



The use of the MMPI and MMPI-2 in Cuba: A historical overview from 1950 to the present

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ABSTRACT. One of the first innovations in objective assessment in Cuba was the translation of the original MMPI from English to Spanish. The Spanish language translation was the product of a personal association between Drs. Starke Hathaway, one of the originators of the MMPI, and Idelfonso Bernal del Riesgo. The MMPI was used in a number of clinics in Cuba prior to 1959. With the advent Cuban revolution, the teaching and practice of psychology underwent dramatic changes and an indigenous «Cuban Psychology» developed along with and the sociopolitical development of the nation in an effort become independent of American influence and rid itself of the ties to colonization. Psychologists in Cuba continued their clinical work and research on the MMPI after the revolution. This research is summarized in this theoretical study. In the 1990's, Dr. Guillermo Arias, from the University of Havana, met with the second author at the University of Minnesota in order to develop and apply the MMPI-2 in Cuba. The resulting research developments are described.

KEYWORDS. MMPI. MMPI-2. Cuba. Theoretical study.

RESUMEN. Una de las primeras innovaciones en la evaluación objetiva en Cuba fue la traducción del MMPI del inglés al español. La traducción a la lengua española fue consecuencia de la relación personal entre el Doctor Starke Hathaway, uno de los autores del MMPI, e Idelfonso Bernal del Riesgo. El MMPI fue usado por numerosos clínicos en Cuba antes de 1959. Con el advenimiento de la revolución, la enseñanza y la práctica de la Psicología experimentaron drásticos cambios, surgiendo una «psicología cubana» para el desarrollo sociopolítico de la nación en un esfuerzo por independizarse de la influencia estadounidense y liberarse de lazos colonizadores. Los

psicólogos cubanos continuaron sus trabajos clínicos y de investigación con el MMPI después de la revolución. Esta investigación es resumida en este estudio teórico. En los años noventa, el Doctor Guillermo Arias, de la Universidad de La Habana, contacta con el segundo autor de la Universidad de Minnesota para desarrollar y aplicar el MMPI-2 en Cuba. Se describen todos estos acontecimientos.

PALABRAS CLAVE. MMPI. MMPI-2. Cuba. Estudio teórico.

RESUMO. Uma das primeiras inovações na avaliação objectiva realizadas em Cuba foi a tradução do MMPI original do inglês para o espanhol. A tradução para a língua espanhola foi o produto de uma associação pessoal entre Drs. Starke Hathaway, um dos autores do MMPI, e Idelfonso Bernal del Riesgo. O MMPI foi usado, antes de 1959, em diversas clínicas em Cuba. Com o advento da revolução cubana, o ensino e prática da psicologia sofreu mudanças dramáticas e desenvolveu-se uma «Psicologia Cubana» indígena que juntamente com o desenvolvimento sociopolítico da nação, num esforço de se tornar independente da influência americana e sair ela própria dos trilhos da colonização. Os psicólogos em Cuba continuaram o seu trabalho clínico e investigação no MMPI após a revolução. Esta investigação é sumariada neste estudo teórico. Nos anos 90, Dr. Guillermo Arias, da Universidade de Havana, encontrou-se com o segundo autor na Universidade de Minnesota no sentido de desenvolver e aplicar o MMPI-2 em Cuba. Neste estudo são descritos os resultados no desenvolvimento da investigação.

PALAVRAS CHAVE. MMPI. MMPI-2. Cuba. Estudo teórico.

Introduction

In the early 1950s, and prior to the Revolution, people in Cuba could not pursue the study of Psychology at the professional level because training programs were not readily available in the country. As a result there were few practicing psychologists, with little or no available mental health services for the vast majority of the Cuban population. Thus, Cubans who were able to afford mental health services, including the elite, sought treatment from psychiatrists or left the country for services elsewhere. Torre (1977) observed that unfortunately, the majority of the population had no formal government-sponsored or community-based treatment of mental disorders.

From 1945 to 1959, Cuban psychologists, like their counterparts in the rest of Latin America, were largely, and uncritically, influenced models of psychotherapy that were being applying in the United States. This includes the models espoused by Freud and Rogers. Later on, it was the work of Skinner. In particular, psychoanalysis took a strong foothold in many Latin American countries including Cuba. With regard to psychodiagnostic assessment, instruments like the Rorschach and Thematic Apperception Test were not only popular but rarely challenged with regard to their credibility, integrity, and validity. Thus, while these approaches were highly influential, there also remained many contradictions. Also, the cultural limitations of such theories and measures were rarely challenged from a cultural and linguistic point of view.

Ironically, at the same time, objective personality assessment was also beginning flourish in Cuba during this period. One of the first innovations in objective assessment in Cuba was the translation of the original MMPI from English to Spanish. In many ways, this initial development opened the door for use of the MMPI throughout Latin America. The Spanish language translation largely grew from a personal association between Drs. Starke Hathaway, one of the originators of the MMPI, at the University of Minnesota, and Idelfonso Bernal del Riesgo. At the time, Bernal del Riesgo was a prominent psychologist who was keenly aware of the advances being made in psychology in North America and Europe and attuned to the emergence of a native Cuban psychology since the early 1930s. In a 1944 publication, he reiterated the importance of developing culturally sensitive diagnosis and treatment of Cubans, by integrating the knowledge of a «Cubanosofia», or the wisdom of the Cuban culture. Torre (1977) defined the methodology of Cubanosofia as «the gathering of knowledge, observations and data which makes scientific knowledge possible, [and] the [sensitive and accurate] diagnosis of our nationality». This approach also emphasized the use of socially meaningful observations as a way to cultivate and study Cuban people. Moreover, Bernal wove ideas and thinking from both international and Cuban scholars, without ever losing sight of his Cuban roots.

At the time Bernal del Riesgo met Hathaway, one of the original MMPI developers, he maintained a private practice and was the head of a small department of Psychology in the School of Education (at the University of Havana) in Havana. In the classroom, Bernal del Riesgo taught his students and peers the principles of psychological testing, while favoring a more objective and scientific approach. While maintaining professional contact with the likes of Adler and Jung, and possibly Freud (in the late 1930s), it was Hathaway who sparked his interest in psychodiagnosis. Hathaway (who spoke Spanish and was very interested in psychology in Latin America, see Butcher, 2000), likely met Bernal del Riesgo through G. Stanley Hall during one of the many summer seminars he attended in the United States (Lastra, personal communication, 2002). Largely due to this association, the Spanish translation of the MMPI, spearheaded by Bernal del Riesgo, was released for use in Cuba, in 1951. This translation, one of the earliest non-English translations, was the first applied in private practice settings. However, it became increasingly popular among psychologists in other settings.

Paralleling the development of psychology in other Latin America countries, the emergence of an indigenous «Cuban Psychology» was inextricably linked to the sociopolitical development of the nation (Torre, 1977). This is especially evident in Cuba's quest to become independent of American influence and rid itself of the ties to colonization. Thus, the pressing needs of the Cuban community would eventually impact the extant of the use of the MMPI in Cuba. The application of the MMPI would continue in Cuba even after political disagreement severely split the two countries from earlier collaborative efforts.

With the advent of the triumph of the revolution in 1959, the teaching and practice of Psychology underwent dramatic changes in Cuba. For example, in 1961 and 1962, schools of psychology opened in Las Villas and the University of Havana, respectively. Unlike the years before the revolution, when psychology was open as a profession only

to the wealthy or elite, Psychology became a profession that could be pursued by all persons. As a result, Psychology evolved into a discipline intended to aid the populace in the fields of education, health and in the work places. During that time psychology became devoted to solving social and community problems. Psychologists got out of the clinics and went in to the fields, the nurseries, the sugar mills, the «solares,»¹ and the hospices.

During the early years of the Cuban revolution, the MMPI continued to be used in mental health settings although the attitude toward standardized psychological assessment and tests was beginning to change from positive to negative. Largely influenced by Soviet psychology, psychologists in Cuba came to view psychological testing as a product of bourgeoisie ideology that perpetuated decadent ideas about human nature including the separation of persons by types or classes. Yet, in spite of these criticisms and emerging viewpoint, the Bernal-Fernandez version of the MMPI continued to be used in the public mental health sector, with interpretation based on the original United States norms. According to Valcárcel and Ríos (1974), «there [was] practically no psychological practice setting were the inventory [was] not included in a clinician's diagnostic battery».

A review of several articles published in Cuba, during the early 1970s, suggests that these investigations offered empirical support for the use of the MMPI. At the same time, this body of literature reflected a series of concerns about using this instrument in a different linguistic and cultural context. For example, there was strong concern about the meaning of the validity scales for Cubans, the absence appropriate norms, and issues about test items. With regard to the absence of Cuban norms, Valcárcel and Ríos (1974) pointed out that «the absence of appropriate norms for our population [has] obliged us continually to articulate reservations regarding the profiles of our patients». Cuban psychologists also noted problems with some items, particularly with respect to the cultural and political circumstances of Cuba (see Barroso, Alvarez, and Alvisa, 1982; Valcárcel and Ríos, 1974; Valdés, 1979). Yet overall, this same literature supported the efficacy of this instrument in Cuba as studies did in the United States.

Studies on the evaluation of profile validity

The study by Valcarcel and Rios (1974) is possibly the first publication about the adaptation of the MMPI in Cuba. It is a modest study employing factor analysis to determine sources of variability of the L scale in order to establish whether the scale could be used to detect invalid profiles. At the time, the MMPI was being used in individual therapy settings within the public health system with no special attention paid to the value of the L scale in determining overall validity. It was assumed that most persons in this setting openly presented problems. Although the application of factor analysis on one scale of the MMPI was somewhat of a difficult task, Valcarcel

¹ Cuban name for slums and poor neighborhoods.

and Rios felt it necessary to examine the L scale for two reasons. First, the scale was composed of a relatively small number of items and second, the relative simplicity of the item structure made it more amenable to factor analysis. The authors also justified their methodology by stating that «to our knowledge, there are no works of this kind which justify the wide diffusion of the MMPI [in Cuba]». The results, as expected, suggested that there was only a single factor underlying the L scale.

In a follow-up study which focused on the L scale, Valcarcel and Rios found significant differences between undergraduate psychology students' L scores prior to and after being accepted into the School of Psychology at the University of Havana. After being accepted, the student applicants were administered the MMPI for the exclusive purpose of self-knowledge. They obtained significantly lower scores on L scale than when they took the instrument as part of the admissions process. An analysis of the performance supported the idea that the L scale was a measure of defensiveness, an attempt to appear virtuous, and to favorably impress others. To Valcárcel and Ríos, the results of this study confirmed the original purpose of this scale with normative or non-psychiatric Cuban samples.

Valdés (1979) cited a study presented in 1972 at a National Symposium on the Mental Health of the Revolutionary Armed Forces. Unlike the previous study, this investigation addressed the use of the MMPI validity scales with a clinical population. In addition, issues of cultural appropriateness and translation were presented for discussion. Valdes observed that the MMPI had been used for more than five years in the Dr. Diaz Soto Central Military Hospital as part of a battery of tests in order to aid in the diagnosis of personality disorders. Valdes reported that many persons who were administered the MMPI reported an unpleasant experience with frequent complaints about meaning of the items, tiredness, and headaches. The respondents considered the MMPI to be extremely lengthy. In addition, many of the MMPI protocols, using interpretive guidelines from the test manual, matched those of severe psychiatric illnesses and psychosis. Moreover, there appeared to be no correspondence between MMPI profiles and clinical presentation of the participants.

Valdés (1979) examined 100 outpatients who had been referred for treatment at various psychology clinics. All of these outpatients were diagnosed as possessing a psychopathic or antisocial personality. The first 365 items of the MMPI, as well as a test for reading comprehension, were administered to the outpatients. Exclusionary criteria was set at a raw score of 16 on the F scale. As a result of using this rule, a total of 71% of the outpatients were considered to have invalid profiles. A negative, and significant, correlation of $-.69$ ($p < .01$) between the the F scale and reading comprehension was found. This indicated that the higher the F scale score the lower reading comprehension, which is consistent with research in the United States (Butcher and Williams, 2000; Arbisi and Butcher, 2004). Valdés (1979) also reported that the original MMPI contained «negative statements,» which oftentimes caused confusion among Cuban respondents. Valdés also observed that some of the items were culturally different, and perhaps insensitive, especially with regard to political ideologically. Another observation, clearly the most important, was to recommend that MMPI be discontinued in outpatient settings. Unfortunately, and largely due to barriers in scientific

communication, Valdés was not aware of many developments with regard to the original MMPI in the United States. For example, more liberal rules which allowed the F scale score to be much higher without invalidating the MMPI protocol, were appearing in the literature. It was believed by researchers in Cuba that many persons who were obtaining higher scores on the F scale were actually endorsing religious-type items that reflected beliefs that may not have been socially acceptable at the time. Perhaps, adjustments should be made to the MMPI F scale as was done in China (see Cheung, Song, and Butcher, 1991). Also, as noted by Valdes, researchers and clinicians were highly concerned about poor or inappropriate translations of many MMPI items including «I am not usually self-conscious», which lost its connotation of being embarrassed or feeling insecure in the Spanish translation. Other items that appeared problematic included «I believe there is a God» and «I believe in a life hereafter». Another key issue was the frequent use of double negatives in the English language MMPI, and the fact that double negatives are not common in the Spanish language. Researchers believed that such items could easily confuse respondents, thus inflating F scale scores.

Another key issue outlined by many researchers and clinicians in Cuba was the problem of applying the MMPI to adolescents. They observed that many of the respondents tended to have exceedingly high F scale scores, especially in mental health settings. This observation was similar to the results of studies with the MMPI on adolescent samples in the United States (see Dudley and Mark, 1972). Also, one might have expected accompanying elevations on the Pd and Sc scales, again, because of age and level of maturity (Blumberg, 1967; Gynther, 1961; Gynter, and Algimantas, 1965b).

In many ways, this study on the translation of the MMPI yielded results that were parallel to findings conducted in the United States with minorities, especially Latinos who are Spanish-speaking and who had to be evaluated with poor translations of the MMPI, including the much criticized «Nunez» version.

Studies in the United States indicated that beside age, IQ was an important moderator variable that would influence the degree of elevation on the F scale. In fact, IQ in combination with age was found to be more potent as a moderator variable than level of education (see Applezweig, 1953; Gynther and Algimantas, 1965a). For example, in a study by Gynther and Algimantas (1965a), it was found that psychiatric patients whose age was less than 35 years typically obtained raw F scale scores higher than 16, while those who were over 36 years did not display this pattern. In an investigation conducted in Cuba, it was found that 71% of the sample had less than 9 years of education. This sample was also found to have a high prevalence of high F scale scores. It would have been interesting to have conducted the study in more contemporary times given the high literacy rate within the Cuban population, especially in the last 25 years.

Other key developments with the MMPI in Cuba

In the mid-1970s, and prior to undertaking a three-year study, Barroso et al. (1982) who were affiliated with the School of Psychology at the University of Havana revised the «Cuban MMPI». In particular, they focused on the first 366 items of the MMPI, which constituted the basic Validity and Clinical scales (i.e., as the first 370 items do

today for the MMPI-2). Lastra (personal communication, 2002) noted that it was more productive to only focus on the first half of the MMPI since it was quite cumbersome to score all of the remaining scales, subscales, and indexes. Barroso *et al.* (1982) noted several reasons for a revision of the MMPI for use in Cuba including the fact that many of the items, due to their sociocultural or religious content, were not relevant to modern Cuban society. Thus, this research team conducted sweeping changes and modifications to the MMPI including the reduction of the number of double negative statements. It was hoped by this team that such modifications would decrease any artificial elevations on key scales including F, because comprehension and the understanding of idioms of distress would no longer be a problem. In total, Barroso *et al.* (1982) found 173 items with various problems and one group of 103 items with grammatical problems, which may not have specifically affected test performance, but required unnecessary efforts to fully comprehend. Another group of 70 items were thought to be deficiently translated, employed double negatives, and were culturally inappropriate. Barroso *et al.* (1982) left 185 items unchanged, improved the grammatical composition of 103 items, and converted 46 items from negations into affirmative statements. A comparability study was conducted using both the Bernal-Fernandez and new version over an interval that was less than one week. Two groups were employed, 20 highly educated bilingual persons in Spanish and English and 20 high school-educated persons with no knowledge of English. Barroso *et al.* (1982) found that there were no significant differences in the endorsement rate of unmodified items, for both groups, and that among bilinguals, there were very minor differences in the endorsement of new modified items. Yet, it was found that Spanish-speakers did change their responses at a rate of 15%. With regard to the negative statements which were re-written to reflect affirmations, the bilingual respondents did change their responses at an astounding rate of 90%. When examining the profiles for both the bilingual and Spanish-only groups, Barroso *et al.* (1982) found that a) profiles in both versions, the original and modified, for the bilinguals were practically identical and b.) profiles for the Spanish-speaking group appeared more elevated, and perhaps more dysfunctional, on the original version when contrasted to performance on the modified version (i.e., scale scores appeared to be within the normative range whereas scores on the original version yielded scores that were almost one standard deviation about the mean). This was especially worrisome on the L, F, D, Sc and Ma, which were much higher on the original Spanish version. Barroso *et al.* (1982) concluded that this revision also reflected better or increased comprehension among normative or non-psychiatric respondents. In a follow-up investigation, Barroso and colleagues administered the modified MMPI to a group of 80 normative persons. They also included a list of items that were used to evaluate the cultural adequacy of the measure. The investigators reported that 12 items had different cultural meanings in Cuba. In fact, it appeared that some of these items caused enough confusion so that respondents were actually endorsing such items in a completely opposite manner when contrasted to persons who were involved in the U.S. standardization. For example, it appears that endorsing such items as «I believe there is a God» actually helped to increase the score on scales such as F. At present, it appears that the endorsement of religious items in the affirmative may actually be increasing as the Cuban government has consented to greater involvement on the part of its citizens in formalized religion.

This type of research proved to be quite crucial in the MMPI's gaining of legitimacy, especially after the revolution. In fact, the National Group of Psychology in Cuba endorsed the printing of the modified version. Also, professionals were educated on the use and interpretation of instrument in several provinces (Lastra, personal communication, 2002).

Other validation-type studies with the MMPI in Cuba

The publication of the modified version of the MMPI pushed the increased usage of this instrument in a variety of clinical settings, including medical. In fact, many studies that were conducted in what became known as «health psychology» in Cuba utilized the MMPI as a measure of psychological or personality correlates. For example, a series of investigations on hyperthyroidism yielded modal profiles with elevation on the D, Sc and Pt scales (Alvarez, Alavez, and Lastra, 1982; González, Martín, Despaigne, and Espinosa, 1983). Additional scales that were found to be elevated for this group included the Hs and Hy scales. Other studies that examined physically-based chronic problems within patients, found similar findings, especially on scales that tapped into issues such as sweating, diarrhea and tachycardia (González *et al.*, 1983). Studies have also examined the personality characteristics of persons affected by hyperthyroidism. The results of these studies are quite similar to those conducted in the United States (MacCrimmon, Wallace, Goldberg, and Streiner, 1979; Wallace, MacCrimmon, and Goldberg, 1980) yielding very similar profiles. In addition, elevations on the Hs, D, Hy, Pt, and Sc were also found in the Cuban sample. These results appeared to suggest the presence of depressive symptoms, somatic distress and feelings of loss of psychological control.

Arque, Segura, and Torrubia (1987), using another modification of the MMPI, examined the performance of persons who were considered to be psychosomatic versus those considered to be both healthy and non-psychosomatic. In this study significant elevations were found for the psychosomatic group on the Hs, D, Pt, and Si scales. Positive correlations were found between levels of thyroxin (T4) to elevations on the majority of the depression and anxiety scales. Moreover, analyses of the distribution of participants according to T4 levels yielded differences on the Hs, D, Hy, and Si scales, with groups scoring higher on T4 levels having higher scores.

A series of published studies, conducted by the National Institute of Hematology and Immunology of Cuba, obtained similar findings for persons with diverse blood disorders including relative polycythemia, cellular immunodeficiency, and leukemia (Triana, Delgado, Sarraff, and Felipe, 1999; Triana, Espinosa, Triana, Espinosa, and Abascal, 1987; Triana, Espinosa, Valdés, and González, 1988; Triana, Valdés, and Felipe, 2000). The most prominent elevations were found on the D and Sc scales. Elevations were also reported on Hs and Pt scales for these persons. In a study with cancer patients, Gómez de Borda, González, and Lorca (1988) found that this group obtained elevations on the Hs and D scales, and in some cases, also on the Sc scale. These findings were similar to those of studies conducted on patients with leukemia (Triana *et al.*, 1995). Yet, for women, an additional elevation was found on the Pa scale, which

was found to be similar to women with hematological neoplasia in Spain (see Blanco *et al.*, 1988). In persons with an elevated peripheral venous haematocrit (despite a normal total red cell mass), an elevation was found on the Hs suggesting the possibility of Type A behavior patterns and greater psychophysiological arousal (Jern, Jern, and Wadenvik, 1991).

Triana *et al.* (2000) found that persons affected by cellular immunodeficiency performed similarly to persons with other blood disorders. For example, elevations were found on the Hs, Hy, Pd, Pt, and Pa scales. Loy, Alvarez, Duran, and Almagro (1981), examined a group of adult hemophiliacs using the original Bernal version of the MMPI. They found a prominent elevation on the D scale suggesting that studies with the linguistic modification of the MMPI produced similar results on persons with blood pathologies. The authors also found that the MMPI successfully differentiated between two groups of patients, those with hemophilia versus orthopedic limitations. Patients with hemorrhages before 3 years of age obtained significantly higher scores on the D and Sc scales than those without this history.

Findings from studies with chronically ill patients, especially pain patients, have been highly consistent with elevations occurring on the Hs, D, and Hy scales. This has been found to be especially true with a heightened danger of death and functional limitation (Bombardier, Divene, Jordan, Brooks, and Neelon, 1993; Lohmann, Vogues, Meuter, Rath, and Thomas, 1979; Naliboff, Cohen, and Yellen, 1982, 1983; Pierce, Lawton, Freeman, and Fearing, 1973a, 1973b). In a study conducted on Cuban patients with leprosy, the modal profile reflected elevations on the following three scales, Hs, Sc, and D (Rincón and Lastra, 1987). It was also found that the MMPI was sensitive to the degree of perceived severity of the illness. For example, the profile for patients with physical deformities was considerably more elevated than those without deformities and it had the added feature of an elevation in the Pa scale. Finally, in a study on persons with sexual dysfunctions, it was found that this group obtained slightly more elevated profiles than those without a sexual dysfunction (Rincón and Lastra, 1987).

In summary, it appears that research with the MMPI in Cuba has been affected by several key movements, the sociopolitical as well as the introduction of Soviet psychology into mainstream Cuban psychology. While the use of the MMPI has waxed and waned, it never disappeared completely from Cuba. The studies that have been discussed in this section have been both creative and genuine attempts to adapt a measure that has potential for both diagnosis and treatment planning. While the body of research is not necessarily large, it does appear that with the advent of the introduction of the MMPI-2 in Cuba, the potential is even greater for methodologically sound research that validates this instrument with the Cuban population. The next section discusses the recent introduction of the MMPI-2 in Cuba via the efforts of Dr. Guillermo Arias.

Introduction of the MMPI-2 in Cuba: Initial research

Soon after the publication of the Spanish translation of the MMPI-2, in 1993, Dr. Guillermo Arias, from the University of Havana, met with James Butcher at the University of Minnesota about applying the MMPI-2 in Cuba. Dr. Arias returned to Cuba quite

enthusiastic about using a revision which had much promise because of psychometric and linguistic improvements. Over the past several years, Dr. Arias has applied the MMPI-2 to both psychiatric patients and non-psychiatric or normative persons. Results of such an endeavor were presented at the 2002 Annual Meeting on Recent Developments in the Use of the MMPI-2 in Minneapolis, Minnesota (see Arias, Mendoza, Atlas, and Butcher, 2002). At this point, it appears that the data strongly correspond to studies conducted in both the United States and throughout Latin America.

These data were collected between 1994 and 1995 throughout several provinces or states in Cuba. A large proportion of the normative or non-clinical sample consisted of university students. Data on the psychiatric sample was collected at a variety of state-sponsored mental health institutions. In all settings, the vast majority of participants had graduated from high school and over 40% had attended college. The majority came from the Western provinces of Cuba (e.g., Havana) with the exception of Isla de la Juventud, which is an island off of the southwestern coast of Cuba. Participants from the city of Havana were considered to be an urban sample, while those from outside of the capital were considered to be from rural areas. Participants from the remaining provinces including the Isla de la Juventud were found to be a mixture of rural and urban inhabitants.

A total of 260 participants were involved in the study. The following exclusionary criteria was used in this investigation: a) protocols with incomplete or missing data including sociodemographic were excluded, b) a CS equal to or greater than 30 unanswered items, and c) a T score equal to or greater than 110T for F, 110T for Fb, 100T for either VRIN or TRIN, 80T for L, or 80T for K. Based on these criteria, a total of 77 cases were disqualified leaving 168 for further analysis. It is important to note that the clinical sample had a greater number of invalid profiles than the non-clinical sample (Clinical: 36.1%, Non-clinical: 25.9%). This difference, not unusual, appears to be largely due to typically high scale scores, especially on the F and Fb by psychiatric patients.

As described in the recent study by Arias *et al.* (2002), exploratory group profile comparisons were made between the clinical and normative or non-psychiatric samples on many of the various MMPI-2 scale sets including the Validity and Clinical scales. Comparisons were also made with the normative sample from the United States. Comparisons between the two groups of Cuban samples yielded expected differences because one group was psychiatrically impaired. Comparisons with the normative group from this country yielded lower scores for the Cuban sample.

The future of the MMPI-2 in Cuba

The data collected by Arias and colleagues are the first MMPI-2 findings to come out of Cuba. Group profiles for both clinical and non-clinical samples from Cuba appear to be generally similar to the profiles found in the United States for both psychiatric and non-psychiatric samples. Although these preliminary findings are promising, especially with regard to validity at the international level, there is clearly a need for more studies with the Spanish-language version used in this investigation. There is also a need for studies that actually validate the results of the MMPI-2 against known or specific diagnostic or clinical groups. In their recent presentation, Arias *et al.* (2002) made the following recommendations about future research in Cuba:

- Explore the linguistic and cultural context of MMPI-2 items to determine if the idioms that are used in the «official» MMPI-2 translation are fully applicable in Cuba. Also, it would be important to conduct bilingual test-retest or comparability studies to determine if any Cuban-language adaptation is comparable to other Spanish translations and to the original English-language MMPI-2.
- Provide relevant MMPI-2 literature to Cuban psychologists, both researchers and clinicians. For example, at this point, it appears that any translations of the MMPI should be discarded in favor of the MMPI-2, which offers much more with regard to psychometric integrity to Latinos in both the United States and Latin America.
- Generate a series of studies nationwide which examine both psychiatric and non-psychiatric samples, using a methodology similar to the restandardization of the MMPI-2 in the United States.
- Assure that all investigations with the MMPI-2 include persons from the eastern provinces of Cuba because differences do exist across the country. The Cuban population is very heterogeneous along a variety of sociocultural factors including ethnic identity and composition and language dialects.
- There is a need to link research in Cuba with research being conducted in other parts of the world, most notably Latin America. For example, research on the MMPI-2, and its adolescent counterpart, the MMPI-A, is thriving in countries like Mexico and Chile. There is also a need to link research on Latinos in the United States, such as Chicanos and Puerto Ricans, to research being conducted in Cuba.

Conclusion

It is evident from this chapter that the MMPI has a long a colorful history in Cuba, as it does in other parts of the world. The MMPI was introduced to Cuba in an effort to provide a better means of diagnosing and treating clients in the early 1950s. Psychologists became quite interested in the instrument to the point of using it with clients. After the revolution, many traditional and even Americanized techniques were questioned for their validity with Cubans. This pushed many psychologists to reflect on the value of an instrument like the MMPI within Cuban society, including its sociopolitical underpinnings. In recent years, as the doors have slowly opened between the United States and Cuba, a new generation of psychologists in Cuba has become interested in the contributions that the MMPI-2 can make in the treatment of clients. The next few years should be very exciting as more and more collaboration occurs between psychologists in both countries in an effort to assist persons with mental illness.

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