Racial Differences on the MMPI-2-RF in Women Prison Inmates

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Past research findings have been mixed regarding racial disparities on the MMPI (c.f. Hall, Bansal, & Lopez, 1999). Considerable research exists that suggests there are differences between Blacks and Whites in diagnoses of mental illnesses. Black women have been reported to obtain higher scores than White women on scales L, F, 1, 2, 4, 5, 6, 7, and 8, and lower scores than White women on scales K, 2, 3, and 9 (Hall et al, 1999). To date and to our knowledge, no studies have examined racial differences on the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF).

The current study examined mean profile elevation differences between 118 Black and 116 White women prison inmates. Among the higher-order and clinical scales, the Black women obtained significantly higher mean elevations on scales THD, BXD, RC3, RC6, RC7, RC8, and RC9, and significantly lower elevations on RC2 than White women. But, when race and education are controlled, differences on BXD, RC7, and RC2 are no longer significant.

These findings point to the importance of examining race/ethnic differences in incarcerated populations. Further investigation is needed to determine if these scale differences relate to social and cultural experiences, actual differences in diagnosis, or other test-related issues.
MMPI-2-RF Measures of Psychopathic Deviance: Correlates of the MMPI-2-RF and the PPI-R in Samples of College Students and Civilly Committed Sexual Offenders

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Introduction: Research indicates the MMPI-2-RF can be useful in identifying psychopathy (Sellbom et al., 2005). In the current study, previously collected data were analyzed for a sample of college students (N=114) who completed the PPI-R and the MMPI-2-RF. Archival data containing the MMPI-2 completed by civilly committed sexual offenders (N=22) was collected and converted to the restructured format for comparison with the college sample.

Method: Civilly committed sexual offenders were asked to complete the PPI-R; their scores were matched to their respective MMPI-2 profiles.

Results: For the college sample, the MMPI-2-RF clinical scales Antisocial Behavior (RC4) and Hypomanic Activation (RC9), higher order scale Behavioral/Externalizing Dysfunction (BXD), externalizing scales Juvenile Conduct Problems (JCP) and Substance Abuse (SUB), and PSY-5 scale Disconstraint (DISC-r) were positively correlated with the PPI-R total score. The MMPI-2-RF clinical scale Low Positive Emotions (RC2) and internalizing scale Multiple Specific Fears (MSF), and the PSY-5 scale Introversion (INTR-r) were negatively correlated with the PPI-R total score. For the sexual offender sample, the MMPI-2-RF clinical scale RC4 was positively correlated with the PPI-R Rebellious Nonconformity (RN) scale; the DISC-r was positively correlated with the PPI-R total score, RN, and Fearlessness (F) scales.

Conclusion: For the college sample, the results suggest a greater number of correlations between various scales of the MMPI-2-RF in relation to the PPI-R total score compared to the sexual offender sample. Results indicated DISC-r may have good utility for prediction of psychopathy in college students and sexual offenders. For classification purposes, further research with the MMPI-2-RF and PPI-R leading to the use of these instruments in various settings (e.g. prisons, sexual offender treatment programs) is recommended. Correlates of the PPI-R and the MMPI-2-RF may reduce testing time in these situations by selecting individuals with such elevations for continued assessment.
Cross-Validation of the MMPI-2-RF Indices of Psychopathy in a Criminal Offender Sample

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The Psychopathic Personality Inventory (PPI; Lilienfeld & Andrews, 1996) advanced the study of psychopathy by providing an alternative to the Psychopathy Checklist-Revised (PCL-R; Hare, 1991/2003), and conceptualized the disorder closer to views of Hervey Cleckley (1941). Sellbom and colleagues (in press) developed regression-based indices on the MMPI-2-RF to capture broad elements of psychopathy in line with the PPI in several large correctional and college samples. These authors illustrated good construct validity of their indices in capturing Global Psychopathy, Fearless-Dominance, and Impulsive-Antisociality.

The current study examined these three indices further in a correctional sample of jail inmates who completed the MMPI-2-RF in addition to several measures of psychopathy (PPI-Short Form, Triarchic Psychopathy Measure), as well as a measure of narcissism (NPI; Raskin & Terry, 1988), empathy (IRI; Davis, 1980), and five factor model of personality (BFI; John et al., 1991). After removing non-content invalid profiles, we had a sample of 69 inmates. We correlated and regressed the FD and IA indices with a variety of criteria and the results were consistent with our expectations. The MMPI-2-RF index of Fearless Dominance was significantly associated with Boldness on the Triarchic Psychopathy Measure ($r = .60$), PPI-SF Fearless-Dominance ($r = .61$), NPI Authority ($r = .63$), IRI Personal Distress ($r = -.48$), Extraversion ($r = .43$), and Neuroticism ($r = -.59$). The index capturing Impulsive-Antisociality was significantly associated with Disinhibition and Meanness on the Triarchic Psychopathy Measure ($rs = .71$ & $.64$, respectively), Impulsive-Antisociality on the PPI-SF ($r = .70$), Perspective Taking on the IRI ($r = -.49$), Agreeableness ($r = -.62$), and Conscientiousness ($r = -.59$).

In general, the results suggest that the MMPI-2-RF indices designed to capture psychopathic personality traits in line with the PPI were successful. Implications for the results will be discussed.
Predicting MBMD Scale Scores from the MMPI-2-RF

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The MMPI and the MBMD (Millon Behavioral Medicine Diagnostic) are two multidimensional inventories that are frequently used by psychologists working in medical settings. Often patients are asked to complete both inventories, but how much unique information is obtained from the second inventory? This study addresses that question by evaluating how well each of the 29 MBMD clinical scales can be predicted using the 42 substantive scales of the MMPI-2-RF.

The MMPI-2 and MBMD were completed by 596 patients at a hospital-based pain clinic in the Midwest who were being evaluated for treatment. MMPI-2-RF scales were scored from the MMPI-2 protocols. Each of the 29 MBMD scales was predicted from the 42 MMPI-2-RF scales using linear multiple regression with a forward entry procedure; in each analysis, MMPI-2-RF scales were added as predictors until no remaining scale predicted an incremental 2% of the variance of the MBMD criterion scale.

Results showed that, for almost all of the MBMD scales, virtually all of the reliable variance (as determined by coefficient alpha values for the MBMD scales) could be predicted using from one to four MMPI-2-RF scales. The most notable exception was the MBMD Spiritual Absence scale, which was highly reliable but had a multiple correlation of only .38 with its MMPI-2-RF predictors. The multiple correlations with the other MBMD scales ranged as high as .80 and above. RCd was the strongest MMPI-2-RF predictor for over half of the MBMD scales, suggesting that demoralization contributes substantially to the overall elevation of MBMD profiles.
Simulated Malingering and Clinical Samples: A MMPI-2-RF Profile Comparison Study

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As typified by research, coached malingerers are more successful at deceiving validity scales when compared to uncoached malingerers (e.g., Bury & Bagby, 2002; Marion, Sellbom, & Bagby, 2011; Sellbom & Bagby, 2010). In addition to the malleability of validity scale scores after the introduction of coaching, Weiss, Bell, and Weiss (2010) report that coached malingering may also impact scales investigating psychopathology. This brings to question whether simulated coached malingerers are able to produce profiles that are consistent with the symptoms they falsely report.

The current study compares simulated malingering conditions to corresponding clinical samples to investigate if varying amounts of coaching information will produce a more accurate representation of a clinical sample profile. Psychopathology of interest for simulated conditions and clinical samples include schizophrenia, PTSD, and mTBI. Three levels of coaching (i.e., uncoached, coached, in-depth coached) presented participants with varying amounts of symptom and validity scale information and are used for comparison to clinical samples. The Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008) was given to undergraduates at a Midwestern university to compose the in-depth malingering conditions, whereas, the MMPI-2 was given to undergraduates to compose the uncoached and coached malingering conditions (Shipper, 2005; Veltri, 2005).

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Comparison of the PSY-5 Scales to Big Five, Sensation-seeking, and Impulsivity Scales

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This study investigated the manner in which the revised Personality Psychopathology Scales (PSY-5) of the Minnesota Multiphasic Personality Inventory Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008) relate to other personality measures using data from 308 (100 male, 208 female) college students at a Midwestern university.

The PSY-5 scales of Aggressiveness-Revised (AGGR-r), Psychoticism-Revised (PSYC-r), Disconstraint-Revised (DISC-r), Negative Emotionality/Neuroticism-Revised (NEGE-r), and Introversion/Low Positive Emotionality-Revised (INTR-r) were evaluated alongside the 120-item International Personality Item Pool measure of the Big Five factors (IPIP-NEO; Johnson, 2010), the Arnett Inventory of Sensation-seeking (AISS; Arnett, 1994), and the Barratt Impulsiveness Scale Version 11 (BIS-11; Patton, Stanford, & Barratt, 1995). Internal consistencies of the MMPI-2-RF PSY-5 scales were generally consistent with previous findings and ranged from .62 to .73. Medium to large correlations were observed between (1) AGGR-r and Agreeableness, Extraversion, and Sensation-seeking, (2) DISC-r and Conscientiousness, Agreeableness, Sensation-seeking, and Impulsivity, (3) NEGE-r and Extraversion and Neuroticism, and (4) INTR-r and Extraversion. A small but significant association was observed between PSYC-r and Neuroticism. While the PSY-5 scales were not developed to directly evaluate Big 5 personality constructs, these finding were mostly consistent with the theoretical bases of the PSY-5 scales and with research investigating the relationships between PSY-5 scales and Big 5 traits.

In summary, the present findings provide support for the theoretical bases of the revised PSY-5 scales.
The Disconstraint PSY-5 Scale as an Effective Predictor of Risk-Taking Behaviors

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This study investigated the effectiveness of various personality indices in predicting risk-taking behaviors (alcohol consumption, drug use, cigarette-smoking, gambling, risky sexual behavior, risky driving, and extreme sports participation).

The sample included 60 male and 93 female college students at a Midwestern university. Participants were administered the Minnesota Multiphasic Personality Inventory Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008), the 120-item International Personality Item Pool measure of the Big Five factors (IPIP-NEO; Johnson, 2010), the Arnett Inventory of Sensation-seeking (AISS; Arnett, 1994), the Barratt Impulsiveness Scale Version 11 (BIS-11; Patton, Stanford, & Barratt, 1995), and a questionnaire to elicit information about participants’ engagement in risk-taking behaviors.

With respect to PSY-5 scales, Aggressiveness (AGGR-r) and Disconstraint (DISC-r) were significantly associated with each risk-taking behavior ($r$'s $\geq .20$). Similarly, IPIP-NEO Conscientiousness was significantly associated with each risk-taking behavior ($r$'s $\geq -.18$). Of these scales, DISC-r was the biggest predictor of six risk-taking behaviors, explaining variances amounting to 36% in alcohol consumption and drug use respectively, 16% in cigarette-smoking, 13% in gambling and risky sexual behaviors respectively, and 23% in risky driving. Sensation-seeking was the biggest predictor of extreme sports participation, explaining 11% of the variance.

This research illustrates the utility of personality indices, especially DISC-r, in predicting risk-taking behaviors. Clinical implications will be elaborated upon.
MMPI-2 Scale Norms in a Sample of Men Presenting for Inpatient and Outpatient Treatment of Sexual Addiction

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Research on setting-specific considerations in the use of the MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kreammer, 1989) has included outpatient and inpatient mental health settings as well as alcohol and drug treatment programs. One sample that has recently started to be examined is individuals seeking treatment for sexual addiction. Sexual addiction is characterized by impaired control over sexual behaviors associated with adverse consequences in affective (e.g., suicidality, guilt and shame), physical (e.g., sexually transmitted diseases, unwanted pregnancy) and relational (e.g., marital conflict, child custody) domains. Interpretive considerations are unique within sexually addicted samples which may span outpatient, inpatient and alcohol/drug treatment programs.

The current study will compare average raw and T scores on the Clinical, Restructured Clinical, Content, Supplemental and PSY-5 scales of the MMPI-2 obtained from a sample of males currently seeking inpatient treatment for sexual addiction with those obtained from the MMPI-2 normative sample. The same procedure will then be applied to the subsample of men seeking outpatient treatment. Data is currently being collected and it is expected that approximately 500 participants will be included in the analyses which expand on preliminary normative results previously reported. Implications, limitations and possible future research will be discussed.

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Using Bias Indicators to Improve the Ability of Substantive Indicators to Discriminate Between Epileptic and Non-Epileptic Seizure Disorders

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BACKGROUND: The use of bias indicators in psychological measurement has been contentious, with some researchers questioning whether they actually suppress or moderate the ability of substantive psychological indicators to discriminate (McGrath, Mitchell, Kim, & Hough, 2010). We tested whether bias indicators on the MMPI-2-RF (F-r, Fs, FBS-r, K-r, and L-r) suppressed or moderated the ability of RC1 and NUC to discriminate between Epileptic Seizures (ES) and Psychogenic Non-epileptic Seizures (PNES), a conversion disorder that is often misdiagnosed as ES. RC1 and NUC had previously been found to be the best scales on the MMPI-2-RF to differentiate between ES and PNES in this sample (Locke et al., 2010).

METHODS: We retrospectively rescored MMPI-2s to the MMPI-2-RF on 429 inpatients from an Epilepsy Monitoring Unit (EMU), all of whom had confirmed diagnoses based on video EEG monitoring. We used moderated logistic regression to test for moderation and logistic regression to test for suppression. Negative impression management (NIM) indicators included F-r and Fs. Positive impression management (PIM) indicators included K-r and L-r. We also tested FBS-r, which includes elements of both PIM and NIM.

RESULTS: No moderation was found. Suppression was found for F-r, Fs, K-r, and L-r for RC1, and for all variables for NUC. For the NIM indicators, the optimal RC1 and NUC cut scores increased at higher levels of bias. For PIM indicators, optimal hit rate was variable; in general, it decreased as level of bias increased. For FBS-r, the optimal cut for NUC decreased as bias increased. Detailed sensitivity and specificity at optimal cut scores will be provided in the poster details.

CONCLUSIONS: Accounting for bias indicator suppression on the MMPI-2-RF can improve discrimination of ES and PNES. At higher levels of NIM indicators, higher cut scores on substantive scales are needed to attain optimal discrimination, while at higher levels of PIM indicators and FBS-r, lower cut scores are needed.

Author Notes: This research was supported by an MMPI-2/MMPI-2-RF rescoring grant from the University of Minnesota Press. This is the same sample previously published in the following peer-reviewed articles analyzed for different reasons:

Can the MMPI-2-RF Validity Scales Detect Cognitive Response Bias in an Inpatient Psychiatric Setting?

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The MMPI-2-RF has already accumulated substantial support in its ability to detect various threats to protocol validity (e.g., Gervais et al., 2011; Purdon et al., 2011; Sellbom et al., 2010; Wygant et al., 2009, 2010, 2011). The test contains scales that were developed to capture distinct forms of symptom exaggeration. However, the MMPI-2-RF has not been examined in terms of its ability to capture neurocognitive response bias in a psychiatric setting.

The current study will extend the MMPI-2-RF research base by examining the ability of the test to capture cognitive symptom distortion in a psychiatric inpatient setting. One hundred eleven patients completed the MMPI-2-RF in addition to the Rey-15 Item Test, a screening measure of cognitive response bias. Utilizing a combination score of 20 (free recall + [recognition- false positives]) developed by Boone and Salazar (2002) to identify evidence of feigning on the Rey-15, we identified 10 patients with cognitive response bias and 101 with no evidence of cognitive symptom distortion. We compared these two groups on the MMPI-2-RF over-reporting and non-content based validity scales.

Infrequent Responses (F-r), Infrequent Psychopathological Responses (Fp-r) and True Response Inconsistency (TRIN-r) were the only scales to significantly discriminate between the two groups, $t(109) = 2.63, 3.33, 3.64$, respectively ($p < .01$). Effect sizes were largest for TRIN-r ($d = 1.21$) and Fp-r ($d = 1.11$). Classification accuracy was also calculated for F-r and Fp-r. Fp-r exhibited adequate sensitivity in classifying Rey-15 performance at a cutoff of 110 (.50), with good specificity (.87). Interestingly, RBS, which was developed specifically to capture cognitive response bias on the MMPI-2-RF did not discriminate between the groups. This is consistent with Wygant et al. (2007), who found that evaluation context impacts the relationship between MMPI-2 validity scales and cognitive symptom validity tests. The implications of these findings as well as recommendations for identifying symptom exaggeration with the MMPI-2-RF in inpatient settings will be discussed.
Associations Between the MMPI-2-RF and Battery for Health Improvement 2 (BHI 2) in a Forensic Disability Sample

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The Battery for Health Improvement 2 (BHI 2) (Bruns, D. & Disorbio, J. M., 2003) is a 217-item self-report inventory designed to assess possible biopsychosocial complications affecting medical patients and their progress in treatment. The inventory contains two Validity Scales (Self-Disclosure and Defensiveness), four Physical Symptom Scales (Somatic Complaints, Pain Complaints, Functional Complaints, and Muscular Bracing), three Affective Scales (Depression, Anxiety, and Hostility), five Character Scales (Borderline, Symptom Dependency, Chronic Maladjustment, Substance Abuse, and Perseverance), and four Psychosocial Scales (Family Dysfunction, Survivor of Violence, Doctor Dissatisfaction, and Job Dissatisfaction). The inventory contains norms based on community (N = 725) and physical rehabilitation and chronic pain patient (N = 527) samples.

In the present study, we examined the association between the above noted BHI 2 scales and the MMPI-2-RF Validity, Higher-Order, Restructured Clinical, and Somatic/Cognitive scales. The sample consisted of 213 Workers’ Compensation claimants or personal injury litigants (149 men, 64 women) referred to the first author for detailed psychological examinations subsequent to work-related injuries or motor vehicle collisions. Correlational analyses were conducted based on combined gender. MMPI-2-RF exclusion criteria included CNS ≥ 18 and VRIN-r/TRIN-r ≥ 80T for analyses involving the validity scales. For the MMPI-2-RF substantive scales we also excluded on the basis of F-r = 120T, and Fp-r, Fs, FBS-r, and RBS ≥ 100T. Zero-order correlations between scores on the MMPI-2-RF Validity, Higher-Order, Restructured Clinical, and Somatic/Cognitive scales and the BHI 2 Validity, Physical Symptom, and Affective scales are presented and their implications for clinical practice are discussed.