were 15, did you torture or hurt animals on purpose?</td>
</tr>
<tr>
<td>110</td>
<td>Before you were 15, did you rob, mug, or forcibly take something from someone by threatening him or her?</td>
</tr>
<tr>
<td>111</td>
<td>Before you were 15, did you force someone to have sex with you, get undressed, or touch you sexually?</td>
</tr>
<tr>
<td>112</td>
<td>Before you were 15, did you set fires?</td>
</tr>
<tr>
<td>113</td>
<td>Before you were 15, did you deliberately destroy things that weren’t yours?</td>
</tr>
<tr>
<td>114</td>
<td>Before you were 15, did your break into houses, other buildings, or cars?</td>
</tr>
<tr>
<td>115</td>
<td>Before you were 15, did you lie a lot or con other people?</td>
</tr>
<tr>
<td>116</td>
<td>Before you were 15, did you sometimes steal or shoplift things or forge someone’s signature?</td>
</tr>
<tr>
<td>117</td>
<td>Before you were 15, did you run away and stay away overnight?</td>
</tr>
<tr>
<td>118</td>
<td>Before you were 13, did you often stay out very late, long after the time you were supposed to be home?</td>
</tr>
<tr>
<td>119</td>
<td>Before you were 13, did you often skip school?</td>
</tr>
</tbody>
</table>

**Note:** Questions 105 through 119 are age specific. Some pertain to your behavior before age 15, others to your behavior before age 13.

<table>
<thead>
<tr>
<th>Question</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>120</td>
<td>Since you were 15, have you done things that are against the law – even if you weren’t caught - like stealing, using or selling drugs, writing bad checks, running number, having sex for money, etc.?</td>
</tr>
<tr>
<td>121</td>
<td>Since you were 15, have you ever been arrested for anything?</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Since you were 15, have you been in more than one physical fight, attacked someone, or hit someone?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you ever been so angry that you have thrown things at your spouse/partner more than once?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you ever hit a child, yours or someone else's, so hard that he or she had bruises or had to stay in bed or see a doctor?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you sometimes not paid bills or other financial obligations?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you sometimes been unable to pay for household necessities such as food, rent, or the electric bill because you spent so much money on things you could have done without?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you ever failed to make court ordered payments such as child support, alimony, or a lawsuit settlement?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15 and when you have been working, have you ever gotten into trouble for not arriving on time, missing too many days, not doing your work, or not following the rules?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, did you ever walk off a job without having another one to go to?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you impulsively picked up and moved around from place to place without any idea of how long you were going to stay or where you would go next?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, do you regularly spend money impulsively on things you do not need or can not afford?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, do you often get into trouble because you don't plan ahead?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, do you often find that you have to lie to get what you want?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you ever used an alias or pretended you were someone else or developed a scheme to con people into giving you what you want?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, did you ever drive a car when you were drunk or high?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you received an above average number of speeding tickets or been in several car accidents?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have others often said that you tend to be a reckless or dangerous driver?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, have you been known as someone who risks life and limb in recreational activities?</td>
<td>No</td>
</tr>
<tr>
<td>Since you were 15, did you ever get into trouble at work for doing things that could be dangerous to you or others?</td>
<td>No</td>
</tr>
<tr>
<td>If you answered yes to any item between 120 and 139, do you think what you did was wrong in any way?</td>
<td>No</td>
</tr>
</tbody>
</table>
Appendix Y: Human Subjects Review Board Approval Letter 1

EASTERN MICHIGAN UNIVERSITY

September 27, 2004

Shauncie Weber
Department of Psychology

RE: “The impact of identifying personality style and personality disorder symptoms on outcomes in a training clinic.”

The Human Subjects Institutional Review Board (IRB) of Eastern Michigan University has granted approval to your proposal: “The impact of identifying personality style and personality disorder symptoms on outcomes in a training clinic.”

After careful review of your application, the IRB determined that the rights and welfare of the individual subjects involved in this research are carefully guarded. Additionally, the methods used to obtain informed consent are appropriate, and the individuals are not at a risk.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Approval of this project applies for one year from the date of this letter. If your data collection continues beyond the one-year period, you must apply for a renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

Sincerely,

Dr. Laura M. Jusko
Administrative Co-Chair
Human Subjects Committee

CC: Dr. Steve Pernecky, Faculty Co-Chair
Dr. Karen Saules
Appendix Z: Human Subjects Review Board Approval Letter 2

EASTERN MICHIGAN UNIVERSITY

July 22, 2005

Ms. Shauncie Skidmore
Department of Psychology

RE: “The impact of identifying personality style and personality disorder symptoms on outcomes in a training clinic”

The Human Subjects Institutional Review Board (IRB) of Eastern Michigan University has granted approval to your modified proposal: “The impact of identifying personality style and personality disorder symptoms on outcomes in a training clinic”.

After careful review of your application, the IRB determined that the rights and welfare of the individual subjects involved in this research are carefully guarded. Additionally, the methods used to obtain informed consent are appropriate, and the individuals are not at risk.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Approval of this project applies for one year from the date of this letter. If your data collection continues beyond the one-year period, you must apply for a renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

Sincerely,

Dr. Patrick Melia
Administrative Co-Chair
Human Subjects Committee

CC: Dr. Steve Pernecky, Faculty Co-Chair
Dr. Karen Saules
Appendix AA: Human Subjects Review Board Approval Letter 3

From Robert Holkeboer <robert.holkeboer@emich.edu>

Sent Wednesday, July 26, 2006 10:58 am

To Shauncie Marie Skidmore <sskidmor@emich.edu>
Cc "ksaules@emich.edu" <ksaules@emich.edu>, Street Talk <Mary.Schmaltz@emich.edu>

Subject Re: UHSRC Renewal Request

Shauncie:

Thanks for your renewal request (revised protocol) for "Personality Disorder Identification and the Subsequent Impact on Treatment Outcomes in a Training Clinic Setting." Your request is approved.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Reapproval of this project applies for one year from the date of this letter. If your data collection continues beyond the additional one-year period, you must apply for an additional, and final, renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

Bob Holkeboer

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Robert Holkeboer, Ph.D.
Associate Vice President
Graduate Studies and Research
Eastern Michigan University
Ypsilanti, MI 48197
Phone (734) 487-0042
Fax (734) 487-0050
robert.holkeboer@emich.edu

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On 07/19/2006 6:20 PM, "Shauncie Marie Skidmore" <sskidmor@emich.edu> wrote:

> Dr. Holkeboer,
>
> Attached please find a UHSRC Research Approval renewal request. This request includes a few minor modifications. A modified Summary of Research and modified forms, as listed in the renewal request, have been attached for your review.
>
> If you require a paper version with an original signature, please let me know.
>
> Thank you for your time and consideration. I look forward to hearing from you.
Appendix AB: Human Subjects Review Board Approval Letter 4

EASTERN MICHIGAN UNIVERSITY

July 17, 2007

Shauncie Skidmore
P.O. Box 971512
Ypsilanti, MI 48197

Dear Shauncie Skidmore:

The Human Subjects Institutional Review Board (IRB) of Eastern Michigan University has granted approval to your proposal, “The Impact of Identifying Personality Style and Personality Disorder Symptoms on Outcomes in a Training Clinic.”

After careful review of your completion application, the IRB determined that the rights and welfare of the individual subjects involved in this research are carefully guarded. Additionally, the methods used to obtain informed consent are appropriate, and the individuals participating in your study are not at risk.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Approval of this project applies for one year from the date of this letter. If your data collection continues beyond the one-year period, you must apply for a renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

Sincerely,

Deb de Laski-Smith, Ph.D.
Interim Dean
Graduate School
Administrative Co-Chair
University Human Subjects Review Committee

Note: If project continues beyond the length of one year, please submit a continuation request form by 7/17/08.

Reference # 070615
Appendix AC: Human Subjects Review Board Approval Letter 5

EASTERN MICHIGAN UNIVERSITY

October 22, 2007

Shauncie Skidmore
P.O. Box 971512
Ypsilanti, MI 48197

Dear Shauncie Skidmore:

The Human Subjects Institutional Review Board (IRB) of Eastern Michigan University has granted approval to your modified proposal, "The Impact of Identifying Personality Style and Personality Disorder Symptoms on Outcomes in a Training Clinic."

After careful review of your completed application, the IRB determined that the rights and welfare of the individual subjects involved in this research are carefully guarded. Additionally, the methods used to obtain informed consent are appropriate, and the individuals participating in your study are not at risk.

You are reminded of your obligation to advise the IRB of any change in the protocol that might alter your research in any manner that differs from that upon which this approval is based. Approval of this project applies for one year from the date of this letter. If your data collection continues beyond the one-year period, you must apply for a renewal.

On behalf of the Human Subjects Committee, I wish you success in conducting your research.

- Smith, Ph.D.
Interim Dean
Graduate School
Administrative Co-Chair
University Human Subjects Review Committee

Note: If project continues beyond the length of one year, please submit a continuation request form by 10/23/08.