**Introduction to the MMPI-2**

(www.cdonaldwilliamsmd.com/introduction\_to\_the\_mmpi2.html)

The MMPI-2 is the most widely used psychological test in the United States and is commonly used in countries around the world. It is used in inpatient and outpatient mental health settings and medical settings. It is a 567 item test that was developed to independently assess an individual’s psychological functioning. Thousands of scientific studies have demonstrated its value in reliably and reproducibly assessing the psychological functioning of persons in clinical and non-clinical settings.

I use the MMPI-2 and MMPI-2-RF (which was developed using 338 of the 567 items from the MMPI-2) routinely in *independent psychiatric evaluations* to enhance the objectivity of the assessment process. I also use the MMPI-2/MMPI-2-RF  to assist with diagnosis and to help assess progress in *psychiatric treatment*. The results of the testing are shared with the patient as an aid to the therapy process. I find that it helps to achieve better focus and effectiveness in evaluation and treatment.

**Technical discussion** (adapted from *Objective Psychiatric Assessment and Management of Chronic Disability Syndromes.* Williams CD. in "Medical Care of the Psychiatric Patient," Fogel B and Greenberg D Eds.  (New York) Oxford Univeristy Press. 2013 (in press):

The MMPI-2 is a 567 item test in which the examinee is asked to endorse each item as *true* or *false* and requires about 90 minutes to complete. Although psychologists most commonly administer and interpret the test, there are avenues for other clinicians to obtain training since it is necessary to qualify professionally to purchase and administer the test (Graham, 2012).  The MMPI-2 has been empirically validated both on clinical and non-clinical populations. It is available through Pearson Assessments in both English and Spanish and in both written and audio formats; the audio format is useful for test takers that have limited reading skills. The MMPI-2 has greater utility than brief self-report tests in forensic setting because it possesses *validity scales* and because in clinical settings it has the advantage of measuring a broad array of psychopathology instead of only one aspect of personality functioning. The MMPI-2 is only available through Pearson Assessments. The test materials can be administered by paper and pencil, by CD or cassette tape, or by computer. Validity has been established for English, Spanish, and Hmong. Scoring by computer is faster than scoring with hand templates. The Pearson Assessments website provides detailed information on workshop scheduling and ordering test materials.

The raw scores, i.e. the number of items endorsed as true, on the MMPI-2 are statistically transformed for each scale to uniform “T scores,” with the result that a T score of 65 for one scale has the same meaning as T score of 65 on another scale. For example, T scores of 65 correspond to the 92nd percentile for each scale (for a non-clinical normal population), and in general T scores >65 are commented upon as clinically significant and interpretable. Profiles are graphed using the T scores for the individual scales on each *profile*. For the remainder of this chapter it is understood that when a scale score is mentioned, it refers to the T score and not the raw score.

The MMPI-2 contains a *validity scale* profile, a *clinical scales* profile, a *restructured clinical scales* profile, a *content scales* profile, a *supplementary scales* profile, and the *PSY-5 scales* profile. We will focus most of our attention on the *profile elevation* (which is the mean of the T scores of the Clinical scales except for 5 and 0), the *validity scales*, the *RC scales*, and the *PSY-5 scales* to simplify our discussion. Graham (20012) and Rogers (2000) can be consulted for detailed guidelines regarding the development and composition of each scale, and the theoretical and research background underpinning them.

The **Validity Scales** identify random response patterns, inconsistent response patterns, defensive response patterns, and exaggerated response patterns, providing a forensically valuable advantage compared to test instruments without such scales (Graham, 2012). In 1989, new *validity scales* were added to add to the F (infrequency), K (defensiveness) and L (Lie) scales of the original MMPI providing much more information about the test-taker’s approach to the test. VRIN (variable response inconsistency) and TRIN (true response inconsistency) scales elevated beyond a certain point indicate that the individual is not attending to the content of the items and is responding in a random fashion resulting in an invalid profile. The Fp scale (infrequency psychopathology) consists of 27 items endorsed infrequently as true both by psychiatric inpatients and in the MMPI-2 normative sample, making it more likely to reflect psychopathology than the F scale (infrequency). The F scale items were chosen because they were infrequently endorsed as true in a *non-clinical* population. Because psychiatric subjects more frequently endorse items on the F scale, a high Fp scale score is more likely to reflect exaggeration or malingering than a high F scale score this corrects an important deficiency in the original MMPI. Detailed information regarding guidelines for assessing validity, exaggeration, and malingering are available in several references. (Graham, 2012; Butcher, 2000) The Fp scale has particular value in identifying malingering in individuals seeking compensation. (Arbisi et al. 2006)

There are 10 **Clinical Scales**, either referred to by their numbers from 1 to 10, or by names, some of which are no longer in common use; *hypochondriasis, depression, hysteria, psychopathic deviate, masculinity-femininity, paranoia, psychasthenia, schizophrenia, hypomania, and social introversion*. Graham (2012) provides a detailed discussion of the qualities associated with each scale.

*Code types* refer to the number (i.e. 1-9) designations of the scales’ T scores which are the highest one in the profile, and may refer either to *two-point* or *three-point* code types.  Graham (2012) and Butcher et al. (2000) should be consulted for a discussion of interpretive strategies.

The nine **Restructured Clinical (RC)** scales were developed by Tellegen, Ben-Porath, McNulty, Arbisi and Graham (2003) to achieve improved convergent and discriminant validity compared to the Clinical Scales, and they represent a significant addition to the power of the MMPI-2 (Graham, 2012; Ben-Porath and Tellegen, 2008). The RC scales have been carried forward without change to the MMPI-2-RF. *Convergent validity* means that the scores on a scale are significantly related to conceptually relevant extra-test measures. For example, individuals with high RC4 scores often have histories of difficulties with the law and are prone to substance abuse, and typically have work-related problems, which is what it was intended to measure. *Discriminant validity* is demonstrated when scores on a scale are not related to extra-test measures that are un-related to what the scale is intended to measure (Graham, 2012). Thus, since RC4 does not significantly relate to other measures of depression or anxiety or thought disorder, it is said to have discriminant validity. Both the Clinical scales and the RC scales have good convergent validity, but many studies have demonstrated that the RC scales have better discriminant validity.

Tellegen (2003) described the development of these scales, beginning with the RCd scale labeled “Demoralization” which he determined contained items which related to overall emotional distress, emotional discomfort and turmoil that contaminated many of the other original Clinical scales. A sophisticated statistical approach was employed to determine which items correlated with core constructs such as health concerns or lack of positive emotions, and to sift out the items that related to demoralization and create a separate scale. In general, except for the RCd scale, each RC scale correlates with the Clinical scale with the same number designation, even though in some cases the item selection is considerably different. Thus RC1 (somatic concerns) is similar to clinical scale 1, RC2 (low positive emotions) is similar to clinical scale 2, and so forth. No RC scale was developed to correlate with clinical scale 5 or clinical scale 10. The practical result of this project is that when there are “across the board” elevations of the Clinical Scales the RC scales are often elevated more selectively, which makes it possible to develop a more fine grained understanding of the primary problems with psychological functioning in a given subject. Thus, for example, an examinee may have T score elevations >65 on clinical scales 1, 2, 3, 6, 7, and 8, but the RC scales may only be elevated >65 on RCd (demoralization) and RC2 (low positive emotions). As Graham (2012) states, “When the clinical scale score is high but the corresponding RC scale score is not, one should be quite cautious about making inferences that the test-taker has characteristics consistent with the core construct associated with the clinical scale.” In the example given, the elevated RCd score would imply that the person had a high level of overall emotional distress, is demoralized, pessimistic and that they might report anxiety and depression. The elevated RC2 score indicates unhappiness, demoralization, and an increased risk of clinical depression. This profile would not be likely to be interpreted as indicating paranoia or psychosis, since although clinical scales 6 and 8 are elevated, the corresponding RC scales reflecting ideas of persecution (RC6) and aberrant experiences (RC8) are not elevated.

**PSY-5** scale development is described in a monograph by Harkness, McNulty, Pen-Porath, and Graham (2002). These *dimensional* scales (Aggressiveness, AGGR; Psychoticism, PSYC; Disconstraint, DISC; Negative emotionality/neuroticism, NEGE; Introversion/low positive emotionality, INTR) were developed to assess personality traits that are present in normal persons, but are pathological when they are extreme. They are related to some extent to the *five-factor model* of personality, and have been shown to be relatively stable over a five year period. Therefore, to some extent they can be employed to develop an idea of personality trait disturbances that are conceptually relevant although not identical to the proposed but ultimately not adopted DSM-5 conceptual model of personality disorders. This suggests that inferences can be drawn regarding personality disorders that have relevance to the vulnerability of individuals being assessed to developing psychiatric impairments in response to external stressors, such as injuries. Therefore they can contribute to distinguishing between persons with depression and no evidence of personality trait disturbance and individuals with depression arising from an external stressor and evidence of serious pre-existing personality trait pathology.

**The MMPI-2-RF is a revision of the MMPI-2 that provides additional information regarding comparison populations**

The MMPI-2-RF (Restructured Form) was published in 2008 by Pearson Assessments, and adds significantly to the information available through the MMPI-2. The MMPI-2-RF consists of 338 questions that were “designed to represent the clinically significant substance of the (567) MMPI-2 item pool with a comprehensive set of psychometrically efficient measures. The MMPI-2 Restructured Clinical (RC) scales assess the major distinctive core components of the test’s Clinical scales and have been carried over to the MMPI-2-RF with no changes. The RC scales are supplemented by “broad-band higher order” measures of psychological dysfunction and other scales that focus more specifically on a variety of internalizing, externalizing, and interpersonal characteristics.  The MMPI-2-RF also includes 9 validity indicators, two of which are revised versions of the MMPI-2 Variable Response Inconsistency (VRIN-r) and True Response Inconsistency (TRIN-r) scales. The test contains revised versions of the MMPI-2 L (ie) scale, now labeled Uncommon Virtues (L-r) and the Correction scale, now labeled Adjustment Validity (K-r), two measures of under-reporting scales in clinical and non-clinical samples.” The MMPI-2-RF has 5 over-reporting indicators, including the recently (2011) added Response Bias Scale (RBS) which predicts overstated memory complaints, a capability absent in the MMPI-2. Recent research (Wygant et al, 2011) suggests that the MMPI-2-RF validity scales can be helpful in forensic evaluations. The MMPI-2-RF manual can be consulted for cutoff scores.

One advantage of using the MMPI-2-RF in addition to the MMPI-2 is that it provides a more nuanced picture of long-standing personality traits and a more finely grained picture of over and under-reporting along both psychological and somatic dimensions. This provides a more robust basis for segregating cause and effect with regard to the effects of the industrial injury. Another useful feature of the MMPI-2-RF is that means and standard deviations for many specific population groups can be graphically depicted in the computer printed report for all MMPI-2-RF scales making it possible to see at a glance how an examinee’s response pattern compares to a relevant reference population.

Its use is mandated by the Department of Labor and Industries. It meets both the **Daubert test** and the **Frey test**, and also meets the **FRE** (Federal Rules of Evidence) which was adopted in 1976.[[1]](#footnote-1)

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1. [↑](#footnote-ref-1)