International and Cross-Cultural References
for the MMPI-2

12/9/16

This reference file contains recent publications of cross-cultural articles published on MMPI-2 instruments that were obtained through a PSYCHLIT search. The search words used were "MMPI-2", "International" and "Cross-Cultural." Articles on the MMPI-2-RF, along with the MMPI-2, are included in this resource even though the scales comprising the two instruments are different in makeup, construction and utility. The MMPI-2-RF contains only 60 percent of the MMPI-2 item pool. Readers need to be aware that these measures are different in theoretical construction and empirical validity.

Aksu, S. R. (2012). Acculturation experiences and personality characteristics among Turkish Americans. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 73*(1-B), 669.

This study investigated how the two dimensions (heritage culture and mainstream culture identification) and four strategies (integration, assimilation, separation, and marginalization) of acculturation are associated with personality and mental health of first-generation Turkish Americans, people who were born in Turkey and immigrated to the United States. To measure personality and psychopathology, MMPI-2/MMPI-2-RF RC scales were used. This study was significant for employing a newer (i.e., bidimensional) conceptualization of acculturation, RC scales (purer and psychometrically more appealing versions of the original clinical scales), on a Turkish American community sample. Results indicated that lower mainstream-culture identification was associated with higher scores on Demoralization (RCd), Somatic Complaints (RC1), Low Positive Emotions (RC2), Cynicism (RC3), and Dysfunctional Negative Emotions (RC7) scales; and lower heritage-culture identification was associated with higher scores on Demoralization (RCd), Cynicism (RC3), and Antisocial Behavior (RC4) scales to the direction of psychopathology. The findings of this study are consistent with previous studies that found different levels of acculturation to have differential impact on MMPI-2/MMPI-2-RF performance, and studies that found higher identification with both mainstream culture and heritage culture to be associated with more favorable mental health outcomes. Findings provided support for the premise that both mainstream and heritage cultures simultaneously offer benefits in cross-cultural living. In addition, findings of the study showed support for the bidimensional model of acculturation and challenged unidimensional model of acculturation as most participants demonstrated high identification with both mainstream and heritage cultures. In addition, while there was a significant and positive association between length of residence and mainstream culture identification (r =.25, p < .01), there was an extremely small and statistically insignificant association between length of residence and heritage culture.

Almagor, M., & Koren, D. (2001). The adequacy of the MMPI-2 Harris-Lingoes subscales: A cross-cultural factor analytic study of scales D, Hy, Pd, Sc, and Ma. *Psychological Assessment, 13*(2), 199-215.

 The authors investigated cross-culturally the factor structure of Scales D, Hy, Pd, Pa, Sc, and Ma of the Minnesota Multiphasic Personality Inventory-2 (S. R. Hathaway & J. C. McKinley, 1989) to examine the adequacy of the Harris-Lingoes (HL) subscales developed for these scales. A combined sample of 1,896 Israeli

outpatients and inpatients and a sample of 1,020 American outpatients were used. Each scale was factor analyzed separately in the Israeli and U.S. samples and, within each sample, by gender. The results did not support the structural adequacy of the HL subscales for Scales D, Pd, Sc, and Ma but generally supported their suitability for Scales Hy and Pa. In addition, the results also suggested that all clinical scales share a common element of general distress akin to A. Tellegen's (1985) negative affectivity. These findings highlight the need for developing and validating a new set of subscales for most of the clinical scales, using external measures of relevant clinical and personality domains for which the current scales may serve as a basis.

Amadeo, M. G., Rosario-Hernandez, E., Ortiz, J. F. F., Velez, G. M., & Rivera, C. M. P. (2012). Comparison of the validity scales, clinical and restructured of the MMPI-2 in a Puerto Rican sample. *Revista Puertorriquena de Psicologia, 23*, 119-145.

The MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) Validity, Clinical and Restructured Clinical (RC) Scales profiles of 153 Puerto Rican adults were examined. Consistent with findings in U.S. studies, the present findings reflect the ability of these scales to differentiate between groups from diverse contexts. The RC scales (Tellegen, Ben- Porath, McNulty, Arbisi, Graham, & Kaemmer, 2003) retained their convergence with the Clinical scales while simultaneously demonstrating greater differentiation between the groups than the Clinical scales. Because the RC scales are the foundation for the newly published MMPI-2 RF (Ben- Porath & Tellegen, 2008), it is important to study these scales in the Puerto Rican cultural and linguistic context.

Boscan, D. C., Penn, N. E., Velasquez, R. J., Reimann, J., Gomez, N.,…, & De Romero, M. C. (2000). MMPI-2 profiles of Colombian, Mexican, and Venezuelan university students. *Psychological Reports, 87*(1), 107-110.

Performances of 82 Colombian, 87 Mexican, and 96 Venezuelan adults were compared on Spanish translations of the MMPI-2. The results show that all groups performed within the so-called normative range. Variations were found for all 3 countries, which may reflect differences in Latin subcultures. Findings suggest that more comprehensive research is required on applications of the MMPI-2 in Latin America and greater consideration of the roles of culture and nationality.

Branton, R. E. (2004). A multifaceted assessment protocol for successful international assignees. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64*(8-B), 4024.

The process of selecting and screening expatriates for successful assignments is a critical component for multinational organizations. Research suggests that there are a number of critical personality traits that tend to relate to success rates for those working in cross-cultural situations. In order to increase the likelihood of predicting successful international assignees, this critical literature analysis reviews two of the most commonly used measures of assessment utilized for personnel screening and selection, the NEO PI-R and the MMPI-2. The review provides suggestions for how these measures may be utilized with the expatriate population. A less-known measure, the CCAI, is also identified to further encapsulate helpful screening indicators. This literature review also highlights sociocultural and demographic variables, emphasizing the importance of a holistic evaluation and organizational support. Finally, an assessment battery is proposed to assist organizations in their screening processes of applicants for successful international assignments.

Butcher, J. N. (Ed.) (1996). *International adaptations of the MMPI-2: Research and clinical applications.* Minneapolis, MN: University of Minnesota Press.

[A] most widely used objective clinical test of personality is the Minnesota Multiphasic Personality Inventory-2 (MMPI-2). . . . "International Adaptations of the MMPI-2" discusses cross-national personality assessment research generally and provides extensive documentation on the adaptation of the MMPI-2 into other languages. (PsycINFO Database Record (c) 2016 APA, all rights reserved) Throughout this volume our goal is to provide both research information and clinical case material to illustrate the clinical utility of the MMPI-2 in other countries. One of the primary goals of this volume is to discuss cross-national personality assessment research and to explore the applicability of the MMPI-2 in a number of countries. A second goal is to describe a number of specific clinical adaptations of the MMPI-2 that have been initiated by psychologists in other countries, illustrating the increasing use of the instrument around the world. A third goal is to provide, in some detail, an overview of the expanding clinical research base of the MMPI-2 that has been accumulating through the work of scholars around the world.

Butcher, J. N. (2004). Personality assessment without borders: Adaptation of the MMPI-2 across cultures. *Journal of Personality Assessment, 83*(2), 90-104.

In contemporary psychology, personality assessment knows few national or cultural boundaries. Psychological tests developed in one country are often translated and adapted into cultures that might appear to be greatly different from the country of origin. In this article, I address the factors that are important to international test adaptation and examine problems that can adversely affect cross-cultural test research programs. I address qualities important for verifying the accuracy and adequacy of cross-cultural assessment. I review the extensive adaptation of the MMPI (Hathaway & McKinley, 1940) and MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), the most frequently used personality measure. I highlight several contemporary research trends in international personality assessment.

Butcher, J. N. (2005). Exploring universal personality characteristics: An objective approach. *International Journal of Clinical and Health Psychology, 5*(3), 553-566.

Mental health practitioners have long wondered whether there is a common core to psychopathology or whether mental illness is largely culturally based. Mental health problems could result primarily from cultural factors. Yet, many professionals have observed the similar ways psychiatric disorders become manifest regardless of the unique cultural and educational backgrounds of their people. Several mental disorders (e.g., schizophrenia and bipolar disorder) that one can find in DSM-IV-TR or ICD-10 have been shown to have many characteristics that are similar in symptoms across cultural boundaries. The question as to the similarity of abnormal behavior across cultures can only be adequately understood if a common methodology for researching mental health problems is used across cultures. The use of objective research strategies, such as the Minnesota Multiphasic Personality Inventory (MMPI-2) can provide a valuable means of objectively comparing mental health problems across cultures. This theoretical study addresses the value of cross-cultural personality research and examines the utility of comparing mental health problems with an instrument, like the MMPI-2, that has been shown to have both validity and utility across cultures. Important steps to improve cross-cultural mental health research are considered.

Butcher, J. N., Atlis, M. M., & Hahn, J. (2004). The Minnesota Multiphasic Personality Inventory-2 (MMPI-2). In M. J. Hilsenroth & D. L. Segal (Eds.), *Comprehensive handbook of psychological assessment* (Vol.2: Personality assessment, pp. 30-38). Hoboken, NJ: John Wiley & Sons Inc.

In this chapter, the authors examine the Minnesota Multiphasic Personality Inventory-2. The main topics discussed include the following: (1) test development and theoretical basis; (2) scoring and psychometric

characteristics; (4) range of applicability and limitations; (5) cross-cultural factors; (6) administration format and computerization; and (7) current research status and future developments.

Butcher, J. N., Ben-Porath, Y. S., Shondrick, D. D., Stafford, K. P., McNulty, J. L., Graham, J. R., Stein, L. A. R., Whitworth, R. H., & McBlaine, D. D. (2000). Cultural and subcultural factors in MMPI-2 interpretation. In J. N. Butcher (Ed.), *Basic sources on the MMPI-2* (pp. 501-536). Minneapolis, MN: University of Minnesota Press.

"Education Level and MMPI-2 Measured Psychopathology: A Case of Negligible Influence" / J. N. Butcher / Confirms that differences on the MMPI-2 as a function of education level are minimal. "MMPI-2 and Race in a Forensic Diagnostic Sample" / Y. S. Ben-Porath, D. D. Shondrick, and K. P. Stafford / Compares responses of African American and White individuals involved in competency evaluations. "Comparative Validity of MMPI-2 Scores of African American and Caucasian Mental Health Center Clients" / J. L. McNulty, J. R. Graham, Y. S. Ben-Porath, and L. A. R. Stein / Compares the validity of MMPI-2 responses of African American and White mental-health clients. "Comparison of the MMPI and MMPI-2 Administered to Anglo and Hispanic American University Students" / R. H. Whitworth and D. D. McBlaine / Provides and empirical evaluation of Latino and Anglo responses to the MMPI and MMPI-2. The articles in this section are reprinted from various sources.

Butcher, J. N., Cabiya, J., Lucio, E., & Garrido, M. (Eds.) (2007). *Assessing Hispanic clients using the MMPI-2 and MMPI-A.* Washington, DC: American Psychological Association.

Persons of Hispanic origin are the largest ethnic minority group in the United States. Practitioners involved in personality assessment will undoubtedly work with Hispanic clients who may be grappling with low English proficiency and other challenges of acculturation to U.S. society. Written by front-line experts in the use of the Minnesota Multiphasic Personality Inventory (MMPI), *Assessing Hispanic Clients Using the MMPI-2 and MMPI-A* discusses the utility of psychological tests based on U.S. norms in making clinical decisions for clients from different cultural backgrounds.
The MMPI instruments are the most extensively researched and widely used personality instruments with Spanish-speaking clients. The authors provide readers a critical sociocultural context in the use of the MMPI-2 and MMPI-A in the clinical assessment of Hispanic clients in the U.S. and abroad. Psychologists and other practitioners are offered a practical guide for clinical interpretation of test results, with advice on addressing biases, challenges to protocol validity, and other potential barriers to the culturally appropriate and ethical use and interpretation of the tests.
Butcher, Cabiya, Lucio, and Garrido provide a comprehensive review of the research literature, past and contemporary, on the use of the MMPIs with Spanish-speaking populations in the U.S. and internationally.
The authors describe the development and validation of Spanish-language versions of the MMPI-2 and MMPI-A, offering scenarios from Mexico, Cuba, and other Spanish-speaking countries. A set of appendices include T score conversion tables for the Mexican MMPI versions and a listing of Spanish language translations.

Butcher, J. N., Cheung, F. M., & Kim, J. (2003). Use of the MMPI-2 with Asian populations. *Psychological Assessment, 15*(3), 248-256.

Psychological tests developed in the United States are being widely adapted into other languages and cultures around the world. This article examines the generalizability and utility of personality assessment instruments across cultures and addresses methodological issues related to using personality questionnaires in countries different from the one in which they were developed. This article specifically highlights the application of objective psychological tests in Asia with special emphasis on the most widely used and internationally adapted personality instrument, the Minnesota Multiphasic Personality Inventory-2 (MMPI-2). Effective strategies for translating, adapting, and standardizing questionnaires in languages and cultures different from their country of origin are reviewed. The history of several successful adaptations of the original MMPI and MMPI-2 is surveyed to illustrate the extensive research base for the test in Asia. Current research is summarized, and recommendations for future research are provided.

Butcher, J. N., Derksen, J., Sloore, H., & Sirigatti, S. (2003). Objective personality assessment of people in diverse cultures: European adaptations of the MMPI-2. *Behaviour Research and Therapy, 41*(7), 819-840.

This article examines the cross-national application of psychological tests and examines the generalizability of objective psychological assessment instruments. The most widely used and internationally adapted personality instrument, the Minnesota Multiphasic Personality Inventory (MMPI-2), is highlighted to illustrate the adaptation of psychological tests across the barriers of language and culture. The problems and limitations of using questionnaire methods were noted and effective strategies for translating, adapting, and standardizing questionnaires in languages and cultures different from their country of origin are reviewed. The history of several European adaptations of the original MMPI and MMPI-2 is surveyed to illustrate the extensive research base for the test in Europe. Applications of the MMPI-2 in clinical and non-clinical (e.g. industrial) settings were noted. Current research is described and recommendations for future research are provided.

Butcher, J. N., Hass, G. A., Greene, R. L., & Nelson, L. D. (2015). Cultural factors in forensic assessment with the MMPI-2. In *Using the MMPI-2 in forensic assessment* (pp. 69-89). Washington, DC: American Psychological Association.

This chapter presents a brief review of the literature concerning the forensic use of the MMPI-2 with ethnic minorities and immigrants and the issues involving the influence of culture and socioeconomic diversity that should be considered when interpreting profiles from forensic examinees who do not neatly fit the normative sample. Psychologists interested in a more in-depth analysis of this topic are encouraged to consult other sources of information and perspectives (e.g., Butcher, 2004; Butcher, Cabiya, Lucio, & Garrido, 2007; Butcher, Mosch, Tsai, & Nezami, 2006; Butcher & Pancheri, 1976; Dahlstrom, Lachar, & Dahlstrom, 1986; Dana, 1988, 2000; Greene, 1987; Pritchard & Rosenblatt, 1980). This chapter concludes with a case study that illustrates the interpretation of an MMPI-2 profile in a forensic case of an ethnically diverse individual.

Butcher, J. N., Lim, J., & Nezami, E. (1998). Objective study of abnormal personality in cross-cultural settings: The Minnesota Multiphasic Personality Inventory (MMPI-2). *Journal of Cross-Cultural Psychology, 29*(1), 189-211.

The cross-cultural use of objective instruments to assess personality and psychopathology has increased markedly in recent times. The most widely used clinical personality inventory in ==international== settings is the ==MMPI==/MMPI-2. The present article describes the procedures characteristically followed by ==international== scholars to adapt the MMPI-2 for their clinical applications. Steps in the translation and adaptation process are described and methods of assuring test equivalence discussed. A number of ==international== MMPI-2-based research programs are highlighted and some limitations to the application of the MMPI-2 in cross-cultural research are noted.

Butcher, J. N., Mosch, S. C., Tsai, J., & Nezami, E. (2006). Cross-cultural applications of the MMPI-2. In J. N. Butcher (Ed.), *MMPI-2: A practitioner's guide* (pp. 505-537). Washington, DC: American Psychological Association.

Traditionally, the study of cultural influences on personality and psychopathology has been relegated to different subareas of anthropology. With the exception of a few renegade scientists and clinicians, psychologists and psychiatrists have begun only recently to think seriously about cultural influences on personality and psychopathology. This is partly because of demographic trends that guarantee increasing exposure to and

contact with immigrant and ethnic minority populations (U.S. Bureau of the Census, 1992) and partly because of advances in technology that facilitate international communication. In this chapter, we discuss the importance of examining personality and psychopathology across cultural and ethnic groups and the advantages to using objective personality instruments in such examinations; we review methodological problems that arise when adapting such instruments for international use; and we present technical solutions that address problems to such examinations. Finally, we present the MMPI-2 as a useful tool for assessing personality and psychopathology in different cultural and ethnic groups and discuss instruments for which most of the methodological problems have already been resolved.

Butcher, J. N., & Williams, C. L. (2009). Personality assessment with the MMPI-2: Historical roots, international adaptations, and current challenges. *Applied Psychology: Health and Well-Being, 1*(1), 105-135.

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is the most widely used personality test in psychological practice. Although originally developed during the middle of the last century in the United States, its use today extends around the world. The MMPI-2 is a robust measure given its strong empirical tradition and many innovations. Recent years have seen controversial changes to this standard of psychological assessment. New scales were added in 2003 (i.e. the Restructured Clinical or RC Scales) and the Fake Bad Scale (FBS) was included in the MMPI-2 in 2007. A new instrument called the MMPI-2 Restructured Form (MMPI-2-RF) was released in 2008 with the RC Scales replacing the well-validated MMPI-2 Clinical Scales; 40 per cent of its items eliminated; a shortened FBS included; and most of its 50 scales introduced for the first time. This article traces the history of the evolving MMPI-2 with special attention to its ==international== applications, and offers a perspective on the radical departure from past MMPI-2 research represented by the RC Scales, FBS, the MMPI-2-RF, and other recent changes to this standard in the field.

Cabiya, J. J., Lucio, E., Chavira, D. A., Castellanos, J., Gomez, F. C., & Velasquez, R. J. (2000). MMPI-2 scores of Puerto Rican, Mexican, and U.S. Latino college students: A research note. *Psychological Reports, 87*(1), 266-268.

Examined the basic validity of Spanish translations of the MMPI-2. Latino-descent persons from Puerto Rico (n = 290), Mexico (n = 1,920), and the US (n = 28) were administered 1 of 3 Spanish translations of the MMPI-2. A review of the mean scores of these respective groups indicated similarities across all scales. Differences among these 3 groups, with the exception of the Masculinity-Femininity scale, were well within the 1 standard deviation band. It is concluded that these findings are promising given the fact that 3 different translations of the MMPI-2 were applied.

Callahan, W. J. (1998). MMPI-2, symptom reports, and acculturation of White- and Mexican-Americans in psychiatric, college, and community settings. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 58*(8-B), 4439.

==Cross-cultural== studies of the original ==MMPI== have indicated that Hispanics may obtain elevated profiles in comparison to Whites, especially when clinical samples are compared. With the MMPI-2, there persists a controversy over Hispanic-White profile differences and the degree to which Hispanic acculturation influences MMFI-2 scores. This study compared White- and Mexican-Americans from outpatient psychiatric, college, and community samples on the MMPI-2. Mexican-American subjects were also administered the Acculturation Rating Scale for Mexican-Americans (ARSMA). Psychiatric patients (diagnosed with schizophrenia or schizoaffective disorder) also completed the Brief Symptom Inventory (BSI). A significant relationship between Mexican-Americans' ARSMA scores and MMPI-2 scale scores was found only in the psychiatric sample, with

less acculturated patients tending to score higher on the MMPI-2 No overall ethnic differences were observed in the psychiatric patients' profiles. However, statistically significant and clinically meaningful (e.g., greater than 5 T-score points) ethnic differences were found, with White patients (White men in particular) scoring higher on the Psychasthenia, Schizophrenia, and Social Introversion Scales. Comparison of the combined college and community samples found both ethnic groups scored well within normal limits and indicated statistically significant overall profile differences between Mexican-Americans and Whites. Univariate analyses of the MMPI-2 Validity and Clinical scales revealed that the apparent profile differences were attributable to the tendency of Mexican-American women to score significantly higher on the Lie scale than other groups. No other clinically meaningful ethnic differences were observed. In summary, MMPI-2 comparisons of Mexican-Americans and Whites from college and community samples of similar ages and educational backgrounds indicated small mean differences which were isolated on specific scales, and were not always clinically meaningful. Although Mexican-American acculturation was found to be a significant moderator of Mexican-American patients' MMP-2 performance, White patients scored higher on the MMPI-2. However, considering the small number of patients included in this study and the inclusion of only schizophrenic spectrum patients, this finding is considered tentative and not generalizable to other diagnostic groups.

Carstairs, K. S., Richards, J. B., Fletcher, E. G., Droscher, H. K., & Ecob, R. (2012). Comparison of MMPI-2 trends in UK and USA parental competency examinees. *Journal of Child Custody: Research, Issues, and Practices, 9*(3), 195-200.

Stredny, Archer, and Mason (2006) collected MMPI-2 data on 127 individuals who were ordered by the court to undergo parental competency evaluations in the United States. We sought to compare their results with the MMPI-2 profiles of a sample of 89 U.K. parents who had also undergone court-ordered parental competency evaluations. The MMPI-2 results for the U.K. sample were found to be largely consistent with the U.S. sample, with a near significant elevation on the Lie scale (L) and peaks on clinical scales 4 (Psychopathic Deviate) and 6 (Paranoia). A significant difference between the two samples was found only on Scale 5 (Masculinity/ Femininity).

Cheung, F. M., Cheung, S., & Zhang, J. (2004). Convergent validity of the Chinese Personality Assessment Inventory and the Minnesota Multiphasic Personality Inventory-2: Preliminary findings with a normative sample. *Journal of Personality Assessment, 82*(1), 92-103.

We examined the convergent validity of the Chinese Personality Assessment Inventory (CPAI; Cheung, Leung, et al., 1996), an indigenously constructed measure, by comparing its patterns of correlations with the MMPI-2 (Butcher et al., 2001). A valid sample of 147 Chinese students took both the CPAI and the MMPI-2. Results provide preliminary support for the convergence between most of the CPAI clinical scales and the relevant MMPI-2 scales. The CPAI personality scales further illustrated the patterns of personality features associated with the MMPI-2 scales in a Chinese cultural context. We discuss discrepancies in the correspondence between a number of CPAI and MMPI-2 clinical scales.

Choi, S. J. (2001). Acculturation and method bias in reporting of psychological symptoms among first-generation Korean Americans. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 61*(7-B), 3835.

Cross-cultural comparisons of East Asians with European Americans suggested a systematic trend varying with the assessment method used (Park, Upshaw, & Kuo, 1988). Employing a non-experimental within-subjects design, Park et al. (1988) also found that self-report measures elicited more psychological distress among elderly Korean immigrants, relative to European Americans, whereas comparisons using face-to-face structured

interviews yielded no significant ethic group differences. The purposes of this research were to experimentally examine a potential cross-cultural method bias in psychological symptom reporting and to investigate the possible role of impression management (IM) in socially desirable responding. Fifty-two first-generation Korean Americans and 52 age- and sex-matched U.S. born European Americans were recruited from the community in the greater New York metropolitan area. Following random assignment to either self-report or face-to-face interview, subjects were individually administered either the Korean or English versions of the demographic questionnaire, Symptom Checklist 90-Revised (SCL-90-R), Balanced Inventory of Desirable Responding Version 6 (BIDR) Other-Deception Questionnaire (ODQ) and Self-Deception Questionnaire (SDQ), and Minnesota Multiphasic Personality Inventory L and K scales (MMPI-L and K). Measures were administered by a bilingual Korean interviewer of the same sex as the subject. The Suinn-Lew Asian Self-Identity Acculturation scale (SLASIA), which was administered only to the Korean Americans, and the BIDR were translated into Korean and evaluated in a preliminary study; findings supported the reliability and validity of the two translations. The findings did not support the hypothesized presence of a significant cross-cultural method bias in the assessment of psychological distress. In conjunction, the unacculturated Korean Americans behaved similarly to European Americans in socially desirable responding. Controlling for SLASIA and SDQ scores, IM, as measured by ODQ, did not account for a significant amount of variance in overall psychological symptom reporting, as assessed by SCL-90-R Global Severity Index. These findings suggested that assessment method might not necessarily influence psychological symptom reporting among first-generation Korean Americans in the greater New York metropolitan area. Additionally, ethnic differences in IM did not vary by assessment method, and IM did not predict overall psychological symptom reporting among Korean Americans. Several demographic variables were significantly associated, however, with psychological symptom reporting, as well as with socially desirable responding. Further study of the influence of these variables on increasing the likelihood of biased assessment may be helpful in clarifying previously reported finding of a method bias among Korean immigrants.

Chung, J. J., Weed, N. C., & Han, K. (2006). Evaluating cross-cultural equivalence of the Korean MMPI-2 via bilingual test-retest. *International Journal of Intercultural Relations, 30*(5), 531-543.

Previous efforts to establish the cross-cultural equivalence of the Korean MMPI-2 have focused on analysis of internal structure and peer behavioral correlates using only a Korean college sample. The intent of this study was to provide further evidence of the cross-cultural equivalence of the Korean MMPI-2 using a bilingual test-retest method. Fifty-three self-reported bilinguals living in the US completed both the MMPI-2 in Korean and English within a 1-week interval. Their profiles were compared to previously established test-retest reliabilities. Cross-language correlations were sizable, but substantially lower than the published within-language test-retest correlations. However, when a proficient bilingual subsample was selected from the original sample post hoc, cross-language correlations were more similar to test-retest reliabilities. Cross-language item analysis revealed that items with simple and direct grammar had the highest item agreement. Complicated sentences, such as those containing double negatives or unique American idioms, had the least concordance.

Cleveland, P. W. (2008). Hope and elevations on the Minnesota Multiphasic Personality Inventory-2 in cross-cultural missionaries. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 69*(4-B), 2668.

This study explores the relationship between hope and depression, demoralization and low positive emotions in evaluations of cross-cultural, long-term missionaries as measured by the Agency and Pathways subscales of the Adult Dispositional Hope Scale. Hope was correlated with five scales of the Minnesota Multiphasic Personality Inventory-2. The five scales are the Depression scale on the clinical scales, the Depression scale on the content

scales, the demoralization scale, and the low positive emotions scale on the restructured clinical scales, and the Introversion-Low Positive Emotionality scale (INTR/LPE) on the PSY-5 scales. Participants were 57 cross-cultural missionary clients from an outpatient counseling center. This survey method research design used Pearson correlations, multiple regressions, and multivariate analysis of covariance to explore relationships between hope scores on the subscales of the ADHS and five scales of the MMPI-2. Pearson correlations showed that there was no significantly negative correlation between the ADHS subscales and four of the MMPI-2 scales. There was a significant negative correlation between the Depression content scale and the Agency subscale. A multiple regression analysis demonstrated that 22% of the criterion variance for the Agency subscale scores could be accounted for by the combined predictors, Depression Content and demoralization. Eighteen percent of this 22% could be specifically accounted for by Depression Content. Multivariate Analysis of Covariance did not statistically demonstrate that there was a significant difference between the hope scores of missionaries who scored high and those who scored low on the MMPI-2. Furthermore, the MANCOVA did not support the hypothesis that there would be a statistically significant interaction between the scales of the MMPI-2 to differentially affect the hope scores when these were adjusted for months between administrations of the MMPI-2 and the ADHS.

Cox, A. C., Weed, N. C., & Butcher, J. N. (2009). The MMPI-2: History, interpretation, and clinical issues. In J. N. Butcher (Ed.), *Oxford handbook of personality assessment* (pp. 250-276). New York, NY: Oxford University Press.

One of the oldest and still most widely used personality assessment instrument around the world today is the MMPI (MMPI-2 and MMPI-A). This chapter addresses the history, interpretation, and clinical issues to provide an introductory overview of the use of the MMPI-2 in clinical assessment. The chapter includes exhibits illustrating historical developments and summarizing MMPI-2 measures and contain, up-to-date references and resources for readers interested in a more thorough treatment. The traditional MMPI-2 clinical, content, and supplemental scales are described and strategies for interpretation are provided. Some newer measures, such as the PSY-5 and Restructured Clinical scales, are also described. Clinical issues in the use of the MMPI-2 such as using the MMPI-2 with minority populations and international settings are described. In addition, some procedures that have produced less effective results, such as MMPI short forms, are noted.

Dana, R. H. (2013). Culture and methodology in personality assessment. In F. A. Paniagua & A.Yamada (Eds.), *Handbook of multicultural mental health: Assessment and treatment of diverse populations* (2nd Ed., pp. 205-224). San Diego, CA: Elsevier Academic Press.

This chapter begins with an examination of bias in research. Biased methodology has a history in the United States based on application of a scientific model developed by the majority culture to all cultural elements within the society. This methodology has been focused on affirming prediction and control elements of a Euro-American worldview. Understanding is also a legitimate scientific objective, but has been relegated to an ancillary position and occurs largely by inference or as a by-product of prediction and control. In a society self-proclaimed as a "melting pot," the scientific establishment has minimized group differences by assuming homogenization to be a fact rather than a fictive outcome of ethnocentrism. As a consequence, bias has a history in assumptions made for conventional statistical tests and their interpretation. Bias also occurs in research designs used for group comparisons and selecting as well as sampling research participants. Evaluating and minimizing bias in cross-cultural equivalence research and translation methodologies has been updated and elaborated. Examples of bias reduction in the Rorschach Comprehensive System (RCS), the Minnesota Multiphasic Personality Inventory (MMPI 2), and the Thematic Apperception Test (TAT) illustrate methodologies in test construction, interpretation, and use of new normative data. Normative data for ethnic

minority populations includes population appropriateness, test reliability and validity, differential prediction or regression, and item analysis using item response theory (IRT) methodology and performance differences.

Dong, Y., & Church, A. T. (2003). Cross-cultural equivalence and validity of the Vietnamese MMPI-2: Assessing psychological adjustment of Vietnamese refugees. *Psychological Assessment, 15*(3), 370-377.

The cross-cultural equivalence and validity of the Vietnamese translation of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) were examined in a sample of 1st-generation Vietnamese refugees in the United States (N = 143). Respondents completed the Vietnamese MMPI-2, the Harvard Trauma Questionnaire, a measure of acculturation, and a demographic questionnaire. An inspection of MMPI-2 mean profiles and items showing extreme endorsement rates suggested that certain symptom tendencies and cultural values may be reflected in responses to some MMPI-2 items. Older age, lower acculturation, greater experienced premigration-postmigration traumas, and military veteran status were all associated with elevated MMPI-2 profiles, suggesting that the MMPI-2 functions in a reasonably equivalent and valid way in this population.

Egger, J. I. M., De Mey, H. R. A., Derksen, J. J. L., & van der Staak, C. P. F. (2003). Cross-cultural replication of the five-factor model and comparison of the NEO-PI-R and MMPI-R PSY-5 scales in a Dutch psychiatric sample. *Psychological Assessment, 15*(1), 81-88.

The authors investigated cross-cultural replicability of the five-factor model (FFM) of personality as represented by the revised NEO Personality Inventory (NEO-PI-R; P. T. Costa & R. R. McCrae, 1992) in a sample of 423 Dutch psychiatric patients. Also, NEO-PI-R domain scales were compared with the Personality Psychopathology Five (PSY-5; A. R. Harkness & J. L. McNulty, 1994) scales of the Minnesota Multiphasic Personality Inventory--2 (J. N. Butcher, W. G. Dahlstrom, J. R. Graham, A. Tellegen, & B. Kaemmer, 2002). Principal-components analysis with procrustean rotation confirmed the hypothesized structural similarity of the present sample with the U.S. normative factor scores. All of the hypothesized relations between NEO-PI-R and PSY-5 scales were confirmed. The results provide evidence for cross-cultural replicability of the FFM and for validity of the NEO-PI-R and PSY-5 constructs in the psychological assessment of psychiatric patients.

Egger, J., De Mey, H., Derksen, J., & van der Staak, C. (2003). MMPI-2 and MCMI-III scores among Dutch inpatient substance abusers: Assessing correspondence and cross-cultural equivalence. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues, 22*(2), 117-124.

The Millon Clinical Multiaxial Inventory (MCMI-II and MCMI-III) and the Minnesota Multiphasic Personality Inventory (MMPI-2) were applied to 263 Dutch inpatient substance abusers with multiple psychiatric diagnoses, and the results compared with those of 306 North-American substance abusers studied by Ward (1995). We looked for structural similarity both across groups (per instrument) and across the two instruments (per sample), using principal components analysis and congruence analysis. The component structure found by Ward was partly replicated in the Dutch group, thus cross-validating the use of the two instruments with these patients. Moreover, as found by Ward, the MMPI-2 content and supplementary scales of the Dutch sample proved to be important determinants of the first three MMPI-2 components, adding to convergent validity. Questions remained about the influence of the (dis)continuity of MCMI-II and MCMI-III on the replicability of the MCMI components.

Fantoni, P. A. M. (1995). A criterion validity study of the MMPI-2 and PAI Spanish versions with DIS diagnosis: Implications for clinical practice. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 56*(5-B), 2933.

New Spanish versions of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) and the Personality Assessment Inventory (PAI) were assessed with the Spanish translation of the Diagnostic Interview Schedule (DIS) as the gold standard. Participants were one hundred-five monolingual (Spanish-speaking only) and bilingual (Spanish- and English-speaking) Hispanic psychiatric inpatients and outpatients from several community mental health centers, an addiction treatment clinic, and a hospital in Chicago, Illinois. Findings from categorical and dimensional analyses suggest that, although the degree of diagnostic concordance of both measures with the DIS was found to be moderately high, the MMPI-2 clinical scales yielded greater specificity but lower sensitivity than the PAI scales on two of four diagnostic categories (i.e., Major Depression, and Schizophrenia). Both measures failed to correctly diagnose Anxiety Disorders, while the MMPI-2 also showed poor diagnostic accuracy with Alcohol Dependence. Furthermore, participants were divided by country/region of origin into Puerto Ricans, Mexican Americans, and Latin Americans. Findings suggest MMPI-2 profiles differences due to ethnicity: Puerto Ricans had higher clinical elevations than Mexican Americans on Schizophrenia and Anxiety Disorders scales. Implications of the findings for epidemiological research and clinical practice were discussed.

Fetvadjiev, V. H., & van de Vijver, F. J. R. (2015). Measures of personality across cultures. In G. J. Boyle, D. H. Saklofske, & G. Matthews (Eds.), *Measures of personality and social psychological constructs* (pp. 752-776). San Diego, CA: Elsevier Academic Press.

In this chapter, we review the largest, most popular multidimensional personality instruments used in cross cultural comparisons of adults. We consider countries to represent cultures (despite cultural sub samples within countries). We have not included studies examining only immigrant or different groups within countries, where issues of acculturation and multiculturalism would require additional attention. Except for the widely used Minnesota Multiphasic Personality Inventory (MMPI-2) and Myers-Briggs Type Indicator (MBTI), and the recently developed HEXACO Personality Inventory, all publications included contain direct information about the structural and measurement equivalence across cultures as assessed in exploratory (EFA) and confirmatory factor analysis (CFA) and analyses of item bias or differential item functioning (DIF).

Garrido, M., & Velasquez, R. (2006). Interpretation of Latino/Latina MMPI-2 profiles: Review and application of empirical findings and cultural-linguistic considerations. In J. N. Butcher (Ed.), *MMPI-2: A practitioner's guide* (pp. 477-504). Washington, DC: American Psychological Association.

This chapter contains three major sections. The first section is a review of empirical MMPI/MMPI-2 findings with U.S. Latinos/Latinas. In this review, we highlight the main research and methodological issues that have characterized the study of MMPI/MMPI-2 use with Latinos/Latinas. We also provide an overview of the main cultural and linguistic considerations in the interpretation of the MMPI-2 in light of the diversity and heterogeneity of the U.S. Latino/Latina population. In the second section, we offer interpretive guidelines that incorporate research findings, sociocultural considerations, and clinical experience in the interpretation of specific MMPI-2 scales. The third section presents case studies drawn from our clinical experience with inpatients, outpatients, forensic clients, and bilingual clients. The cases are discussed by highlighting interpretive issues and guidelines that clinicians should consider in their own work.

Greene, R. L., Robin, R. W., Albaugh, B., Caldwell, A., & Goldman, D. (2003). Use of the MMPI-2 in American Indians: II. Empirical correlates. *Psychological Assessment, 15*(3), 360-369.

R. W. Robin, R. L. Greene, B. Albaugh, A. Caldwell, and D. Goldman (2003; see record 2003-08831-014) reported that members of 2 American Indian tribal groups had statistically significant higher T scores on several MMPI-2 clinical,content, and supplementary scales than did the MMPI-2 normative group. The present study investigated the empirical correlates of the MMPI-2 scales in these American Indian tribal members. There were a large number of significant correlates reflecting antisocial symptoms with Scales 4 (Psychopathic Deviate), 9 (Hypomania), Anger, and Antisocial Practices. There were even a larger number of significant correlates reflecting generalized distress and negative affect with Scales 7 (Psychosthenia), 8 (Schizophrenia), Anxiety, Obsessions, Depression, and Welsh Anxiety. The rationally derived MMPI-2 content scales generally had larger correlations with these constructs than the clinical scales. Thus, the differences reported by R. W. Robin et al. (2003), appear to reflect behaviors and symptoms that American Indians participants were experiencing rather than test bias.

Guardado-Soto, R. E. (2014). Cultural differences on the Minnesota Multiphasic Personality Inventory-2 validity scales: A comparison of Latino and Caucasian adult samples. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 74*(12-B(E)).

 The MMPI-2 is extensively employed in the United States in multiple areas including clinical, personnel, and forensic settings. A myriad of research has been conducted to establish empirical support for the use of the MMPI/MMPI-2 with diverse cultural groups and it has been found to be valid and reliable. Differences have been noted in scores between Latinos and Caucasians, specifically with validity scales Lie (L), Infrequency (F) and Correction (K) along with differences in multiple clinical scales on both the MMPI and the MMPI-2. Researchers have found that level of acculturation is related to the scores on the MMPI-2. Latino cultural values such as Familismo, Personalismo, Espiritismo, Machismo, and Fatalismo have been shown by research to influence an individual's choices, perception, and actions. This study sought to evaluate the relationship between Latino MMPI-2 scores and specific cultural values of Familismo, Personalismo, Espiritismo, Machismo, and Fatalismo. Contrary to what was hypothesized, Latinos and Caucasians did not score statistically different on the MMPI-2 Scale L & F. Latinos obtained statistically higher scores on measures of Latino values, Espiritismo and Fatalismo, than did Caucasians. Acculturation did not significantly predict MMPI-2 scale L or F scores for Latinos. However, the cultural values of Espiritismo and Personalismo significantly explained variance on the validity scales F and L respectively. Espiritismo significantly predicted MMPI-2 Scale F scores (p < .05), after controlling for income/education, ethnicity and Fatalismo. Also, Personalismo significantly predicted MMPI-2 Scale L scores (p < .05) after controlling for income, ethnicity, and Fatalismo.

Hahn, J. (2005). Faking bad and faking good by college students on the Korean MMPI-2. *Journal of Personality Assessment, 85*(1), 65-73.

Recent studies that have investigated the utility of MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) validity scales have shown the promising efficacy of these scales in detecting faking-good and faking-bad responses. However, existing research is confined to North America, and work in other cultures is still lacking. The purpose of this study lies in exploring the efficacy of MMPI-2 validity scales in South Korea. The F, Fb, F - K, and F(p) scales of the Korean MMPI-2 (Han, 1993) were able successfully to classify faking-bad participants. The L, K, and S scales of the Korean MMPI-2 were able successfully to classify faking-good participants. Overall, the results of this study suggest that the Korean MMPI-2 works well in discriminating dishonest responses, thus confirming the applicability of the MMPI-2 validity scales in a Korean context.

Han, K. (1993). The use of the MMPI-2 in Korea: Inventory adaptation, equivalence evaluation, and initial validation. *Dissertation Abstracts International, 54*(5-B), 2804.

No abstract available

Han, K., Park, H. I., Weed, N. C., Lim, J., Johnson, A., & Joles, C. (2013). Gender differences on the MMPI across American and Korean adult and adolescent normative samples. *Journal of Personality Assessment, 95*(2), 197-206.

The purpose of this study was to examine whether gender differences on the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989) and Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A; Butcher et al., 1992) items are comparable across 2 distinctive cultural samples: Americans and Koreans. Using large, representative adult and adolescent samples from both cultures, we found that the American samples were associated with a higher proportion of items with gender differences than the Korean samples. The American adult sample produced gender differences on a higher proportion of items than did the American adolescent sample, but no such age difference was found between the Korean samples. Despite these differences between cultures and between age groups, content dimensions underlying items with gender differences were very similar across cultures and age groups, centering on stereotypical gender interests, behaviors, and emotions.

Kagan, C. A. (2015). Impact of cultural identity on MMPI-2 profiles in northern plains American Indians. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 76*(2-B(E)).

American Indian populations experience high rates of psychological distress with 44.5% percent of Northern Plains American Indians reporting experiencing some depressive, anxiety, or substance use disorder over their lifetime. The MMPI-2 is a commonly used psychodiagnostic tool that has become widely used in the mental health treatment of different racial and ethnic groups. Research on the MMPI-2 with minority populations, and American Indian populations in particular, fails to account for the impact of level of acculturation. This study examined the impact of cultural identity on MMPI-2 profiles in Northern Plains American Indians and comparison Caucasian samples. Participants were administered a reading test, the MMPI-2, the Northern Plains Biculturalism Inventory to assess level of acculturation, and a brief demographic form. Results show that American Indians who identify as traditional and, to a lesser extent, bicultural tend to score significantly higher than Caucasian participants on a number of Validity (VRIN, TRIN, F, Fb, Fp, L), Clinical (Pa, Sc, Ma), Harris-Lingoes (Pa1, Sc1, Sc3, Sc5, Sc6, Ma4), and Content (FRS, DEP, HEA, BIZ, ANG, ASP, TPA, SOD, FAM, TRT) Scales. These results would indicate that level of acculturation impacts performance on the MMPI-2. This may suggest that Northern Plains American Indians 1) who are less acculturated experience more psychological distress and exhibit more traits of psychological disorders and 2) score higher because they interpret the items differently based upon the impact of their culture on their worldview.

Ketterer, H. L., Han, K., Hur, J., & Moon, K. (2010). Development and validation of culture-specific Variable Response Inconsistency and True Response Inconsistency Scales for use with the Korean MMPI-2. *Psychological Assessment, 22*(3), 504-519.

In response to the concern that Minnesota Multiphasic Personality Inventory-2 (MMPI-2; J. N. Butcher, W. Dahlstrom, J. R. Graham, A. Tellegen, & B. Kaemmer, 1989; J. N. Butcher et al., 2001) Variable Response Inconsistency (VRIN) and True Response Inconsistency (TRIN) score invalidity criteria recommended for use

with American samples results in an excessive number of exclusions in Asian samples (F. M. Cheung, W. Z. Song, & J. X. Zhang, 1996), we examined the cross cultural equivalence of the original VRIN and TRIN scales, and developed and validated Korean-specific VRIN and TRIN scales with Korean adult normative, clinical, and college samples. Although the results from item pair correlation analyses suggested the superiority of the Korean VRIN and TRIN over the original VRIN and TRIN, the mean comparison results and classification accuracy statistics using data with varying degrees of randomly inserted true and/or false responses did not reveal a strong advantage of one version over the other. We present and discuss plausible causes of the findings.

Kim, S., Goodman, G. M., Toruno, J. A., Sherry, A. R., & Kim, H. K. (2015). The cross-cultural validity of the MMPI-2-RF Higher-Order Scales in a sample of North Korean female refugees. *Assessment, 22*(5), 640-649.

We investigated the cross-cultural factorial validity of the three Higher-Order (H-O) scales in the Minnesota Multiphasic Personality Inventory-2 Restructured Form (MMPI-2-RF) among a sample of North Korean female refugees (N = 2,732). Given the importance of the H-O scales in the overall structure of the MMPI-2-RF scales and in interpretation, we were interested in exploring their cross-cultural validity. We conducted an exploratory factor analysis (EFA) on the nine Restructured Clinical (RC) scale raw scores and fitted and compared one- to three-factor models. The three-factor model, akin to the model in Tellegen and Ben-Porath, demonstrated the best fit to the data. Furthermore, the pattern matrices of loadings across the current sample and the U.S. samples were comparable despite some differences, such as the RC2 scale's salient, negative loading on a factor analogous to the Behavioral/Externalizing Dysfunction scale. We also investigated the unique psychological characteristics of the refugees, possibly resulting from the arduous, perilous journeys out of North Korea taken by this group of female refugees and discussed the results of EFA in light of those singular psychological traits and experiences. Overall, the three H-O scales of the Korean MMPI-2-RF evidenced reasonable cross-cultural factorial validity among the sample of North Korean female refugees.

Kwan, K. K., Gong, Y., & Maestas, M. (2010). Language, translation, and validity in the adaptation of psychological tests for multicultural counseling. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. M. Alexander (Eds.), *Handbook of multicultural counseling* (3rd Ed., pp. 397-412). Thousand Oaks, CA: Sage Publications, Inc.

In this chapter, we report an empirical study that explored the relationships among cultural orientations (response frequency, perceived desirability, and perceived shamefulness of item endorsement); defensiveness; and endorsement of MMPI-2 items with a sample of Korean international students in the United States. We conclude by applying knowledge in the conceptual and empirical literature reviewed in this chapter to approach a clinical scenario.

Kwon, S. (2009). Relative reliability and validity of the Korean MMPI-2 Clinical Scales and restructured clinical scales in a Korean psychiatric sample. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 69*(12-B), 7849.

Despite wide popularity of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2), low internal consistency and high interscale covariation among its Clinical Scales (CS) have been noted as weaknesses. The most recent solution proposed to address scale heterogeneity and covariance is the Restructured Clinical Scales (RCS). The RCS were designed to lure away common psychopathology variance into a separate scale and to augment the unique component within each Clinical Scale. Accruing evidence indicates that the reliabilities of the RCS have been greatly improved while not causing any serious loss of external validity in American normative and clinical samples. Whether the psychometric improvements discovered in American samples will

be replicated in samples with different culture and language is an empirical question that has not been examined yet. In this study, the Korean RCS and the CS were compared with regard to their internal consistency, internal, and external validities within a 395 case Korean psychiatric sample. Psychiatric patients' MMPI-2 scores and clinician ratings were subjected to correlational and regression analyses. ==Cross-cultural== comparisons with the American RCS and CS were also carried out. Psychometric improvements through restructuring were evident in this sample with the magnitude of gains varying by scale. In general, the RCS were more internally consistent, less saturated by demoralization, and less intercorrelated than their CS predecessors. Because of their relative freedom from demoralization, correlates for RCS were fewer than those for CS, with the number of meaningful correlates varying: RCS 1, 2, 4, and 7 had several; 3, 6, 8, and 9 had few. The RCS were less sensitive but more specific to DSM-IV diagnoses. Depending on gender, behavioral correlates differed. Superior psychometric characteristics and behavioral correlates consistent with the proposed constructs justifies discriminating use of four RCS (RC1, 2, 4, and 7) in place of their predecessors. Utilization of RC 3, 6, 8, and 9 independent from their clinical counterparts is unwarranted because of their poor external validity. Given the responsiveness of RCS to sample characteristics, generalization of empirical findings about RCS warrants caution. Local investigation of behavioral correlates is imperative in future studies.

Laughter, V. A. (2014). The impact of examiner and respondent ethnic similarity on personality assessment measures. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 74*(8-B(E)).

This research examined the impact of the examiner and respondent being of the same or different ethnicity on assessment results using the Rorschach (RPAS), MMPI-2, and NEO-PI-R. To accomplish this, 128 respondents were randomly assigned to an examiner based on ethnicity to be either the same or different ethnic dyads. Respondent's perceptions of racial and ethnic/cultural similarity to the examiner were examined. Results indicated that ethnically dissimilar dyads presented with more distress with higher scores on the NEO-PI-R Neuroticism scale, MMPI-2 Welsh's A scale, and Rorschach SC-Comp variable. Ethnic minorities who were in different ethnic dyads presented as less engaged on the Rorschach as measured by Complexity, number of responses, and prompts. Higher perceived racial similarity was associated with lower scores on scale F and Welsh's A, and higher perceived ethnic/cultural similarity was associated with fewer prompts on the Rorschach. Overall, there were few group differences; the limitations and need for future research was discussed.

Lessenger, L. H. (1998). The relationship between cultural identity and MMPI-2 scores of Mexican American substance abuse patients. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 59*(2-B), 0877.

The purpose of this study was to explore the specific implications of culture on structural assessment procedures. One hundred Mexican American male substance abuse patients were administered the MMPI-2 and the Acculturation Rating Scale for Mexican Americans, Version II (ARSMA-II). The analyses supported the hypothesis that cultural identity would be significantly correlated to scores on four MMPI-2 scales. The hypothesis that acculturation would be significantly correlated to the MMPI-2 scores was not supported. Although the correlations between MMPI-2 scales and cultural identity were larger than for acculturation, the difference between correlations was not significant. Cultural identity was found to contribute to the variance in MMPI-2 scale scores independently of demographic variables. Three subscales comprised the total cultural identity score (Anglo Cultural Identity, Mexican American Cultural Identity and Mexican Cultural Identity). Mexican American cultural identity was found to be the most powerful predictor of three of the MMPI-2 scale scores, while Anglo cultural identity was most powerful in predicting one scale score. The subjects displayed a

bicultural orientation with moderate levels of identification with Mexican, Mexican American, and Anglo American cultures. Implications of the study's finding and directions for future research were discussed.

Lucio, E., Ampudia, A., Duran, C., Leon, I., & Butcher, J. N. (2001). Comparison of the Mexican and American norms of the MMPI-2. *Journal of Clinical Psychology, 57*(12), 1459-1468.

Presents the results of the norms for the Mexican general population in comparison with the North American normative population. This study addresses psychopathology from the point of view in which emic and etic traditions are combined. The Mexican sample includes 1744 adults (aged 19-80 yrs) from different regions of the country. Means and standard deviations were calculated and compared with the North-American normative sample. Cronbach a coefficients also were obtained. The greatest differences observed were in the scales L (lies) and 5 (masculinity-femininity), which indicates that the greater distinctions between both populations are with respect to test-taking attitude in taking the test, which may be due to cultural factors. In comparison to the American norms, the Mexican population does not show psychopathology on the MMPI-2 scales.

Moran, C. (2011). MMPI-2-RF scale comparisons of American and Mexican women entering into substance abuse treatment: An international study. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 71*(9-B), 5799.

The present study compared MMPI-2-RF scale scores of American and Mexican women entering into substance abuse treatment in Mexico and California. Hypotheses predicted American and Mexican women to obtain clinically significant elevations on the Substance Abuse (SUB) Scale, and Mexican women to score significantly higher than American women on Validity Scales, Lie (L-r), Infrequent Responses (F-r), and Adjustment (K-r). Two-tailed t-tests were used to compare the means of Mexican and American women on the SUB, L-r, F-r, and K-r Scales, and ANOVAS were used to compare the means of the remaining 46 Scales. The present study found clinically significant elevations for Mexican and American women on the SUB Scale, and significant differences at the $p<.05$ level in the predicted direction on the L-r and F-r Scales. Significance was found on the K-r Scale, but in the opposite direction than was predicted. Results were consistent with MMPI-2 research, which showed Hispanics scoring higher than Caucasians on the L and F Scales (Greene, 1987; Hall, Bansal, & Lopez, 1999). Results of the present study suggested within a substance abuse treatment setting, MMPI-2-RF Validity Scales appeared to discriminate between Mexican and American women. The ANOVA of the remaining 46 scales showed significant differences at the $p<.05$ level between Mexican and American women on eight scales. Mexican women scored higher on three scales that measure thought dysfunction, Ideas of Persecution (RC6), Psychoticism-Revised (PSYC-r), and Thought Dysfunction (THD), two scales that measure behavior dysfunction, Aggression (AGG) and Aggressiveness-Revised (AGGR-r), and one scale that measures emotional dysfunction, Behavior-Restricting Fears (BRF). American women scored higher on a measure of interpersonal functioning, the Interpersonal Passivity (IPP) Scale. Results indicated that with the context of a substance abuse treatment setting American women tend to be less assertive than Mexican women, and Mexican women appear to experience more anger. Mexican women appear to have less coping abilities within the context of a substance abuse treatment setting than American women. Limitations to the study include the relatively small sample size of 72 total participants derived from two substance abuse clinics, and the use of minimal demographic data.

Nezami, E., Zamani, R., & DeFrank, G. (2008). Linguistic translation of psychological assessment tools: A case study of the MMPI-2. *Evaluation & the Health Professions, 31*(3), 313-317.

This article examines the effect of cultural differences on translation accuracy outcomes for the translation of the Minnesota Multiphasic Personality Inventory-2 (S. R. Hathaway & J. C. McKinley, 1940) into Farsi for use in Iran.

Nichols, D. S., Padilla, J., & Gomez-Maqueo, E. L. (2000). Issues in the cross-cultural adaptation and use of the MMPI-2. In R. H. Dana (Ed.), *Handbook of cross-cultural and multicultural personality assessment* (pp. 247-266). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

This chapter discusses issues in the cross-cultural adaptation and use of the MMPI-2. Topics include: research issues in cross-cultural use of the MMPI-2 (linguistic equivalence, conceptual equivalence, metric equivalence, functional equivalence); and progress and directions for the future.

Nzewi, E. N. (1999). Patterns of MMPI-2 scores of non-psychiatric Nigerian university graduates. *Journal of Psychology in Africa: South of the Sahara, the Caribbean, and Afro-Latin America, 9*(2), 101-114.

The study attempted to determine MMPI-2 response patterns of Nigerian university graduates and whether the MMPI-2 could be used clinically in Nigeria without major modification and re-standardization. The sample consisted of 108 males and 79 females (aged 23-32 yrs) reduced in size from 150 and 122 males and females respectively following profile validity screening. Nigerian mean T-Scores were within the normal range on all validity and clinical scales except scales F and Scale 8 with mean T-Scores of 68 for males and 65 for females. Highest profile elevations occurred on these 2 scales. There was minimal gender differences between the Nigerians with significant differences only on Scale 1 (Hs), 2 (D), 3 (Hy) and 5(Mf). The findings are discussed in terms of cross-cultural use of the MMPI-2 and implications for clinical use of the MMPI-2 in Nigeria.

Poizner, J. (2010). A cross-cultural examination of the MMPI-2-RF Substance Abuse scale: Comparing samples from Mexico and the United States. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 71*(6-B), 3944.

Although there are decades of research pertaining to MMPI instruments, there is presently a dearth of literature related to the MMPI-2-RF. Among its numerous significant differences, the MMPI-2-RF does not utilize the MMPI-2's multiple scales for detecting substance abuse, and instead relies exclusively on a single scale known as Substance Abuse (SUB). To date, the only published MMPI-2-RF study involving substance abuse involves the publication manual's comparative sample of Veterans Affairs (VA) male inpatients. There are also no published studies that involve the cross-cultural analysis of the MMPI-2-RF. This study aimed to augment the literature by examining the MMPI-2-RF data from two samples of males receiving inpatient substance abuse treatment, one from Mexico City (n = 63) and one from Redwood City, California (n = 63), which were also compared to the VA sample (n = 1,151). The data from these samples were analyzed across 5 MMPI-2-RF scales: SUB, Uncommon Virtues (L-r), Antisocial Behavior (RC4), Aggressiveness (AGGR-r), and Aggression (AGG). All three samples clinically elevated (T = 65 or greater) SUB, offering initial support for its utility in cross-culturally screening for substance abuse. T-tests revealed statistically significant differences between the Mexico City and California samples' mean T scores on SUB, L-r, AGGR-r, and AGG, all of which were higher for the Mexico City sample. The Mexico City sample also obtained statistically significantly higher scores than the VA sample on AGGR-r and AGG. The VA sample obtained statistically higher scores than the California sample on L-r, AGGR-r, and AGG. In an exploratory analysis, a one-way analysis of variance (ANOVA) and Mann-Whitney U test revealed statistically significant differences between the Mexico City and California

samples on 21 of the remaining 45 scales, with the Mexico City sample obtaining higher scores on every scale except one Implications, limitations, and suggestions for future research are discussed.

Robin, R. W., Greene, R. L, Albaugh, B., Caldwell, A., & Goldman, D. (2003). Use of the MMPI-2 in American Indians: I. Comparability of MMPI-2 between two tribes and with the MMPI-2 normative group. *Psychological Assessment, 15*(3), 351-359.

The comparability of the MMPI-2 in American Indians with the MMPI-2 normative group was investigated in a sample of 535 Southwestern and 297 Plains American Indian tribal members with contrasting sociocultural and historical origins. Both American Indian tribal groups had clinically significant higher T scores (>5 T points) on 5 validity and clinical scales, 6 content scales, and 2 supplementary scales than did the MMPI-2 normative group. There were no significant differences between the 2 tribal groups on any of the MMPI-2 clinical, content, or supplementary scales. Matching members of both tribes with persons in the MMPI-2 normative group on the basis of age, gender, and education reduced the magnitude of the differences between the 2 groups on all of these scales, although the differences in T scores still exceeded 5 T points. It appears likely that the MMPI-2 differences of these 2 American Indian groups from the normative group may reflect their adverse historical, social, and economic conditions.

Rosen, G. M., Baldwin, S. A., & Smith, R. E. (2016). Reassessing the "traditional background hypothesis" for elevated MMPI and MMPI-2 Lie-scale scores. *Psychological Assessment, 28*(10), 1336-1343.

The Lie (L) scale of the Minnesota Multiphasic Personality Inventory (MMPI) is widely regarded as a measure of conscious attempts to deny common human foibles and to present oneself in an unrealistically positive light. At the same time, the current MMPI-2 manual states that "traditional" and religious backgrounds can account for elevated L scale scores as high as 65T-79T, thereby tempering impression management interpretations for faith-based individuals. To assess the validity of the traditional background hypothesis, we reviewed 11 published studies that employed the original MMPI with religious samples and found that only 1 obtained an elevated mean L score. We then conducted a meta-analysis of 12 published MMPI-2 studies in which we compared L scores of religious samples to the test normative group. The meta-analysis revealed large between-study heterogeneity (I2 = 87.1), L scale scores for religious samples that were somewhat higher but did not approach the upper limits specified in the MMPI-2 manual, and an overall moderate effect size (d = 0.54, p < .001; 95% confidence interval [0.37, 0.70]). Our analyses indicated that religious-group membership accounts, on average, for elevations on L of about 5 t-score points. Whether these scores reflect conscious "fake good" impression management or religious-based virtuousness remains unanswered.

Rossi, G., & Sloore, H. (2008). Cross-cultural reliability and generality of the Megargee Offender Classification System. *Criminal Justice and Behavior, 35*(6), 725-740.

The cross-cultural reliability and generality of the offender classification system developed by E. I. Megargee et al. was examined. A hierarchical cluster analytic approach was used to identify Megargee's Minnesota Multiphasic Personality Inventory-2 based types in a sample of Belgian male federal prisoners (N = 1,636). Six types (i.e., Able, Charlie, Delta, Easy, How, and Item) were clearly replicated, albeit with variable reliability in terms of goodness-of-fit. Types Baker, Foxtrot, George, and Jupiter were not supported. Instead, another meaningful MMPI-2 type was identified, labelled 4-6, because Scales 4 and 6 were the two highest scales with a T score of 65 or higher. Cross-national cluster analytic research is necessary to further examine the cross-cultural reliability and generality of the types identified in the current study.

Sankaran, K. (2005). Equivalence evaluation of the MMPI-2 for Singaporean college students. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 65*(10-B), 5451.

In evaluating cross-cultural assessments, it is imperative to establish factor invariance across national samples before performing inter-and intea-scale comparisons as factor validity ensures items and/or scales have generally the same psychological meaning in the new culture. This study examined the cross-cultural equivalence of the MMPI-2 for an Asian yet highly Westernized young adult population of Singapore. As it is an English-speaking population, direct comparison of the MMPI-2 performance between the U.S. and Singaporean samples were made without the confounds of translation. MMPI-2 responses from 199 females and 183 males were factor analyzed at the basic and content scale levels, and the factors were compared with those of the American, Korean and Japanese college samples. Comparisons of scale means and standard deviations were also performed. Factor analyses of the 15 content scales resulted in a two-factor solution which indicated identical factor structures across samples, genders and nationalities. Factor analyses of the basic scales indicated that the four-factor solution for Singaporean females yielded better convergence with American and Japanese females, whereas for Singaporean males, the three-factor solution yielded greater convergence with Korean and American males. Comparisons of scale means and standard deviations revealed significant differences between Singaporean sample and samples of other nationalities on most of the clinical and content scales when the t-test was used, a test that is affected by large sample sizes. In addition to the t-test, effect sizes using Cohen's d (which is not affected by sample sizes) were calculated to determine significant differences between samples. The factor structures of the MMPI-2 content scales for the Singaporean sample is internally consistent with other national samples and is therefore measuring similar latent variables as the original MMPI-2. Factor structures for the basic scales for the Singaporean male sample, however, are less internally consistent with the original. Future research involving examination of the basic scales, which did not show factor invariance across national samples, is in order. The results of this study indicate the importance of establishing test validity in a cross-cultural setting.

Sarma, Z. M. (2006). Adaption of the Minnesota Multiphasic Personality Inventory-2 to Latvia. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 66*(10-B), 5694.

The purpose of the present investigation was to adapt the MMPI-2 for use in Latvia. The project encompassed two phases. Phase I consisted of a multi-step process of translating the MMPI-2 to Latvian. Phase II consisted of three separate investigations that examined evidence of reliability and validity of the Latvian MMPI-2. In the first study, 26 Latvian-English bilingual individuals completed both the Latvian and English version of the MMPI-2 in a test-retest format; resultant correlation data suggested that the Latvian MMPI-2 was equivalent to the U.S. version. A second study compared the MMPI-2 data from 181 female and 76 male Latvian undergraduate students with data previously collected from a sample of U.S. university students. The Latvian MMPI-2 scales demonstrated adequate internal consistency, and scale intercorrelations were similar to those observed in the U.S. Scale level analyses revealed many similarities in the basic validity, clinical and content scale score configurations. Female Latvian student scale scores were slightly higher on the D and Hy clinical scales when compared to their U.S. counterparts, and both female and male Latvian students' results revealed slight elevations above the U.S. student group data on several of the content scales. The F infrequency scale was also elevated for both Latvian females and males. None of the scales were elevated above the clinically significant T-score of 65. Principal components analysis revealed a four-component structure that paralleled the structure typically found in U.S. populations. In Study 3, MMPI-2 profiles of a group of 56 Latvian psychiatric inpatients were compared to those of the Latvian female and male students. Multiple scales were elevated well above the Latvian student data and were clinically significant. The mean MMPI-2 scale score configuration of 26 Latvian inpatients with a diagnosis of schizophrenia was highly similar to that of a U.S. group with the same

diagnosis. Implications of the results were reviewed; the minor differences observed in the Latvian student profiles were discussed in terms of possible cultural differences between Latvia and the U.S.

Shemer, H. (2011). Cross-cultural equivalence of the MMPI-2-RF: A comparison between an Israeli and an American normal sample. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 71*(8-B), 5146.

One of the most widely used personality assessment instruments is the MMPI. Since its emergence into the field of psychological assessment in the late 1930's, the MMPI has gone through several revisions, all in the attempt to strengthen the reliability and the validity of this objective measure. Recently, a new instrument was introduced, the MMPI-2 RF. Since the MMPI-2 RF is such a novel instrument, there is a need for samples from different cultures and ethnic groups all over the world using this instrument. The cultural group selected for this study is an Israeli population of 75 subjects that have completed the MMPI-2, all from a normative sample. This archival sample was converted to MMPI-2 RF profiles and then compared with the MMPI-2 RF North American norms. The data from these two samples were analyzed on four scales: L-r, RC1, RC2, and RC4. These scales were selected because previous research indicates they may be especially sensitive to gender and cultural differences. The Israeli sample obtained a statistically significant higher score than the MMPI-2-RF U.S. normative sample on scales L-r, RC1, and RC4. With regards to the Israeli male and Israeli female samples, the Israeli male sample obtained significantly higher mean T scores on RC2 than the Israeli female sample, and higher mean T scores on RC4, however the differences were not statistically significant. An exploratory analysis between the Israeli male and the Israeli female samples on the remaining 47 scales revealed 2 statistically significant mean T score differences, with the Israeli male sample obtaining higher scores on MEC, and the Israeli female sample obtaining higher scores on MSF. Lastly, exploratory analysis between the Israeli sample and the MMPI-2-RF U.S. normative sample on the remaining 46 scales revealed 35 statistically significant mean T score differences Implications, limitations, and suggestions for future research are discussed.

Shkalim, E., Ben-Porath, Y. S., Handel, R. W., Almagor, M., & Tellegen, A. (2016). Psychometric examination, adaptation, and evaluation of the Hebrew translation of the MMPI-2-RF VRIN-r and TRIN-r validity scales. *Journal of Personality Assessment, 98*(6), 608-615.

In this study we examined the utility of the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008/2011; Tellegen & Ben-Porath, 2008/2011) Variable Response Inconsistency-Revised (VRIN-r) and True Response Inconsistency-Revised (TRIN-r) scales, including alternative versions of the scales, in the Hebrew translation of the test. First, we examined the applicability of the U.S. VRIN-r and TRIN-r scales in an Israeli Hebrew-speaking mixed clinical sample, and replaced original item pairs that did not meet the development criteria with substitution item pairs that did. Then, using the Israeli normative sample and a pure clinical sample, we compared the psychometric functioning of the adapted Hebrew-language VRIN-r and TRIN-r scales with that of the original versions of these scales under various conditions of simulated non-content-based (random and fixed) responding. Overall, results showed that the adapted versions of the scales did not improve on the original ones. We therefore recommend using the U.S. VRIN-r and TRIN-r versions, which could also facilitate ==cross-cultural== comparisons

Sneyers, M., Sloore, H., Rossi, G., & Derksen, J. J. L. (2007). Using the Megargee system among Belgian prisoners: Cross-cultural prevalence of the MMPI-2 based types. *Psychological Reports, 100*(3.1), 746-754.

On the basis of the Minnesota Multiphasic Personality Inventory, and later the MMPI-2, E.I. Megargee and colleagues empirically developed a classification system to enhance management and treatment of offenders

throughout the criminal justice system. This preliminary study extended the application of the MMPI-2 based system for the first time to a non-U.S. prison sample and classified the MMPI-2 profiles of 1,636 male inmates from Belgian federal prisons. The typology was capable of classifying most of the subjects and all 10 Megargee types were represented. Compared to American prevalence data, types Delta and Charlie were overrepresented and type George was underrepresented. Issues that warrant further investigation are discussed.

Stevens, M. J., Kwan, K., & Graybill, D. F. (1993). Comparison of MMPI-2 scores of foreign Chinese and Caucasian-American students. *Journal of Clinical Psychology, 49*(1), 23-27.

Compared Minnesota Multiphasic Personality Inventory-2 (MMPI-2) scores of 15 female and 10 male foreign Chinese university students with those of a matched sample of 11 female and 10 male Caucasian university students. Although responses for all groups were within normal limits, Chinese men appeared more socially introverted than Caucasian men. Relative to Caucasian women, Chinese women were more defensive, depressed, unaware of somatic and psychosocial problems, and gender astereotypic in interests. These tentative findings are discussed in terms of ethnicity and adjustment.

Strassberg, D. S., Clutton, S., & Korboot, P. (1991). A descriptive and validity study of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) in an elderly Australian sample. *Journal of Psychopathology and Behavioral Assessment, 13*(4), 301-311.

Examined the performance of 60 female and 50 male Australians (aged 60-96 yrs) on the MMPI-2. The study also evaluated the concurrent validity of 4 of the MMPI-2's new content scales (depression, anxiety, low self-esteem, and health concerns). Results revealed a pattern of MMPI-2 relative highs and lows that was consistent with MMPI profiles obtained in previous research (e.g., R. Taft, 1957) on US geriatric Ss. The content scales designed to assess depression and anxiety showed substantial concurrent validity for both male and female Ss. The validity results associated with the content scales assessing low self-esteem and health concerns were positive for men but mixed for women.

Telander, C. M. (1999). Asian and Hispanic-American performance on the supplementary scales of the MMPI-2. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 59*(11-B), 6108.

Utilization of the Minnesota Multiphasic Personality Inventory - 2 (MMPI-2) with members of ethnic minority groups continues to be questioned due to the lack of research on the impact of acculturation and other cultural variables assumed to affect profile elevations. Most of the published research on this topic investigated ethnic minority members' performance on the basic clinical scales. Only two studies considered the impact of ethnicity on the supplementary scales of the inventory. The present study attempted to determine if differences in acculturation among Hispanic and Asian Americans would impact the elevations obtained by members of these groups on the Anxiety (A) and Repression (R) supplementary scales of the MMPI-2. A sample of Hispanics (n = 28) and Asians (n = 87) from two colleges and one church were matched with a Caucasian sample (n = 115) on the variables of sex, institutional setting, and treatment experience. The Hispanics were assigned to one of two groups based on their scores on the Acculturation Rating Scale for Mexican Americans (ARSMA). The Asians were assigned to one of three acculturation groups based on their scores on the Suinn-Lew Asian Self-Identity Acculturation Scale (SL-ASIA). Multivariate analyses of variance indicated that there were differences on the Anxiety supplementary scale, but not the Repression scale based on level of acculturation for both Hispanics and Asians. When compared to the matched Caucasian sample, the bicultural Asian group scored significantly higher on the Anxiety supplementary scale. A comparison of the low and high acculturated Asian group means with the Caucasian group mean revealed no significant differences.

Furthermore, there were no differences between either Hispanic group and the Caucasian sample. In addition, subgroup differences within the Asian sample were also investigated. Results of two analyses of variance indicated that there were differences between the subgroups on the Anxiety scale, but not the Repression scale, with the Vietnamese subjects scoring significantly higher on the Anxiety scales than the Chinese subjects. The unique stressors associated with being a bicultural individual are discussed, along with possible explanations for the elevation of the Vietnamese subgroup on the Anxiety scale. Suggestions for future research are given.

Trachanatzi, K. A. (2014). A cross-cultural examination of Latino/a and Caucasian levels of somatization and treatment attitudes using the MMPI-2. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 75*(6-B(E)).

MMPI-2 is the most popular psychological measure used to date. Although there are several studies performed with the MMPI-2, very few of them have examined the number of theoretical constructs. An exploratory factor analysis generated four factors: somatic complaints, euphoria, cognitive functioning, and social functioning. Somatic and health complains between two ethnic groups (Caucasians and Latino/a) and two genders (men and women) were examined in this study. A greater understanding of somatization has an impact in several areas such as therapy, multicultural competency and stigma. The study's sample (N=434) was comprised of 296 Caucasian adults and 138 Latino/a adults residing in the U.S. Somatization was measured by the first three clinical scales (1-Hs, 2-D, 3-Hy) of the MMPI-2 with somatic item content. Analysis showed significant results for the Depression scale (with Latinos/as scoring higher than Caucasians) but not for the 1-Hs and 3-Hy scales. Results were the same even after income was statistically controlled for. Additional results showed that 1-Hs and 2-D significantly predicted negative treatment attitude while 3-Hy predicted a positive treatment attitude. Contrary to expectations, ethnicity was not a significant predictor of treatment attitude. Supplemental analyses including the examination of other scales was also performed. Clinical implications, study limitations and future recommendations are discussed.

Tsai, D. C., & Pike, P. L. (2000). Effects of acculturation on the MMPI-2 scores of Asian American students. *Journal of Personality Assessment, 74*(2), 216-230.

Examined acculturative differences among Asian American college students and their scores on the validity and clinical scales of the MMPI-2. A sample of 90 Asian American students (18-55 yrs old) were assigned to groups based on acculturation level. 90 White students (18-51 yrs old) matched according to selected demographics variables also participated. Analysis of variance tests indicated that low-acculturated, bicultural, and high-acculturated Asian Americans yielded different profiles. Compared to the matched White student sample, low-acculturated Asian Americans scored significantly higher on 9 scales, and bicultural Asian Americans had 6 significantly different scores. High-acculturated Asian Americans did not differ from Whites. Cultural variables to be considered when interpreting Asian American profiles are discussed.

Tsushima, W. T., & Tsushima, V. G. (2009). Comparison of MMPI-2 validity scales among compensation-seeking Caucasian and Asian American medical patients. *Assessment, 16*(2), 159-164.

Validity scales of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) are widely used for the detection of exaggerated psychological complaints, although little is known about the results of these scales with racial or ethnic minority individuals. Five validity scales derived from the MMPI-2, including the F Scale, the Back Infrequency Scale, the Symptom Validity Scale, the Infrequency-Psychopathology Scale, and the Dissimulation Scale-MMPI-2, were evaluated in 157 medical patients-109 Caucasian Americans and 48 Asian Americans. all patients were involved in personal injury litigation or seeking compensation for alleged

psychological conditions. analyses of variance (aNOVas) conducted on the five validity scales revealed no significant group effects for race. The results were consistent with the limited available data on the MMPI-2 validity scales with minority group samples. Further research with other racial minorities, including relevant extra-test criteria for malingering, is encouraged.

Wexler, A. K. (1996). Gender and ethnicity as predictors of psychological qualification for police officer candidates. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 57*(4-B), 2924.

Research has demonstrated that various ethnic minority groups and women tend to score differently on the MMPI and MMPI-2, specifically on scales 4 and 9, than Caucasian men (Greene, 1987; Costello, Fine and Blau, 1973; Boone & Green, 1991). It has been found that Latinos rarely score as high as Caucasians on scales 4 or 9 (Whitworth and McBlaine, 1993; McGill, 1980). Conversely, African-Americans have often been found to score higher on scales 4 and 9 than both Latinos and Caucasians (Costello, Fine and Blau, 1973; Gynther, 1972). Furthermore, recent research has indicated that successful police officers' personalities are similar to those of criminals, who often have elevations on scales 4 and 9 on the MMPI-2. (Hargrave, Hiatt & Gaffney, 1986; Boone & Green, 1991). Much of the past research focusing on law enforcement agencies explores success rates of employed officers. There have been virtually no published articles in which research has been conducted to determine if applicants get hired based on their MMPI-2 profiles. Additionally, there are few studies that examine what role ethnicity and gender play in the police selection process as based on the MMPI-2. It seemed that the next logical step would be to see if those who were successful were the same people who were getting psychologically qualified based on their MMPI-2 profiles. It was hypothesized that Caucasian police applicants would be psychologically qualified significantly more often that Latino or African-American applicants. Additionally, it was thought that African-Americans would be qualified more often than Latinos. Finally, it was hypothesized that men, more than women, would be psychologically qualified. Both univariate and multivariate analyses were performed. The univariate analyses revealed one significant result. Chi-square analyses showed that African-Americans were disqualified more often than Caucasians.

Whitworth, R. H., & Unterbrink, C. (1994). Comparison of MMPI-2 clinical and content scales administered to Hispanic and Anglo-Americans. *Hispanic Journal of Behavioral Sciences, 16*(3), 255-264.

Compared 400 Anglo and Hispanic American university students on the MMPI-2 clinical, validity, and content scales. Hispanic Ss scored significantly higher than Anglos on 2 of the 3 validity and 4 of the 10 clinical scales, whereas Anglos were significantly higher than the Hispanics on only the Correction scale. Hispanics also scored significantly higher than Anglos on 13 of the 15 content scales. Although statistically significant, the absolute clinical and content T score differences were relatively small and these results do not appear to warrant either the invalidation of the use of the MMPI-2 with Hispanics or the development of separate Hispanic norms.

Woo, M., & Oei, T. P. S. (2007). MMPI-2 profiles of Australian and Singaporean psychiatric patients. *Psychiatry Research, 150*(2), 153-161.

The use of the Minnesota Multiphasic Personality Inventory-2 (MMPI-2) as a useful measure of psychopathology has been shown in extensive studies. However, there is limited research on the ability of the MMPI-2 to measure differences across diverse cultures. This study aims to extend the research on Caucasian-Chinese MMPI profiles to the countries of Singapore and Australia by examining cross-nation variations. Participants were recruited from psychiatric outpatient clinics and consisted of 70 and 107 patients from Singapore and Australia, respectively. It was predicted that similarities across the two cultures would be

observable, with differences reflected on specific scales. The overall findings indicate that MMPI-2 profile comparisons are comparable between Australian and Singaporean subjects, with considerably more similarities than differences. However, there are significant differences on specific MMPI-2 subscales including the lie, hypochondriasis, Addiction Potential Scale, overcontrolled hostility, fears, health concerns and negative treatment indicators. It is suggested that the differences are a reflection of cultural and ethnic distinctions specific to each country, whereas the commonalities between the two nations indicate comparable overall profiles.

Zapata-Sola, A., Kreuch, T., Landers, R. N., Hoyt, T., & Butcher, J. N. (2009). Personality assessment in personnel selection using the MMPI-2: A cross-cultural comparison. *International Journal of Clinical and Health Psychology, 9*(2), 287-298.

The Minnesota Multiphasic Personality Inventory-2 (MMPI-2) is the most widely used and researched clinical personality assessment instrument in personnel selection. This instrumental study addresses the comparability of the MMPI-2 in assessing Spanish-speaking employees to the performance of English-speaking employees. A sample of 332 Puerto Rican power plant repairers and installers, who were administered the test in Spanish, were compared with 327 English speaking employees from the U.S. mainland. The overall MMPI-2 performance of both groups of participants was highly similar and well within the normal range with most scales within the standard error of measurement. A few scales, such as the Lie scale (L), showed small differences with Hispanic clients scoring higher than the Anglos, a finding that has been reported in other studies. The MMPI-2 symptom scales for Hispanics are generally similar to the Anglo scores and do not require adjustments in interpretive strategies. In personnel settings where test defensiveness is common, interpreters need to assure that the applicant's L score is within the interpretive range.