Associations between MMPI-2-RF PSY-5 Scale Scores and Therapist-rated Success in Treatment

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The MMPI-2-RF PSY-5 scales provide conceptual linkages between the MMPI family of instruments and contemporary models of personality and psychopathology (Ben-Porath & Tellegen, 2008). These scales are measure five personality individual differences constructs that could be related to psychotherapy outcome. The purpose of this study was to determine relationships between the PSY-5 scales and therapist-rated success in treatment. Participants included 238 men and 293 women selected from a sample collected by Graham, Ben-Porath, and McNulty (1999) as part of an investigation of MMPI-2 correlates in an outpatient community mental health center. Therapist success ratings ranged from unsuccessful to fully successful and were completed at termination. All participants had completed at least three therapy appointments. Results indicated that there were only modest associations between some PSY-5 scale scores and therapist-rated success. For men PSYC-r and NEGE-r scale scores correlated -.14 to -.13. respectively with therapist-rated success. For women, PSYC-r scale scores correlated -.25) with therapist-rated success (see Table 1). Regression analyses (see Table 2.) indicated that scores for the PSY-5 scale set were not significantly associated with therapist-rated success for men. For women only PSYC-r scale scores were significantly related to therapist-rated success. It should be noted that the effect sizes were small, suggesting limited utility of the PSY-5 scales in predicting therapist-rated success in this sample. The research should be replicated in different settings and using different outcome measures (e.g., client report).
MMPI-A Characteristics of Adolescents in Juvenile Justice and Outpatient Treatment Settings

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Research has indicated that the Minnesota Multiphasic Personality Inventory- Adolescent (MMPI-A) is the most commonly used self-report psychological assessment with adolescents (Archer & Newsome, 2000), particularly in juvenile justice settings (Baum, Archer, Forbey, & Handel, 2009). One area of MMPI-A research involves the ability of the instrument to distinguish adolescents in a juvenile justice setting from adolescents in a clinical treatment setting. Archer, Bolinskey, Morton, and Farris (2003) found meaningful MMPI-A scale score differences in adolescents as a function of treatment or evaluation setting: juvenile detention centers, psychiatric inpatient facilities, and an inpatient treatment center for adolescents with a dual diagnosis.

The current study seeks to replicate these findings, with two important differences. Following recommendations proposed by Archer and colleagues in the current study both male and female adolescents from juvenile justice settings will be compared with a mixed gender sample of adolescents from an outpatient, rather than inpatient, treatment facility. It is hypothesized that meaningful MMPI-A scale differences will be found as a function of setting. Archival data was collected from case files from 2006-2011 of adolescents who completed an MMPI-A at a university psychological services center (N = 45) as part of a treatment plan, and adolescents referred to the university psychological services center from local Court Services Units (CSU) (N = 63). Standard MMPI-A validity criterion will be utilized to remove invalid protocols from the analyses. ANOVAs will be used to examine mean scale score differences by group, and discriminant function analyses will be used to evaluate the ability of the MMPI-A to distinguish adolescents by setting.
MMPI-2-RF Scale Norms in a Sample of Men Presenting for Inpatient and Outpatient Treatment of Sexual Addiction

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The MMPI-2-RF provides a number of comparative sample norms for clinicians to use when interpreting profiles in an effort to make better informed sample specific interpretative decisions (Tellegen & Ben-Porath, 2008). To date, MMPI-2-RF norms are not currently available for men presenting for inpatient or outpatient treatment of sexual addiction; however, these individuals may differ from the normative sample in terms of presenting concerns, personality traits and psychopathology which may necessitate the use of sample specific norms.

The current study attempts to address this issue by presenting average MMPI-2-RF scale elevations for men presenting for treatment to a number of inpatient and outpatient sexual addiction programs. The data to be used is currently being collected and includes males who are seeking inpatient or outpatient treatment for problems with sexual addiction. It is predicted approximately 500 participants will be included in the analyses. Average MMPI-2-RF scale raw and T-scores for the outpatient and inpatient groups of men presenting for sexual addiction treatment will be calculated separately and then will be plotted against the MMPI-2-RF normative samples. Notable scale differences between the samples, implications, limitations and future research will be discussed.

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Are the Neurological Complaints and Cognitive Complaints Scales Vulnerable to Malingering?

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The Neurological Complaints (NUC) and Cognitive Complaints (COG) scales are new additions to the Minnesota Multiphasic Personality Inventory -2-Restructured Form (MMPI-2-RF). The NUC scale measures neurological complaints such as dizziness and weakness. The COG scale measures cognitive complaints such as memory difficulties and concentration problems.

We examined the vulnerability of the NUC and COG scales to malingering in a college sample. All participants had a history of mild head injury and completed a comprehensive neuropsychological battery, including the MMPI-2-RF. Forty participants were asked to simulate symptoms of a TBI and 47 were asked to give their best effort. From the initial sample of 87, 3 simulator and 5 control MMPI-2-RF profiles were excluded due to inconsistent responding (Vrin-r and/or Trin-r T score >79).

Results found simulators scored significantly higher than controls on NUC and COG ($p < .01$). Moreover, with all invalid profiles removed based on elevated over-reporting validity scales (an exclusion of 3 control and 9 simulator profiles), results still showed simulators scored significantly higher than controls on NUC ($p < .05$). Furthermore, 37% of simulators and 28% of control participants with valid profiles scored within the clinical range on COG (T score >64), and 60% of simulators and 38% of control participants with valid profiles scored within the clinical range on NUC (T score >64). Thirty-six percent of simulators and 13% of control participants with valid profiles scored within the clinical range on both NUC and COG.

These results indicate that both NUC and COG are vulnerable to malingering of neurological and cognitive symptoms within a well-functioning college sample with a history of mild head injury. Elevations on these scales may warrant careful consideration and cautious interpretation even when validity indices do not indicate over-reporting has occurred.
Examining the Utility of the RBS in a Simulated TBI College Sample

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The Response Bias Scale (RBS) was developed to detect cognitive response biases associated with failing symptom validity measures and over-reported cognitive and memory complaints.

We examined the utility of the RBS in isolation and in combination with the other Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF) over-reporting validity scales in a sample of college students with a history of mild head injury. All participants completed a comprehensive neuropsychological battery, including the MMPI-2-RF. Forty participants were randomly assigned to simulate symptoms of a TBI and 47 were asked to give their best effort. From the initial sample of 87, 3 simulator and 5 control MMPI-2-RF profiles were excluded due to inconsistent responding (Vrin-r and/or Trin-r T score >79).

Results indicate using a RBS cutoff score of 11 corresponds to similar sensitivity and specificity values found using the standard cutoff scores of the MMPI-2-RF Infrequent Responses (F-r), Infrequent Psychopathology Responses (Fp-r), and Infrequent Somatic Responses (Fs) over-reporting validity scales (37.8% and 92.8%, respectively). However, a RBS cutoff score of 13 and above was found to correspond to sensitivity and specificity values found using the standard cutoff score of the MMPI-2-RF Symptom Validity (FBS-r) scale (24.3% and 97.6%, respectively). Additionally, 57% of simulators scoring at the cutoff of 11 and above on the RBS also failed the F-r and Fp-r scales; 78% failed the Fs scale; and 35% failed the FBS. These results suggest the RBS is sensitive to symptom malingering. Therefore, as the developers of the RBS recommend, it may be important to use the RBS and over-reporting validity scale scores in combination when examining the veracity of a MMPI-2-RF profile.
Do Individuals with Substance Use Disorders Score Higher on MMPI-2-RF Scales Assessing Psychotic Symptoms?

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Previous research has demonstrated that excessive use of most illicit substances can result in the user experiencing hallucinations, delusions, paranoia, or disorganized thinking (e.g., Butcher et al., 2010). The Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008; Tellegen & Ben-Porath, 2008) may provide an effective method for assessing the experience of psychotic symptoms resulting from substance use. However, limited research is available addressing the utility of MMPI-2-RF scales for this purpose.

As such, the current study was conducted to examine whether individuals diagnosed with substance use disorders would score differently than individuals with psychotic disorders and individuals with other Axis I disorders on the MMPI-2-RF Thought Dysfunction (THD) scale, Restructured Clinical (RC) scales 6 (Ideas of Persecution) and 8 (Aberrant Experiences), and the Psychopathology Personality Five (PSY-5) Psychoticism-Revised (PSYC-r) scale. After excluding invalid MMPI-2-RF profiles using guidelines provided by Ben-Porath and Tellegen (2008), participants in the current study consisted of 754 men and 283 women receiving treatment in two large inpatient hospitals in Minnesota. Participants ranged in age from 18-86 (M = 41.99, SD = 15.36) and were primarily Caucasian (87.3%). Participants were assigned to one of three groups based on the diagnoses that were assigned at intake by psychiatrists. The first group consisted of 172 individuals diagnosed with only psychotic disorders, the second group consisted of 148 individuals being treated for only substance use disorders, and the third group consisted of 717 individuals diagnosed with another Axis I disorder (but not psychotic or substance use disorders). We calculated four Analyses of Variance (ANOVA), which allowed us to examine whether individuals in each of the diagnostic groups scored differently on the MMPI-2-RF scales of interest.

Results indicated there were statistically significant differences between individuals with psychotic disorders, substance use disorders, and other Axis I disorders on THD (F [2, 1034] = 43.05, p < .001), RC6 (F [2, 1034] = 47.86, p < .001), RC8 (F [2, 1034] = 10.91, p < .001), and PSYC-r (F [2, 1034] = 27.66, p < .001). Tukey’s Honestly Significant Difference post-hoc tests indicated moderate to large differences in scores between individuals with psychotic disorders from those with substance use disorders and those with other Axis I disorders on THD (Cohen’s d = .54 and .69), RC6 (Cohen’s d = .60 and .71), and PSYC-r (Cohen’s d = .46 and .56). Inspection of mean scores for each of the groups on these scales indicated that individuals with psychotic disorders achieved higher scores than participants with other presenting diagnoses. There were no statistically significant differences between those with substance use disorders and those with other Axis I disorders on these scales. Post-hoc results for RC8 indicated there were no statistically significant differences between those with substance use and psychotic disorders, but indicated both of these groups scored significantly higher than individuals with other Axis I disorders (Cohen’s d = .34 and .24).

Overall, these results indicate that individuals with substance use disorders were likely to score similarly to individuals with psychotic disorders on a measure of unusual sensory experiences (i.e., RC8) and that both of these groups reported a higher number of these types of experiences when compared to individuals with other Axis I disorders. The results of this study also suggest individuals achieving high scores on RC8 should be screened for both substance use and psychotic phenomena.
Preliminary MMPI-2-RF Mean Profiles for Forensic State Hospital Patients

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Data were collected from one of the nation’s largest forensic psychiatric facilities, housing approximately 1,500 forensically-committed psychiatric patients. The patient population is comprised of approximately 30% individuals who are incompetent to stand trial (IST), 35% adjudicated not guilty by reason of insanity (NGRI), and 24% classified as mentally disordered offenders (MDO). The MDO commitment type is unique to California and is used to house psychiatrically unstable parolees in a hospital setting for the duration of their parole term.

Although MMPI-2-RF data have been presented on psychiatric inpatient, criminal forensic pre-trial, and prison populations, there is presently a dearth of MMPI-2-RF data available on forensic inpatient populations. The present study is a preliminary examination of mean MMPI-2-RF profiles for forensically hospitalized patients who are incompetent to stand trial (original $N = 20$; valid $N = 14$), not guilty by reason of insanity (original $N = 20$; valid $N = 16$), and mentally disordered offenders (original $N = 7$; valid $N = 5$). All patients were administered the MMPI-2-RF during psychological evaluations conducted for treatment (e.g., diagnostic clarification, treatment planning) or forensic (e.g., malingering rule-out, competency evaluation) purposes. Because the available samples are very small, no quantitative analyses were conducted to compare the groups. However, it was noted that the mentally disordered offenders (who are presumably the highest-functioning and most motivated to appear healthy to gain quick release into the community) scored much higher than anticipated on the inconsistency and overreporting validity scales, as compared to the other groups. The IST and NGRI samples scored very similarly to each other across the MMPI-2-RF validity and substantive scales. This research is part of an ongoing investigation and we plan to further examine MMPI-2-RF scores using data from several hundred MMPI-2 profiles.
Comparison of MMPI-2 profiles and Q-sort Behavioral Correlates of Patients from a Community Outpatient Clinic, a Residential Substance Abuse Treatment Center, and a Forensic Inpatient Unit

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This study was designed to compare the MMPI-2 profiles, along with a 100-item Q-sort of behavior correlates, of patients from 3 distinct clinical settings: an outpatient community mental health center in Oxford, Mississippi (n=29); A 30-day residential substance abuse treatment Center in Oxford, Mississippi (n=52); and a forensic inpatient unit of a psychiatric hospital in Little Rock, Arkansas (n=22).

The findings suggest that the patients of the forensic inpatient unit on average produced profiles with greater scale elevations compared to profiles from the community outpatient mental health center and the residential substance abuse treatment center. The greatest elevation differences were in F and F(p) Scales. Scale 2, 6, and 8 were also significantly more elevated compared to the other two groups. The profiles from the residential substance abuse treatment center had higher elevations on F scale, along with the 2, 4, 9 scales compared to the profiles form the outpatient community mental health center. There was no difference on the F(p) scales between the outpatient mental health center and the residential substance abuse treatment center. The profiles from the outpatient community mental health center, on average, produced the lowest scale elevations, except for L and K. Furthermore, the Q-sort profiles of every participant were correlated with each of the MMPI-2 Scales.

The correlations suggest that the profiles from the outpatient mental health center and the residential substance abuse treatment center were more correlated with conceptually relevant criteria compared to profiles from the forensic inpatient unit.
Ideas of Persecution and Aberrant Experiences: Differential Relationships between RC6, RC8, and Schizotypy Traits

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While delusional thought content and hallucinatory sensory experiences are hallmark features of psychotic disorders, such as schizophrenia, each may have unique predisposing factors that facilitate symptom presentation. Research has focused on longitudinal predictors of the development of psychosis and on psychological dimensions found in family members of individuals with severe mental illness. Personality traits related to subtreshold manifestations of psychotic diagnostic factors, referred to as schizotypy, have been an area of increasing interest.

The current study examines the relationship between schizotypal traits and the MMPI-2-RF (Ben-Porath & Tellegen, 2008) Restructured Clinical (RC) Scales 6 and 8. A sample of 76 first-degree relatives (parents, children, or siblings) of individuals with severe mental illness (schizophrenia, schizoaffective disorder, or bipolar disorder) were administered the MMPI-2-RF and several self-report measures that assess schizotypy or related features, including the Oxford-Liverpool Inventory of Feelings and Experiences (O-LIFE; Mason et al., 1995), the Referential Thinking Scale (REF; Lenzenweger et al., 1997), and the Aberrant Salience Inventory (ASI; Cicero et al., 2010). Twelve individuals were removed from subsequent analyses due to invalid MMPI-2-RF protocols. Correlations were calculated for the schizotypy measures and RC6 and RC8, controlling for variance in the self-report scales that may be due to negative emotionality.

Some of the schizotypy constructs showed nearly equivalent relationships with ideas of persecution and aberrant experiences; however, some of the traits were more strongly related to one than the other. Implications for follow-up studies regarding psychotic processes will be discussed.
Relations between the MMPI-2-RF and the Higher Order Factors of the Iowa Sleep Disturbances Inventory

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While a number of studies have examined the impact of sleep disturbances on psychological functioning with a variety of measures of psychological functioning (e.g., BDI-II, NEO-FFI, and STAI), limited research has been conducted exploring the relation between sleep difficulties and scores on the MMPI family of tests. What limited research that has been conducted focused on the MMPI (e.g., Edinger et al, 1984) and found sleep disturbances (specifically insomnia) highly related to scales assessing internalizing symptomatology (e.g., 2, 7) and somatic complaints (e.g., 1,3).

The current study is designed to expand upon the literature that explores the relation between social, behavioral, and psychological symptomatology and sleep disorders/difficulties by utilizing the MMPI-2-RF and the three higher order factors (Lassitude, Insomnia, and Unusual) of the Iowa Sleep Disturbances Inventory (ISDI; Koffel, 2011). Participants included 592 college students from a Midwestern University (157 males and 435 females, mean age = 19.12). Regression scores for each of the 3 ISDI factors were computed and zero order correlations were calculated by gender between the 3 ISDI factors and raw MMPI-2-RF scale scores. Based upon the sample size, a medium effect size (i.e., $r = .30$) was utilized to establish the significance of the correlational analysis results.

For the ISDI Lassitude scale, results for both men and women indicated a strong relation with MMPI-2-RF scales reflective of generalized distress, health concerns, and anxiety. With respect to ISDI Insomnia, results for both genders reflected generalized emotional/ internalizing disorders. Whereas no ISDI Unusual scale correlates were significant for men, there was a significant relation for women with scales reflective of thought disorder. Implications and suggestions for future study are discussed.