

THE MMPI-2 AND MMPI-2-RF

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First published in 1943, the MMPI (and its subsequent versions) has for many years been the most widely used and researched personality assessment instrument. A survey found that 90% of law enforcement agencies in California alone included the MMPI as part of their psychological screening. (Drees et al., 2003). The test has undergone two major revisions, yielding the [MMPI-2](#) and the [MMPI-2 Restructured Form \(MMPI-2-RF\)](#). Both revisions, currently available for use in peace officer candidate screening, incorporate the [Restructured Scales \(RC\)](#) and the [Personality Psychopathology Five Scales \(PSY-5\)](#).

The MMPI-2 is a 567-item self-report measure of personality and psychopathology (Butcher, Graham, Ben-Porath, Tellegen, Dahlstrom, & Kaemmer, 2001), consisting of eight Validity Scales, ten Clinical Scales, and 15 Content Scales (Table 1). Additional scales and subscales include 15 Supplementary Scales, 28 Harris-Lingoes Subscales, three Social Introversion Subscales, and 27 Content Component Scales. Detailed information about the test can be found in secondary interpretive sources, such as Graham (2012) and Greene (2011). Two major sets of scales (the RC and PSY-5) have been added to the MMPI-2 since the test was first published in 1989.

RC Scales. To aid in their interpretation, Tellegen, et al. (2003) restructured the MMPI-2 Clinical Scales to reduce the high degree of intercorrelation among them. They did so by identifying a factor that accounted for much of the common variance across the Clinical Scales: Demoralization. Tellegen, et al. (2006) have described Demoralization as entailing high negative affect, the absence of positive affect, and a general sense of helplessness, low self esteem, and inefficacy. When Demoralization was factored out of the Clinical Scales, nine Restructured Clinical (RC) Scales resulted, consisting of 192 non-overlapping items. Table 2 provides a description of the RC Scales. When they were first introduced, Tellegen et al. (2003) recommended that the RC Scales be used primarily to guide Clinical Scale interpretation. However, based on a body of literature published since, summarized most recently by Ben-Porath (2012), the RC Scales can now be interpreted as a primary source of information on the MMPI-2.

Table 1: MMPI-2 and MMPI-2-RF Scales

MMPI-2 Scales		MMPI-2-RF Scales	
VALIDITY SCALES		VALIDITY SCALES	
Variable Response Inconsistency	VRIN	Variable Response Inconsistency	VRIN-r
True Response Inconsistency	TRIN	True Response Inconsistency	TRIN-r
Infrequency	F	Infrequent Responses	F-r
Back Infrequency	Fb	Infrequent Psychopathology Responses	Fp-r
Infrequency-Psychopathology	Fp	Infrequent Somatic Responses	Fs
Symptom Validity	FBS	Symptom Validity	FBS-r
Lie	L	Response Bias Scale	RBS
Correction	K	Uncommon Virtues	L-r
Superlative	S	Adjustment Validity	K-r
CLINICAL SCALES		HIGHER-ORDER SCALES	
Hypochondriasis	Hs(1)	Emotional/Internalizing Dysfunction	EID
Depression	D(2)	Thought Dysfunction	THD
Hysteria	Hy(3)	Behavioral/Externalizing Dysfunction	BXD
Psychopathic Deviate	Pd(4)	RC SCALES	
Masculinity-Femininity	Mf(5)	Demoralization	RCd
Paranoia	Pa(6)	Somatic Complaints	RC1
Psychasthenia	Pt(7)	Low Positive Emotions	RC2
Schizophrenia	Sc(8)	Cynicism	RC3
Hypomania	Ma(9)	Antisocial Behavior	RC4
Social Introversion	Si(0)	Ideas of Persecution	RC6
CONTENT SCALES		Dysfunctional Negative Emotions	RC7
Anxiety	ANX	Aberrant Experiences	RC8
Fears	FRS	Hypomanic Activation	RC9
Obsessions	OBS	SPECIFIC PROBLEMS (SP) SCALES	
Depression	DEP	Somatic/Cognitive	[5 scales]
Health Concerns	HEA	Internalizing	[9 scales]
Bizarre Mentation	BIZ	Externalizing	[4 scales]
Anger	ANG	Interpersonal	[5 scales]
Cynicism	CYN	INTEREST SCALES	
Antisocial Practices	ASP	Aesthetic-Literary Interests	AES
Type A	TPA	Mechanical-Physical Interests	MEC
Low Self-Esteem	LSE	PSY-5 SCALES	
Social Discomfort	SOD	Aggressiveness-Revised	AGGR-r
Family Problems	FAM	Psychoticism-Revised	PSYC-r
Work Interference	WRK	Disconstraint-Revised	DISC-r
Negative Treatment Indicators	TRT	Negative Emotionality/Neuroticism-Revised	NEGE-r
		Introversion/Low Positive Emotionality-Revised	INTR-r

Table 2: MMPI-2 RC Scale Descriptions

RC SCALES	
RCd - Demoralization	General dissatisfaction, unhappiness, hopelessness, self-doubt, inefficacy
RC1 - Somatic Complaints	Self-reported neurological, gastro-intestinal, and pain-related complaints
RC2 - Low Positive Emotions	Lack, of or incapacity to experience positive emotions; Core vulnerability factor for depression
RC3 - Cynicism	Non-self-referential belief in human badness
RC4 - Antisocial Behavior	Including, juvenile misconduct, family problems, substance misuse
RC6 – Ideas of Persecution	Self-referential persecutory ideation
RC7 - Dysfunctional Negative Emotions	Including, anxiety, irritability, anger, over-sensitivity, vulnerability
RC8 - Aberrant Experiences	Unusual perceptual and thought processes
RC9 - Hypomanic Activation	Impulsivity, grandiosity, aggression, and generalized activation

PSY-5 Scales. The MMPI-2 Personality Psychopathology-Five scales (PSY-5) were developed to assess dimensions of personality similar, but not identical to the “Big Five” personality traits of Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Openness (Harkness, McNulty & Ben-Porath, 1995). A description of the PSY-5 scales is provided in Table 3. The PSY-5 scales differ from the “Big Five” in that they target a more dysfunctional range of personality functioning.

The MMPI-2-RF consists of a subset of 338 items from the MMPI-2. It includes nine Validity Scales (seven of which are modified versions of the MMPI-2 Validity Scales). Also included are the nine RC Scales (identical in composition to the ones scored on the MMPI-2) and PSY-5 Scales (revised to be scored from the reduced item pool). The MMPI-2-RF also includes: (a) three Higher-Order Scales that assess three broad domains of dysfunction measured by the MMPI-2 item pool: Emotional/Internalizing Dysfunction, Thought Dysfunction, and Behavioral/Externalizing Dysfunction, (b) 23 Specific Problems Scales, covering the areas of somatic complaints, internalizing problems, externalizing problems, and interpersonal difficulties, and (c) two Interest Scales. Detailed information about the scales of the MMPI-2-RF can be found in two test manuals: *Manual for Administration, Scoring, and Interpretation* (Ben-Porath & Tellegen, 2008/2011), and *Technical Manual* (Tellegen & Ben-Porath, 2008/2011).

Table 3: MMPI-2 PSY-5 Scale Descriptions

PSY-5 SCALES
Aggressiveness (AGGR-r) <ul style="list-style-type: none"> • Offensive, instrumental aggression • Enjoy intimidating others • More likely to have history of being physically abusive
Psychoticism (PSYC-r) <ul style="list-style-type: none"> • Disconnection from reality • Unusual sensory/perceptual experiences • Alienation • Unrealistic expectations of harm
Disconstraint (DISC-r) <ul style="list-style-type: none"> • Risk-taking, impulsive behavior • Antisocial
Negative Emotionality/Neuroticism (NEGE-r) <ul style="list-style-type: none"> • Anxious, worry-prone • Focus on the negative • Overly Self-critical
Introversion/Low Positive Emotionality (INTR-r) <ul style="list-style-type: none"> • Social withdrawal • Poor hedonic capacity

Using modern scale construction techniques, the MMPI-2-RF Scales were designed to measure the constructs assessed by the MMPI-2 in a more efficient and psychometrically sound manner. They include measures of distinctive Clinical Scale components that are not represented in the RC Scales, measures of facets of the RC Scales that warrant separate assessment (for example, a substance abuse facet of RC4), as well as scales designed to assess clinically significant attributes that are not directly assessed by Clinical or RC Scales. The three Higher-Order Scales serve the dual role of measuring broad-based dimensions of personality and psychopathology and providing an organizing framework for interpreting MMPI-2-RF scale scores.

Many of the MMPI-2-RF scales are linked empirically and conceptually to current models and concepts of personality and psychopathology (Ben-Porath, 2012). Because the 338 items are a subset of the 567 items of the MMPI-2, it is possible to use existing MMPI-2 data sets to investigate the MMPI-2-RF. The *Technical Manual* for the MMPI-2-RF includes descriptive data for all scales in a law enforcement candidate sample collected in California.

Pre vs. Post-Offer. Since they provide a measure of psychopathology as well as personality, the MMPI-2 and MMPI-2-RF are considered “medical” examinations under the Americans with Disabilities Act, and therefore cannot lawfully be administered prior to a

conditional offer of employment, regardless of the manner in which the responses are interpreted (Karraker v. Rent-A-Center, Inc., 2006).

Developmental Sample. The general normative sample for the MMPI-2 consists of 1138 men and 1462 women. Comparisons with the 1990 census indicate that the MMPI-2 normative sample generally matches the demographics of the adult population of the United States (Butcher et al., 2001). Although the MMPI-2 normative sample has a higher education level, a recalculation of MMPI-2 norms based on a census-matched normative subsample did not result in an appreciable change in scores (Schinka and LaLone, 1997). Thus, the normative sample for the MMPI-2 (and MMPI-2-RF, which is based on the same 1138 men and a subset of 1138 women) yields standard T-scores that allow comparison of an individual's scores with a representative sample of the general population of the United States.

Gender-Based Differences. Historically, MMPI-2 protocols were interpreted by comparing a test-taker's responses to the normative sample for his/her own gender (e.g., a male's responses were compared to the 1138 men in the normative sample). However, the use of gender-based norms in employment-related assessments was prohibited by the 1991 U.S. Civil Rights Act. Non-gendered norms were subsequently developed (Ben-Porath & Forbey, 2003) and incorporated in the MMPI-2 materials. Non-gendered T-score conversion tables were created by randomly selecting 1138 women from the MMPI-2 normative sample, merging their data with those of the 1138 men in the sample, and recalculating the standard T scores for all MMPI-2 scales. The standard T-scores for the MMPI-2-RF are based on the same non-gendered normative sample of 2276 individuals; there are no gender-specific norms for the revised instrument.

Non-gendered norms have been found to be largely the same as gendered norms; in general, no more than 5 T-score point differences (roughly equivalent to the standard error of measurement) separate the average gendered scale scores of men and women when compared with their non-gendered scores (Forbey & Ben-Porath, 2003). Two exceptions include the Content Scale "Fears," in which the scores of men are somewhat lower than women, and scores on PSY-5 Scale "Disconstraint," on which women score somewhat lower than men.

Ethnic Differences/Adverse Impact. Adverse impact occurs when selection decisions are made on the basis of pre-set cutoffs that result in substantially different proportions of group members (e.g., race, gender) being rejected. Since the findings from the MMPI-2 or MMPI-2-RF

should be integrated with the results of other tests and a clinical interview in making such a determination, the MMPI-2 instrument alone should not result in adverse impact. Nevertheless, evaluators should be aware of the role that cultural and demographic factors may play in psychological test results.

Extensive research has also been conducted on use of the MMPI-2 with different cultural, racial and ethnic groups within the United States. Much of this research has focused on comparisons of African Americans and Caucasians. Such studies have yielded some significant differences in mean scores across these two groups, often attributed to real cultural and socio-economic factors (for example on the Content Scale “Cynicism”). However, the few studies that have compared validity coefficients of the MMPI-2 across racial groups (e.g., Arbisi, Ben-Porath, & McNulty, 2003; McNulty, Graham, Ben-Porath, & Stein, 1997) have not produced any evidence of meaningful slope or intercept bias when comparing the predictive validity of the test in African Americans and Caucasians.

With the growth in the size of the Hispanic/Latino population in the United States, greater attention has been paid in the literature to the use of the test with this population. Garrido and Velasquez (2006) summarized the literature in this area and offer specific recommendations for the culturally competent use of the MMPI-2 in interpreting test scores of Hispanics/Latinos assessed in the United States. For example, these authors recommend careful consideration of the test-taker’s English-language proficiency if the test is administered in English and weighing the cultural adaptation of Hispanic/Latino immigrants and their offspring.

Overall, ample empirical evidence indicates that the MMPI-2 can be used effectively across a wide range of nationalities, languages, cultures, and racial/ethnic groups. Because the MMPI-2-RF is based upon a subset of the MMPI-2 item pool and essentially the same set of norms, it can be assumed that any differences based on ethnicity would mirror those found for the MMPI-2.

Reading Level. The MMPI-2 manual recommends that test-takers have at least a sixth grade reading level. This recommendation was made on the basis of an analysis of the readability of the individual test items. Schinka and Borum (1993) concluded that the MMPI-2 item pool can be read at the fourth to fifth grade level. In the most extensive item-by-item analysis of the readability of individual MMPI-2 items conducted to date, Dahlstrom, Archer, Hopkins, Jackson and Dahlstrom (1999) found that 90% of the MMPI-2 items had a fifth grade

reading level. When the entire item pool is analyzed, rather than each item individually, the MMPI-2 item pool yields a Flesch-Kincaid Index of 4.6 and the MMPI-2-RF item pool yields a Flesch-Kincaid index of 4.5 (Ben-Porath & Tellegen, 2008/2011).

PSYCHOMETRICS

Reliability and Standard Error of Measurement. The MMPI-2 and MMPI-2-RF manuals provide data on the reliability and the standard errors of measurement associated with scale scores on these tests. The test-retest reliability analyses reported were based on a subset of 193 members of the normative sample who completed the test twice within approximately one week. Test-retest correlations for the standard MMPI-2 scales range from .54 to .93, with most correlations at .70 and higher. The MMPI-2-RF test-retest correlations fall within a similar range (.55 to .93), with the vast majority above .70. Associated standard errors of measurement expressed in T-score values range from 2.65 to 6.71, with most below 5.0 in non-clinical settings on both instruments.

Validity For Peace Officer Screening. A substantial empirical, peer-reviewed literature exists to support the MMPI's use in evaluating peace officer candidates. As a broad-based measure of personality, the MMPI provides empirically and conceptually-based indicators on a wide variety of personality characteristics, including and especially those underlying the POST Psychological Screening Dimensions, such as corruption, drug and alcohol abuse, evidence tampering, perjury, excessive use of force, firearms misuse, embezzlement, theft, and other counterproductive behaviors. A bibliography of research on the MMPI test in law enforcement populations appears at the end of this document. A few illustrative studies are discussed here.

MMPI-2. Scores on the L, K, Pd, Mf, Pt, and Ma scales have all been shown to be valid predictors of overall job performance (Cullen, et al, 2003). Yet perhaps even more relevant for the purposes of peace officer psychological *screening* (vs. selection) are studies that use as criteria measures of *counterproductivity*. Studies investigating associations between MMPI scales and counterproductive peace officer behavior are numerous, employing a diverse array of criteria such as violence, absenteeism, car accidents, substance abuse, use of force, lying, cheating, stealing and many more actions resulting in disciplinary actions. Although these studies have not always yielded consistent conclusions, replicated results indicate that the Hypomania (Ma) and Psychopathic Deviate (Pd) scales in particular are predictive of a number of aspects of counterproductive behavior, such as violence, disciplinary actions, and dismissal.

A meta-analysis conducted for POST confirmed that scores on the Pd scale were positively related to police corruption, while scores on the Pd, Hypochondriasis (Hs), Schizophrenia (Sc) and the Social Introversion (Si) scales were positively related to police counterproductivity. In another meta-analysis, Aamodt (2004b) found that certain combinations of scores (e.g., F + Scale 9) performed better than individual clinical scales in predicting performance ratings, suspensions, and other disciplinary actions.

Taken together, these results point to the effectiveness of the MMPI measures of defensiveness, impulsivity, rule-questioning attitudes, rebelliousness, and hostility for predicting counterproductive job behavior. The direction of these results indicates that officers with general performance problems appear to experience more subjective distress and anxiety, whereas officers with integrity problems have more problems with suspiciousness and interpersonal reticence.

The Restructured Clinical (RC) Scales vs. MMPI-2 Clinical Scales. In comparison to the MMPI-2 Clinical Scales, the RC Scales have been shown to have comparable or improved reliability, convergent validity, and substantially improved discriminant validity (Tellegen, 2003; Ben-Porath & Detrick, 2004). These improvements are especially pronounced – and understandable - in non-clinical settings (such as pre-employment screening), since Demoralization (which is removed in the RC Scales) can mask problems by attenuating scores on the clinical scales. The RC Scales also assess constructs that are more consistent with a normal personality model (Sellbom & Ben-Porath, 2005). Not surprisingly, Sellbom, et al. (2007) found that the RC Scales provided a better prediction of future problematic behavior in law enforcement candidates as compared with the MMPI-2 scales.

These improvements in convergent and discriminant validity for the RC scales, as compared with the MMPI-2 Scales, have held across a variety of populations and types of assessment. In the first published study of the RC Scales in law enforcement candidates, Sellbom, Fischler, and Ben-Porath (2007) found that the RC Scales, particularly Cynicism (RC3), Antisocial Behavior (RC4), Ideas of Persecution (RC6), and Aberrant Experiences (RC8), were better at predicting behavioral misconduct in peace officers than the MMPI-2 Clinical or Substance Abuse Scales. Because the RC Scales are scored on both versions of the test, these findings apply to both the MMPI-2 and MMPI-2-RF.

Impression Management. Candidates are understandably motivated to provide a positive impression of themselves when being screened for peace officer positions. Therefore, like all self-report measures, the MMPI-2 and MMPI-2-RF are susceptible to efforts to intentionally present oneself in an overly favorable manner and deny significant emotional and or behavioral problems (Sellbom, Ben-Porath, Graham, Arbisi & Bagby, 2005).

A comprehensive research base exists documenting the utility of the L, K, and S scales of the MMPI-2 in detecting these approaches to under-reporting and quantifying their extent when they occur. Baer and Miller (2002) conducted a meta-analysis of this literature, showing that scales L, K, and S, were all effective in detecting this test-taking approach.

Revised versions of the L and K scales (i.e., L-r and K-r) are included in the MMPI-2-RF. Sellbom and Bagby (2008) found these revised scales to be effective measures of under-reporting in both clinical and non-clinical settings. Although highly correlated with the MMPI-2 versions of these scales (Technical Manual for the MMPI-2-RF), the revised scales benefit from the removal of item overlap and item content with a greater focus on efforts to portray oneself as being unrealistically virtuous (L-r) or as being particularly well-adjusted (K-r). Data analyses used in revising these scales included samples of peace officer applicants (Tellegen & Ben-Porath, 2008).

In a unique study of the effects of impression management on MMPI-2-RF scores, Detrick and Chibnal (in press) re-administered the test for research purposes to a sample of 62 police officers who successfully completed academy training and compared their scores in this low demand situation to ones they generated during their high demand preemployment evaluation. The authors found that both L-r and K-r were sensitive to under-reporting in this context and that higher L-r scores were associated with suppression of scores on MMPI-2-RF measures of externalizing behavior whereas higher K-r scores predicted under-reporting of emotional dysfunction. Of note is that even in the low-demand situation, officers scored above the general population norm on both under-reporting measures, reinforcing the importance of relying on police candidate comparison group data when interpreting L-r and K-r scores in a preemployment evaluation.

K-Corrections. The K scale was devised by Meehl and Hathaway (1946) to correct scores on the clinical scales for the adverse effects of self-deception. Although the vast majority of interpretive data in the literature are based on K-corrected MMPI scores, research has shown

that K corrections do not improve validity in clinical settings, and may actually attenuate clinical scale validity in non-clinical settings e.g., Ben-Porath and Forbey (2004). Detrick, Chibnall, and Rosso (2001) demonstrated that applying the K-correction to clinical scale scores of law enforcement candidates substantially reduced their validities.

The use of K to correct scores on the clinical scales in non-clinical settings (such as pre-employment screening) has been called into question by preeminent authors in the field, including Butcher and Han - "*There is no research to guide practitioners to apply K in this context, or even to ensure that any K corrections should be made,*" (1995, p. 27), Greene - "*...clinicians probably need to avoid using K-corrections in settings in which normal persons are evaluated...*" (2000, p. 96), and Graham - "*... in non-clinical applications of the MMPI-2, both K-corrected and uncorrected scores (should) be generated and emphasis be placed on uncorrected scores when K-scale scores are significant above or below average,*" (2006, p. 224).

Applicant Norms. Studies comparing peace officer norms with community samples have generally found officers to be free of significant psychological problems while scoring higher on scales measuring under-reporting, distrust, impulsivity, and rule-questioning attitudes (e.g., Bartol, 1982; Carpenter & Raza, 1987; Hargrave, Hiatt, & Gaffney, 1986). Meta-analyses confirmed that, compared to the general population, peace officer MMPI/MMPI-2 scores tend to show more positive adjustment as well as increased defensiveness.

Moderate elevations ($T \geq 55$), although not uncommon in the general population (occurring in roughly 25% of males), are rare among peace officer candidates. For example, in a recent study by Sellbom, Fischler, and Ben-Porath (2007), the sample of peace officer candidates who made it to the point of psychological screening had $T \geq 55$ in only 1.7% (RC3), 3.0% (RC4), 8.2% (RC6) and 1.3% (RC8) of the cases.

One approach for taking into consideration the sizable T-score differences between peace officer applicants and the general population has been to derive alternate standard scores based on a law enforcement candidate sample (i.e., law enforcement norms). A shortcoming of this approach is that it can mask genuine differences between peace officer candidates and members of the general population. For example, elevated scores on under-reporting indicators standardized in reference to a sample of candidates would appear to reflect an "average" level of defensiveness when, in fact, the test-takers were significantly guarded in their approach to the testing. The use of alternate standard scores can also exaggerate the importance or implications

of relatively rare scores in law enforcement candidates. For example, if admissions of acting-out behaviors are rare in law enforcement candidates, reporting of a small, but overall inconsequential number of such acts could result in a very deviant score on a measure of antisocial behavior.

Another approach to the consideration of law enforcement norms in screening candidates – and the one recommended for use with the MMPI-2 and MMPI-2-RF - is to compare an applicant's scores with those from a relevant law enforcement sample that includes means and standard deviations expressed in standard general population T-scores. For example, in the Sellborn, Fischler and Ben-Porath (2007) sample of law enforcement candidates, the mean T-score for RC2 was approximately 39, with a standard deviation of approximately 6. A candidate's T-score of 58 on RC3 would fall three standard deviations above the mean in comparison with that sample of law enforcement candidates, despite the fact that this score is not uncommon in the general population.

Reliance on or comparison groups as just described has three advantages. First, a single metric is used to communicate scores for both the general and law enforcement samples. This eliminates ambiguity and room for error when reporting test scores. It also eliminates the possibility of masking common characteristics in peace officer candidates (e.g., defensiveness) or exaggerating the significance of rarely admitted ones (e.g., antisocial behavior). A third and particularly important advantage of this approach is that it allows examiners to rely on truly local norms by calculating means and standard deviations for their own local sample and comparing the test-taker's scores with those of their actual local cohort. Procedures for doing so are described in the *Technical Manual* for the MMPI-2-RF. This can also be accomplished with the software for scoring the test (Ben-Porath & Tellegen, 2011). The *Manual* also reports descriptive data for a law enforcement candidate sample provided by the California State Personnel Board. The means and standard deviations produced by this sample of California Highway Patrol officer candidates are very comparable to those generated by law enforcement candidates from other U.S. law enforcement agencies from both large metropolitan areas and local municipalities (Ben-Porath, 2007).

Cut Scores. Sellbom, et al. (2007) determined that scale T-scores as low as 55 maximized the prediction of police officer misconduct; that is, substantial parts of the variance in supervisor ratings of the officers occurred at T-scores below the clinical 65 cutoff. To aid in test score

interpretation, the researchers developed relative risk (RR) ratio cut-offs associated with the RC scale scores. Each RR indicates the likelihood that a peace officer applicant whose RC score is greater or equal to 55+ or 60+ will engage in a particular counterproductive job behavior, such as deceptiveness, abuse of sick leave, excessive force, abuse of authority, and other behaviors directly related to many of the counterproductive behaviors listed in the POST dimensions.

For example, candidates who scored 55 or above on RC8, when compared with those who scored below this cutoff were five times more likely to have been uncooperative toward their supervisors and to have used inappropriate language when interacting with members of the public and more than twice as likely to have used excessive force. . Candidates who scored 55 or above on RC4 were ten times more likely to abuse sick leave, eight times more likely to use their position for personal advantage, and six times more likely to be uncooperative with peers (among other differences), when compared with candidates scoring below 55T on RC4. Numerous undesirable outcomes were found to be associated with higher scores on RC6. The greatest increases in risk were for abuse of authority and showing biased attitudes toward others, both 11 times more likely to occur in candidates who score 55 or above on this scale when compared with those scoring below 55T on RC6. Finally, some of the strongest RR findings were associated with moderate elevations on RC8. For example, those scoring 55 or above on this scale were thirty-eight times more likely to engage in deceptive behavior, and nineteen times more likely to engage in conduct unbecoming of an officer when compared with those who scored 55T or below on RC8. A complete list of the RR analysis findings is reported by Sellbom, et al. (2007).

Tarescavage, Corey, and Ben-Porath (2014) published the first investigation of the predictive validity of the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF) in a sample of law enforcement officers. MMPI-2-RF scores were collected from preemployment psychological evaluations of 136 male police officers and supervisor ratings of performance and problem behavior were subsequently obtained during the initial probationary period. The sample produced meaningfully lower and less variant substantive scale scores than the general population and the MMPI-2-RF Police Candidate comparison group, which significantly impacted effect sizes for the zero-order correlations. After applying a correction for range restriction, MMPI-2-RF substantive scales demonstrated moderate to strong associations with criteria, particularly in the Emotional Dysfunction and Interpersonal Functioning domains.

Relative risk ratio analyses showed that cutoffs lower than T score 65, used to identify clinically significant elevation, maintained were associated with significantly increased risk for problematic behavior.

MMPI-2-RF Police Candidate Interpretive Report (MMPI-2-RF PICR). The *PCIR* is a computer-based interpretive report developed specifically for assessing peace officer candidates. The report includes a section on *Protocol Validity*, with an emphasis on indications and possible implications of under-reporting; a description of *Clinical Findings*, based on clinically elevated scores on the substantive scales of the inventory; an optional list of *Diagnostic Considerations*, which can be suppressed if desired; a section on *Comparison Group Findings*, in which substantive scale findings are described in the context of a Multi-site Police Candidate comparison group made up of 2,074 North American candidates; and a section on *Job-Relevant Correlates*, in which job-relevant personality characteristics and behavioral tendencies of the test taker are described and organized according to ten domains commonly identified in the professional literature as relevant to peace officer candidate suitability. The ten domains, which are similar, but not identical to the ten POST dimensions include: *Emotional Control and Stress Tolerance Problems, Routine Task Performance Problems, Decision-Making and Judgment Problems, Feedback Acceptance Problems, Assertiveness Problems, Social Competence and Teamwork Problems, Integrity Problems, Conscientiousness and Commitment Problems, Substance Use Problems, and Impulse Control Problems*. An *Item-Level Information* section of the report includes a list of *Unscorable Responses; Critical Responses*, which are listed if the test taker produces a clinically elevated score on one or more of the seven scales designated by the MMPI-2-RF authors as having critical content; *Critical Follow-up Items*, a list of items the test taker answered in the keyed direction among a set of items identified by subject matter experts as ones to which a test taker may respond in a manner warranting follow-up; and an optional section titled *User-Designated Item-Level Information*, which allows an MMPI-2-RF user to generate item responses to any designed MMPI-2-RF scale. Report *Annotation* includes the source (i.e., MMPI-2-RF scale score[s]) for every statement in the report, an indication as to whether the statement is based on item content, empirical correlates, or is an inference of the report authors. For all statements identified as being based on empirical correlates, a *Research Reference List* is provided with links to publications that are internet accessible. Corey and Ben-

Porath (2014) provide a detailed description of the report and how to interface with the software used to generate and customize it.

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