

Highlights

Using the MMPI/MMPI-2 to Assess Anger Control Problems or Aggressive Behavior¹

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Extensive research has been conducted on the use of the MMPI and MMPI-2 scales for assessing anger control problems or overly aggressive behavior (see Reference File for more complete listing). The following highlights describe a number of research studies that have addressed these problems. Major research studies and valuable summary projects are highlighted and their findings/implications noted here.

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- 1944 J. C. McKinley & Starke R. Hathaway (1944) provided several empirical scales that address assessment of personality factors related to aggressive behavior, hostility and anger, particularly Pd, Pa and Ma.
- 1954 Drake (1954) reported that aggressive behavior was particularly common among individuals who were in college counseling and had 4-9 profiles.
- 1955 Gough, McKee & Yandell (1955) found that individuals scoring high on the Pd scale at IPAR (Institute of Personality Assessment and Research) were described as hostile, aggressive in their interpersonal relationships and sarcastic and cynical as well as aggressive in their behavior.
- 1965 Shipman (1965) studied the validity of six MMPI hostility scales by comparing their scores with carefully made ratings of verbal hostility, physical hostility and hostile attitudes. In a sample 120 psychiatric outpatients (55 men; 65 women). The three a priori hostility scales had high correlations with each other and with the F and K scales. Physical

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hostility ratings correlated significantly with the R, Re, and Cn scales of the MMPI.

- 1965 Butcher (1965) investigated the MMPI personality characteristics of adolescent boys who were considered to be highly aggressive based upon teacher and peer ratings. Aggression groups consisted of High Aggression (N = 21), High Middle Aggression (N = 20), Low Middle Aggression (N = 20), and Low Aggression (N = 22). High-Aggression boys (although not actually delinquent) were found to be similar to delinquent boys in personality—generally rebellious, schizoid, and excitable. However, they were different in that they appeared more concerned over the effects of their behavior. Low-Aggression boys appeared more disturbed than Middle-Aggression boys and similar to High-Aggression boys in being more schizoid. However, they appeared more neurotic, withdrawn, and socially inhibited than other boys.
- 1967 Megargee, Cook & Mendelsohn (1967) developed a measure, the O-H or Overcontrolled Hostility Scale that addresses the conflict between suppression and expression of hostility. Elevations on such MMPI scales as F, Pd, Pa, Sc and Ma and on the substance abuse scale MAC-R and the content scale ASP suggest deficient inhibitions. Thus, the more these scales are elevated the more hostility is likely to be expressed.
- 1971 Davis and Sines describe a narrowly defined MMPI profile (4-3 profile pattern) and the behavior problems associated with it in a state hospital, a state prison, and a university medical center. The MMPI 4-3 profile with the Pd and Hy scales elevated in a particular configuration entailed a behavior pattern that includes hostile-aggressive acting out. The hostile-aggressive behavior pattern characterized most of the 60 male Ss with this MMPI profile in each of 3 settings studied. The frequency of this profile pattern and the social and psychological importance of the behavior pattern are important to researchers and clinicians.
- 1971 Persons and Marks (1971) replicated the study by Davis and Sines that found the MMPI high point pattern of 4-3 is associated with commission of violent acts. A group of 48 male inmates with the 4-3 codetype patterns were compared with the 3 most frequently occurring other MMPI code types in a prison and with the institutional base rate for commission of violent criminal offenses. The 4-3 inmates committed significantly more violent acts than any of the other personality groups and significantly more violence than the base rates of inmates in general. Of the 4-3 Ss, 85% had a history of violence.
- 1972 Blackburn (1972) analyzed the scores of 165 male inpatient psychiatric offenders on 17 hostility and personality scales (e.g., the MMPI). 4 factors were extracted, identified as aggression, hostility, introversion-extroversion, and age. Hostility and aggression were found to be notably

oblique to each other and slightly negatively correlated with introversion-extroversion. The hostility factor was also identifiable as the neuroticism dimension. It was concluded that 2 broad dimensions of aggressive response tendency and hostile evaluation may be sufficient to describe this area of behavior.

- 1977 Rader (1977) compared the MMPI profiles of 3 groups of men--36 expositors, 47 rapists, and 46 assaulters--who had been referred to and tested by a county court service. The most disturbed group, the rapists, had MMPI K-corrected mean raw scale scores that were significantly greater than those of the expositor group on F, Hs, D, Hy, Pd, Pa, and Sc and greater than those of the assaulter group on Pd, Pt, and Sc. Two-point codes were tabulated for each group, and the percentages of individuals within each group with the same 2-point codes were calculated. All of the Ss in each of the 3 groups were sorted into subgroups according to case disposition, and the MMPI raw mean scale scores were determined for these groups. The group profile for the rapists may be interpreted as follows: appear irritable, hostile, angry, and suspicious, perhaps also somewhat depressed and anxious. They may be seen as being unpredictable and peculiar in action and thought.
- 1981 Jones, Beidleman & Fowler provided valuable information on the differentiation of violent vs. non-violent criminal offenders. The MMPI scales that contributed most to prediction of group membership were F, Pa, Pt, and Sc.
- 1982 Walters, Solomon & Greene, (1982) studied the relationship between the MMPI 4-3 high-point pair and the Overcontrolled-Hostility (O-H) scale in three different populations. Ss were assigned to the 4-3 condition based on the following two criteria: (1) Scales 3 (Hy) and 4 Pd \geq T-score of 65; (2) Scale 4 Pd $>$ Scale 3 (Hy) \geq all other clinical scales. In the prison sample (N = 200), inmates who achieved the 4-3 high-point pair were found to earn significantly higher scores on the O-H scale relative to a group of age-matched controls. These results were cross-validated in a sample of psychology clinic outpatients (N = 500), where patients were matched on both age and sex. A similar relationship was found between the presence of a 4-3 high-point pair and higher scores on the O-H scale in a state hospital (N= 102) sample.
- 1984 Selby (1984) assessed the violence potential of 204 adult male felons incarcerated in a state penal institution, using hostility and anger inventories, the Hostility Control (*Hc*) and Overt Hostility scales of the MMPI, and the Marlowe-Crowne Social Desirability Scale. The 5 measures were evaluated for their ability to discriminate between violent and nonviolent criminals, and between criminal and normal population samples. A comparison of mean scale scores between violent and nonviolent Ss resulted in a significant discrimination for all but the *Hc*

scale. A discriminant analysis procedure applied to individual items from the anger inventory resulted in the selection of 25 variables that identified violence prone individuals with 90% accuracy. Implications for the use of these measures as assessment instruments are discussed.

- 1985 Koss, Leonard, Beezley & Oros (1985) examined the psychological characteristics of 3 types of undetected sexually aggressive men who had assaulted female acquaintances. 17 sexually assaultive Ss (mean age 24 yrs), 23 sexually abusive Ss (mean age 21.1 yrs) and 53 sexually coercive Ss (mean age 21.5 yrs) were selected on the basis of their responses to the Sexual Experiences Survey. A total of 50 sexually nonaggressive Ss (mean age 21.2 yrs) served as controls. Ss completed questionnaires—the Psychopathic Deviate scale of the Minnesota Multiphasic Personality Inventory (MMPI), the Social Anxiety Scale of the Activity Preference Questionnaire, the Hostility Inventory, and the Attitudes Toward Women Scale—that reflected psychological variables relevant to 2 major theoretical models of rape, the psychopathology model and the social control/social conflict model. Data were analyzed using discriminant analysis. The comparison groups were significantly discriminated by 7 variables, including 6 rape-supportive attitudes. The findings support a social control/social conflict explanation of nonstranger sexual aggression.
- 1988 Hale, Zimostad, Duckworth & Nicholas (1988) administered the MMPI to 67 adult males who expressed concern about their violent behavior in relationships. Evaluation of MMPI profiles yielded results similar to those obtained in previous studies. Ss reported low Ego strength and a tendency toward Dependency in their relationships. Characteristics observed in Ss included impulsiveness, lack of respect for social standards, frequent difficulties with the law and with families, situational depression, feelings of inadequacy and low self-esteem, and a tendency toward substance abuse.
- 1988 Sloore (1988) studied possible contributions of the Minnesota Multiphasic Personality Inventory (MMPI) in predicting dangerous behavior and to correlate MMPI profiles or characteristics with the following DSM-III classifications: paranoid, histrionic personality, antisocial personality, borderline personality, passive-aggressive personality, explosive personality, and psychosexual disorders. Correlations with rape and suicidal behavior are also considered. The scales that are expected to differentiate best between violent and nonviolent individuals are highlighted. It was concluded that the MMPI can help the clinician to make predictions of dangerous behavior.
- 1990 Schill & Wang (1990) conducted a study using the MMPI-2 anger-content scale. They correlated this measure with those on Spielberger's anger expression scale, Zelin, *et al.*'s anger self-report scale, and the Cook and Medley hostility scale. Subjects were 32 men and 33 women in college.

As expected, the anger-content scale correlated significantly with measures of anger awareness, anger expression (anger out versus anger in), and negatively with anger control. There was also a significant correlation with measures of hostility (projection of anger) for men.

- 1991 Hjemboe & Butcher (1991) examined the relationship between MMPI-2 measured personality characteristics and marital distress and provides empirical validation for using the MMPI-2 with a marital therapy population. 150 couples in marital therapy and 841 normal couples who participated in the MMPI-2 restandardization study were studied. The MMPI-2, a biographical form, a partner rating form, and the Dyadic Adjustment Scale (DAS) were administered to all couples. The marital counseling group resembled previous marital counseling samples studied with the MMPI and scored significantly higher than the normative sample on several MMPI-2 scales. Relationships between the DAS and MMPI-2 clinical and content scale scores are reported. The Psychopathic Deviate (Pd) clinical scale and Family Problems (FAM) content scale were the most powerful group discriminators and strongest correlates of the DAS; their use as indices of marital distress is tested. The meaning of Pd as an index in assessing personality factors in marital distress is explored.
- 1994 Greene, Coles & Johnson (1994) examined psychopathology and anger expression to evaluate previous distinctions of personality type among abusive individuals and to determine the relation between these types and anger. Cluster analysis was conducted with data gathered from 40 men court referred for anger-management psychotherapy. Measures included the MMPI and the State-Trait Anger Expression Inventory. The results produced of 4 clusters of interpersonal violence offenders. The most pathological cluster type reported the highest level of total anger experience, while the histrionic cluster type reported the lowest anger expression. Results provide tentative support for a positive relationship between psychopathology and anger, as well as for the distinction between overcontrolled and undercontrolled anger as subtypes of interpersonal violence offenders.
- 1995 Han, Weed, Calhoun & Butcher (1995) studied the Ho scale on the MMPI-2 to examine the psychometric characteristics of the MMPI-2 Ho scale. Only nine of the original 50 Ho items were slightly changed in the revision. Ho scores were highly correlated with MMPI-2 scales CYN, K, TPA, and ASP, supporting the interpretation of Ho as a measure of cynicism. High correlations with other MMPI-2 scales also suggested that Ho is related to general psychopathology and negative affectivity. Male Ho scorers were rated by their spouses as hotheaded, bossy, demanding, and argumentative. For women, Ho scale scores were less strongly associated with ratings of overt hostility. Principal components analysis of Ho revealed four underlying dimensions: Cynicism, Hypersensitivity, Aggressive Responding, and Social Avoidance.

- 2000 Weiss (2000) examined the importance of assessing dangerousness as an essential task for mental health workers in correctional facilities. The original MMPI and the MMPI-2, are among the most popular psychological tests in such settings. Two approaches to test data can be used when assessing dangerousness: an actuarial or statistical approach, and an idiographic or clinical approach. This article explores the potential for an idiographic use of the MMPI for risk assessment. Professional literature has emphasized the inadequacies of clinical approaches, whereas more actuarial or statistical approaches have been seen as preferable. This article illustrates through case examples how combining idiographic data with statistically based interpretations of MMPI scores can enhance clinical judgment. It is argued that the individual context enriches and changes the meaning of test scores. Integrating actuarial and idiographic approaches can assist in a more accurate and complete understanding of a felon's dangerousness.
- 2008 Craig (2008) provided an excellent researched-based summary of using the MMPI-2 in forensic assessment of violent offenders in criminal settings. It provides an overview of assessment of murderers, in particular, the application of the Megargee Classification System.
- 2008 Uluc (2008) examined the psychometric properties and content areas of the MMPI-2 [Minnesota Multiphasic Personality Inventory-2]) content scales. In this study the criterion-related validity of the MMPI-2 Depression, Anxiety, and Anger Content scales was examined using the following conceptually relevant scales: The Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and State Triad Anger Scale (STAS). The MMPI-2 Depression, Anxiety, and Anger Content scales, and BDI, BAI, and STAS were administered to a sample of 196 students at Middle East Technical University (n= 196; 122 female, 74 male). Regression analyses were performed to determine if these conceptually relevant scales contributed significantly beyond the content scales. The MMPI-2 Depression Content Scale was compared to BDI, the MMPI-2 Anxiety Scale was compared to BAI, and the MMPI-2 Anger Content Scale was compared to STAS. Criterion validity of the 3 analyzed content scales was demonstrated for both males and females. The findings indicated that (1) the MMPI-2 Depression Content Scale provides information about the general level of depression, (2) the MMPI-2 Anxiety Content Scale assesses subjective anxiety rather than somatic anxiety, and (3) the MMPI-2 Anger Content Scale may provide information about the potential to act out. The findings also provide further evidence that the 3 conceptually relevant scales aid in the interpretation of MMPI-2 scores by contributing additional information beyond the clinical scales.
- 2010 Pennuto provides a comprehensive overview of the use of the MMPI-2 in assessing murderers. The author points out several reasons for the MMPI-

2's utility in this application: 1) the validity scales address the credibility of the individual's test-taking attitudes, 2) the MMPI-2 is interpreted objectively, using external, empirically based correlates, 3) the MMPI-2 has high test-retest reliability, and 4) it has high inter-rater reliability, 5) the extensive research on the MMPI-2 is published in peer-reviewed journals, and 6) the results of the MMPI-2 are easy to communicate to non-psychologists, such as those involved in the judicial process.

- 2016 Hopkins, Brawner, Meyer, Zawilinski, Carnes & Green (2016) investigated associations between personality and psychopathology, as measured by the MMPI-2 and engagement in sadomasochistic (S&M) behaviors in a sample of individuals presenting for treatment of problematic sexual behavior and/or sexual addiction. Profiles were obtained by gender for both low-risk (e.g., seeking out humiliation and loss of power during sexual experiences) and high-risk (e.g., engagement in sexual asphyxiation) presentations. A series of correlation and multiple regression analyses were conducted to establish associations. Among other results, they found that high-risk S&M behaviors in men were predicted by antisocial behavior, trait psychoticism, and generalized fearfulness. High-risk S&M behaviors in women were predicted by self-deprecation, Disconstraint, competitiveness, anger, antisocial behaviors, and aberrant experiences, among others.

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