



MMPI-A for Peru: Adaptation and normalization

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ABSTRACT. Even though the MMPI-A was developed for use with adolescents living in the United States, it is rapidly being adopted by mental health professionals in other countries. In order to sample its potential usefulness in Peru, the present instrumental study compares a Peruvian normative group of 348 adolescents to the standard MMPI-A Hispania U.S. normative sample. The instrument was administered under standardized conditions, the answer sheets were computer scored and the resulting protocols were screened for validity. Between the two samples, there was a high degree of similarity across the validity, clinical, supplementary and content scales. Most scales were within one-half a standard deviation of the U.S. Hispania mean and no scale elevations were clinically significant. The only elevations greater than one-half a standard deviation were found on scales *K* (*Defensiveness*), *Pt* (*Psychasthenia*) and *Si* (*Social Introversion-Extroversion*) for females only. For both males and females, small elevations were found on several other scales. This study would suggest that the adaptation of MMPI-A Hispania with the U.S. norms is appropriate for use in Peru.

KEY WORDS. MMPI-A. Assessment. Personality. International assessment. Adolescents. Instrumental study.

RESUMEN. Aunque el MMPI-A fue desarrollado para su uso con adolescentes que viven en Estados Unidos, ha sido rápidamente adaptado por los profesionales de la salud mental en otros países. Para poder muestrear su utilidad potencial en Perú, el

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presente estudio instrumental compara un grupo normativo peruano de 348 adolescentes con la muestra normativa estandarizada de MMPI-A *Hispania* de los Estados Unidos. El instrumento fue administrado bajo condiciones estandarizadas, las hojas de respuesta fueron puntuadas mediante un ordenador y se comprobó la validez de los protocolos. Se obtuvo un alto grado de similitud en las escalas de validez, clínica, suplementarias y de contenido entre las dos muestras. La mayoría de las escalas se situaron dentro de media desviación típica de la media de la *Hispania* de los Estados Unidos y ninguna de las elevaciones de las escalas fue clínicamente significativa. Las únicas elevaciones mayores de media desviación típica fueron encontradas en las escalas *K* (*Defensividad*), *Pt* (*Psicastenia*) y *Si* (*Introversión-Extroversión*), sólo en el caso de las mujeres. En ambos, hombres y mujeres, se encontraron pequeñas elevaciones en algunas otras escalas. Este estudio podría sugerir que la adaptación de MMPI-A *Hispania* con las normas estadounidenses es apropiada para su uso en Perú.

PALABRAS CLAVE. MMPI-A. Evaluación. Personalidad. Evaluación internacional. Adolescentes. Estudio instrumental.

The Minnesota Multiphasic Personality Inventory (MMPI-2; Butcher, Dahalstrom, Graham, Tellegen, and Kaemmer, 1989) and its adolescent version, the MMPI-A (Butcher *et al.*, 1992), have been recognized internationally as the leading instruments in personality assessment. The MMPI-2 is currently used in over 46 countries on all continents, and since 1989, there have been approximately 33 official test translations (Butcher, 1996; Butcher *et al.*, 1998; Lubin, Larsen, Matarazzo, and Seever, 1985). Similarly, since its release in 1992, the MMPI-A has been translated (12 official test translations) and adapted for use in several countries (*e.g.*, Mexico, Greece, Norway, France, Korea, Holland, Russia, and Thailand) (Butcher, Cabiya, Lucio and Garrido, 2007). There is a rapidly growing international research base on both instruments that provides assurance that the instruments have construct validity in a variety of cultures (*e.g.*, Butcher, 1996; Butcher and Pancheri, 1976; Lucio, Reyes-Lagunes and Scott, 1994).

In Peru, the original MMPI and the MMPI-2 have been widely used in clinical and research settings since approximately 1972. Rather than translate and standardize the instruments for their own country, Peruvian psychologists have chosen the strategy of using existing validated Spanish versions such as those developed for Mexico, Spain, Puerto Rico and the United States. Zanoló (1993) reported that the original MMPI was used in approximately 20 research studies in Peru. This research has explored issues including the relationship between scale elevation and interpretation (Barreda, 1976), the relationship of the MMPI with other personality tests (Chacón and Vargas, 1976), characteristic profiles of specific clinical groups (Starke, 1979; Zevallos, 1991), abbreviated versions of the MMPI (Mendizabal, 1993; Reynoso, 1989) and MMPI-2 personality characteristics of men and women with lung cancer (Figueroa and Jiménez, 1999).

Some investigations in Peru, however, have questioned the appropriateness of using the U.S. norms to characterize the Peruvian population. For example, Valdivia (1996) evaluated 315 Peruvian psychology and medical students using the “Nuñez” (Nuñez, 1987) Mexican version of the MMPI. When compared to the U.S. norms,

Valdivia found mean elevations for females of more than one standard deviation on five validity and clinical scales. For males, elevations of more than one standard deviation were found on seven scales. It is noteworthy that the Nuñez translation has received considerable criticism for cultural, linguistic, and methodological problems that resulted in distorted interpretations (Ledwin, 1980; McCreary and Padilla, 1977).

Research in Peru has established that the U.S. Spanish-language version of the MMPI-2 based on U.S. norms is appropriate for use in clinical assessments in Peru (Butcher *et al.*, 2007). Scott and Mamani Pampa (2000) conducted a comparative study of the MMPI-2 on samples of men and women with diverse educational, occupational and socioeconomic backgrounds and found that between the two samples, there was a high degree of similarity across most clinical, content and supplementary scales. Elevations ($T = 60-65$) were found on scales *F* (*Infrequency*), for males and females, and scales *Mf* (*Masculinity-Femininity*) and *MDS* (*Marital Distress Scale*), for females only. These results demonstrated that on the MMPI-2 the Peruvian sample was similar to the normative samples from other countries. In particular, Spanish-language versions that have been adapted for use in countries such as in Mexico (Lucio *et al.*, 1994), Chile (Rissetti, Himmel, and González-Moreno, 1996), Argentina (Casullo and Samartino, 1996), Spain (Avila-Espada and Jiménez-Gómez, 1996) and Venezuela and Colombia (Boscán *et al.*, 1998) have shown considerable compatibility to the standard U.S. norms with regard to scale score performance. A review of this instrument's use at the international level indicates that the MMPI-2 has been adapted much more quickly than the MMPI. This has been attributed to several "culture-reduced" improvements in the test, including the deletion or modification of culture-bound items and the development of new norms based on a more diverse sample of persons in the United States (Butcher, 1996).

The MMPI-A was developed specifically to evaluate adolescents between the ages of 14 and 18 years. In 1998 the MMPI-A Hispania was published for clinical and research use with Spanish-speaking adolescents (Butcher *et al.*, 1998). The MMPI-A Hispania validity and reliability have been tested several times with Spanish-speaking adolescents in different countries, including Mexico (Farias, Duran, and Gomez-Maqueo, 2003; Lucio, Ampudia-Rueda, Duran-Patino, Gallegos-Mejia, and Leon-Guzman, 1999), Spain (Avila-Espada and Jiménez-Gomez, 1997), Argentina (Contini de González, Figueroa, Cohen Imach, and Coronel de Pace, 2001), Colombia (Scott, Knoth, Beltran-Quiones, and Gomez, 2003), and the United States (Calderon, 2002; Gomez, Johnson, Davis, and Velasquez, 2000; Negy, Leal-Puente, Trainor, and Carlson, 1997). A review of the research to date suggests that the MMPI-A Hispania provides "normal variations" around the standard means of the MMPI-A and that the English-language norms are likely to be appropriate for assessing Spanish-speaking adolescents (Butcher *et al.*, 1998, 2007).

The MMPI-A has only recently been introduced for use in Peru. To date, only one MMPI-A Hispania study that includes Peruvian adolescents appears in the professional literature. Scott, Butcher, Young, and Gomez (2002) compared Spanish-speaking adolescents in five countries: Spain, Columbia, Mexico, Peru and the United States. They found a high degree of similarity across the five countries on the clinical, content and supplementary scales, with most scores falling within one half a standard deviation from the U.S. normative sample.

The purpose of the present study is to compare Peruvian adolescent boys and girls administered the MMPI-A Hispania with the U.S. Hispanic normative sample. This represents an initial step toward evaluating whether existing Hispanic norms for the MMPI-A from the United States can be applied in Peru, or whether there is a need to develop new norms that are more congruent with Peruvian culture. Based on a review of the previously cited literature, it was our hypothesis that a normative sample of Peruvian adolescents would be very similar to their U.S. Hispanic counterparts on the MMPI-A scales.

Method

Participants

A total of 394 adolescents, 188 boys and 206 girls from Arequipa, Peru, were administered the MMPI-A Hispania. Forty-six protocols, however, were eliminated from the study because they did not meet the inclusion criteria (see below.) The resulting sample was comprised of 348 adolescents, 167 boys and 181 girls, ranging in age from 14 to 18. The mean age for boys was 15.90 years and for girls 15.40 years. The mean age for the U.S. Spanish-speaking normative sample of adolescents was 15.90 years for boys and 16.10 years for girls. The modal age for the participants was 16 years. This comprised 40.50% of the sample.

All of the participants were enrolled in public schools at the time of this investigation, with the majority (42.50%) in the fifth year of *secundaria*, the equivalent of grades 9-11 in the United States. All participants reported Spanish as their primary language and this is important because various indigenous dialects are also spoken in Peru. Socioeconomic status was evaluated through parental occupation and indicated that most participants were from medium and low-medium socioeconomic groups. None of the participants indicated that they had ever been treated for emotional or behavioral problems.

Procedure

The researchers worked with local school administrators in Arequipa, Peru's second largest city, to select the most appropriate data collection sites. Since general differences in social class can be very marked in Latin America, an effort was made to select schools which were considered by local school administrators to have student populations that were as representative as much as possible of the general middle class of Peru.

After parental consent was obtained, and a minimum of a sixth grade reading level was verified, participants were tested in group administration sessions using large classrooms. Effort was made to maximize testing conditions by providing a friendly and comfortable environment that was free from distractions. All instructions and verbal interaction with the participants was in Spanish. Participants were reminded that their responses to test items were confidential and anonymous.

Participants of this instrumental study (Montero and León, 2007) were administered the MMPI-A Hispania following a brief demographic questionnaire. All completed MMPI-A answer sheets were computer scored in the United States. To ensure that only

complete and valid protocols were included in the study the same exclusionary criteria used in the U.S. MMPI-A Hispania normative sample (Butcher *et al.*, 1998) were applied: Specifically, a) 35 or more *cannot say* (?) responses, b) *F* (*Infrequency*) > 43 (raw), c) *VRIN* (*Variable Response Inconsistency*) > 13 (raw), and d) *TRIN* (*True Response Inconsistency*) > 14 (raw) or < 5 (raw). A total of 46 protocols were eliminated for violations of the validity rules. The paper was edited according to the norms established by Carretero-Dios and Pérez (2007).

Results

Tables 1 and 2 present the mean raw MMPI-A Hispania scale scores for boys and girls, respectively. Comparisons, by gender, were made between this sample and the U.S. Hispanic normative sample for the validity, clinical, supplementary, and content scales. Significant differences between the two groups were found on a large number of scales, for both boys and girls (all *t*'s ranged from .49 to 7.10). However, as shown in Figures 1 and 2 for the validity and clinical scales, the differences were minimized when the raw scores were converted to *T* scores. The differences between the Peruvian sample and the normative sample were typically less than half a standard deviation (Butcher, 1990). Clinically, all scales were well within the normal range ($T < 65$).

TABLE 1. Mean raw scores for Peruvian sample and the U.S. MMPI-A Hispania normative sample for boys.

Scale	Peru Normative Sample (<i>n</i> = 167)		U.S. Normative Sample (<i>n</i> = 373)		<i>t</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Validity Scales						
<i>VRIN</i>	54.60	8.70	52.20	9.20	2.84	**
<i>TRIN</i>	58.90	7.12	63.40	7.30	-6.67	***
<i>F</i> ₁	5.07	4.05	4.09	3.96	2.63	**
<i>F</i> ₂	9.09	5.18	7.87	5.25	2.46	**
<i>L</i>	3.70	2.25	4.06	2.40	-1.68	
<i>F</i>	14.16	6.63	11.95	8.36	3.29	***
<i>K</i>	11.30	3.99	13.01	4.23	-4.52	***
Clinical Scales						
<i>Hs</i>	8.81	4.30	8.62	4.21	.49	
<i>D</i>	22.32	4.68	20.15	4.61	5	***
<i>Hy</i>	19.52	5.24	20.22	5.42	-1.42	
<i>Pd</i>	18.30	5.03	17.91	5.21	.82	
<i>Mf</i>	19.48	3.18	19.69	3.48	-.69	
<i>Pa</i>	12.74	4.24	11.98	4.64	1.86	
<i>Pt</i>	21.65	7.82	17.80	7.68	5.31	***
<i>Sc</i>	27.61	9.34	23.36	10.74	4.66	***

TABLE 1. Mean raw scores for Peruvian sample and the U.S. MMPI-A Hispania normative sample for boys. (Cont.).

Scale	Peru Normative Sample (<i>n</i> = 167)		U.S. Normative Sample (<i>n</i> = 373)		<i>t</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>Ma</i>	21.73	4.16	21.27	4.82	1.13	
<i>Si</i>	29.43	7.10	25.94	6.90	5.32	***
Supplementary Scales						
<i>A</i>	17.98	6.85	16.36	7.65	4.60	***
<i>R</i>	13.24	3.81	15.28	3.65	-2.78	**
<i>MAC-R</i>	23.52	3.67	21.19	3.94	1.37	
<i>ACK</i>	3.38	2.13	2.76	2.09	-1.21	
<i>PRO</i>	15.34	4.27	16.27	4.08	-3.81	***
<i>IMM</i>	15.76	5.21	11.67	5.70	3.99	***
Content Scales						
<i>A-anx</i>	9.82	3.81	8.40	3.77	4.02	***
<i>A-obs</i>	8.49	3.05	7.38	3.07	3.90	***
<i>A-dep</i>	9.54	4.31	7.40	4.60	5.22	***
<i>A-hea</i>	9.29	5.13	9.05	4.85	.52	
<i>A-aln</i>	7.95	3.06	6.42	3.25	5.26	***
<i>A-biz</i>	6.65	3.14	5.49	3.43	3.86	***
<i>A-ang</i>	8.50	3.19	8.10	3.30	1.34	
<i>A-cyn</i>	15.23	3.48	13.32	3.87	5.68	***
<i>A-con</i>	11.22	3.30	9.96	3.76	3.93	***
<i>A-lse</i>	7.14	3.56	5.63	3.15	4.72	***
<i>A-las</i>	4.92	2.49	5.28	2.66	-1.54	
<i>A-sod</i>	11.07	3.93	8.91	3.67	6.02	***
<i>A-fam</i>	10.77	5.26	10.14	5.13	1.29	
<i>A-sch</i>	5.74	3.06	6.17	3.16	-1.48	
<i>A-trt</i>	12.38	3.77	9.73	4.26	7.24	***

p* < .05. *p* < .01. ****p* < .001.

Note. *VRIN* = Variable Response Inconsistency, *TRIN* = True Response Inconsistency, *F1* = Infrequency (on first half), *F2* Infrequency (on second half), *F* = Infrequency, *L* = Lie, *K* = Defensiveness, *Hs* = Hypochondriasis, *D* = Depression, *Hy* = Hysteria, *Pd* = Psychopathic Deviate, *Mf* = Masculinity-Femininity, *Pa* = Paranoia, *Pt* = Psychasthenia, *Sc* = Schizophrenia, *Ma* = Mania, *Si* = Social Introversion, *A* = Anxiety, *R* = Repression, *MAC-R* = MacAndrew Alcoholism, *ACK* = Alcohol and Drug Problem Acknowledgement, *PRO* = Alcohol and Drug Problem Proneness, *IMM* = Immaturity, *A-anx* = Anxiety, *A-obs* = Obsessiveness, *A-dep* = Depression, *A-hea* = Health, *A-aln* = Alienation, *A-biz* = Bizarre Mentation, *A-ang* = Anger, *A-cyn* = Cynicism, *A-con* = Conduct Problems, *A-lse* = Low Self-Esteem, *A-las* = Low Aspirations, *A-sod* = Social Discomfort, *A-fam* = Family Problems, *A-sch* = School Problems.

TABLE 2. Mean raw scores for Peruvian sample and the U.S: MMPI-A Hispania normative sample for girls.

Scale	Peru Normative Sample (<i>n</i> = 181)		U.S. Normative Sample (<i>n</i> = 413)		<i>t</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Validity Scales						
<i>VRIN</i>	54.34	7.79	50.80	8.50	4.79	***
<i>TRIN</i>	53.78	6.21	57.80	6	-7.44	***
<i>F₁</i>	4.82	2.87	3.20	2.94	6.22	***
<i>F₂</i>	8.12	4.85	6.43	4.55	4.08	***
<i>L</i>	3.72	2.17	3.91	2.43	-95	
<i>F</i>	12.94	5.80	9.63	6.77	6.08	***
<i>K</i>	10.29	3.57	12.71	4.37	-7.10	***
Clinical Scales						
<i>Hs</i>	10.82	4.62	9.46	4.47	3.33	***
<i>D</i>	24.96	4.94	23.08	4.58	4.37	***
<i>Hy</i>	20.45	5.14	22.28	5.24	-3.96	***
<i>Pd</i>	19.96	5.12	18.75	5.59	2.57	*
<i>Mf</i>	24.06	3.38	25.62	3.41	-5.16	***
<i>Pa</i>	13.67	4.45	12.09	4.15	4.07	***
<i>Pt</i>	22.85	7.95	19.31	8.30	4.92	***
<i>Sc</i>	27.73	9.36	22.84	10.21	5.70	***
<i>Ma</i>	20.59	4.53	20.97	4.82	-93	
<i>Si</i>	30.73	7.21	26.85	7.90	5.86	***
Supplementary Scales						
<i>A</i>	19.24	6.72	16.36	7.65	4.60	***
<i>R</i>	14.37	3.68	15.28	3.65	-2.78	**
<i>MAC-R</i>	21.65	3.69	21.19	3.94	1.37	
<i>ACK</i>	2.56	1.78	2.76	2.09	-1.21	
<i>PRO</i>	14.89	4.05	16.27	4.08	-3.81	***
<i>IMM</i>	13.62	5.41	11.67	5.70	3.99	***
Content Scales						
<i>A-anx</i>	10.30	4.19	9.23	4.34	2.83	**
<i>A-obs</i>	8.46	2.91	7.71	3.23	2.81	**
<i>A-dep</i>	10.73	4.95	8.68	5.05	4.63	***
<i>A-hea</i>	10.76	5.52	9.19	4.97	3.28	**
<i>A-aln</i>	8.15	3.57	6.20	3.44	6.22	***
<i>A-biz</i>	6.27	3.25	4.71	3.08	5.48	***
<i>A-ang</i>	8.91	2.88	8.24	3.42	2.44	*
<i>A-cyn</i>	14.92	2.80	13.12	3.80	6.45	***
<i>A-con</i>	8.75	3.19	8.23	3.42	1.79	
<i>A-lse</i>	6.93	3.88	5.99	3.77	2.73	**

TABLE 2. Mean raw scores for Peruvian sample and the U.S. MMPI-A Hispania normative sample for girls. (Cont.).

Scale	Peru Normative Sample (<i>n</i> = 181)		U.S. Normative Sample (<i>n</i> = 413)		<i>t</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
<i>A-las</i>	5	2.78	5.16	2.70	-6.65	
<i>A-sod</i>	11.04	4.08	8.51	4.32	6.83	***
<i>A-fam</i>	12.02	5.27	11.51	5.73	1.06	
<i>A-sch</i>	4.85	2.74	5.22	2.92	-1.50	
<i>A-trt</i>	11.30	4.46	9.13	4.48	5.46	

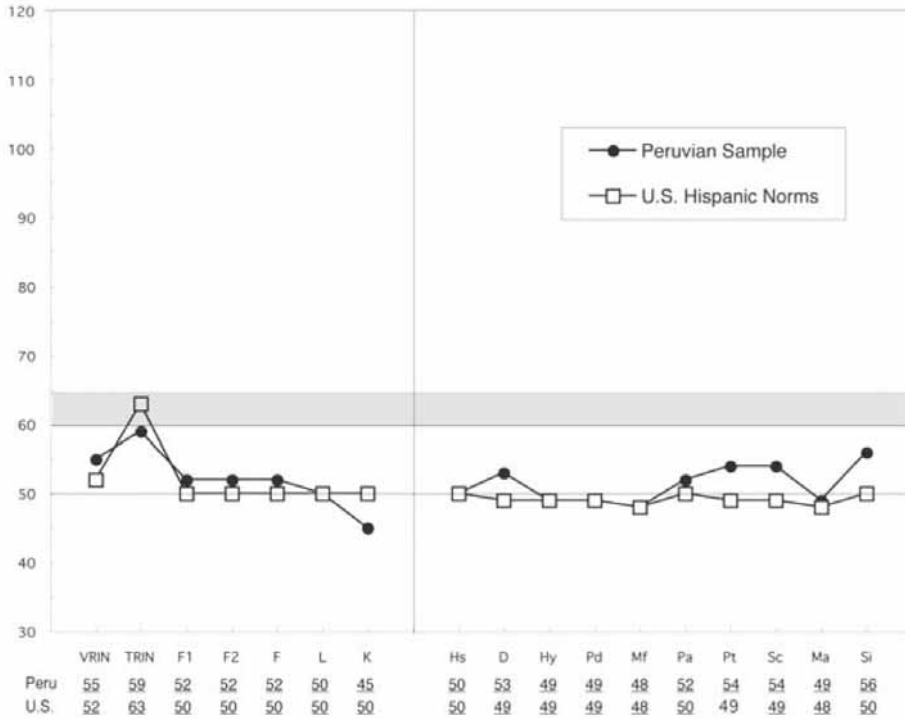
p* < .05. *p* < .01. ****p* < .001.

Note. *VRIN* = Variable Response Inconsistency, *TRIN* = True Response Inconsistency, *F1* Infrequency (on first half), *F2* = Infrequency (on second half), *F* = Infrequency, *L* = Lie, *K* = Defensiveness, *Hs* = Hypochondriasis, *D* = Depression, *Hy* = Hysteria, *Pd* = Psychopathic Deviate, *Mf* = Masculinity-Femininity, *Pa* = Paranoia, *Pt* = Psychasthenia, *Sc* = Schizophrenia, *Ma* = Mania, *Si* = Social Introversion, *A* = Anxiety, *R* = Repression, *MAC-R* = MacAndrew Alcoholism, *ACK* = Alcohol and Drug Problem Acknowledgement, *PRO* = Alcohol and Drug Problem Proneness, *IMM* = Immaturity, *A-anx* = Anxiety, *A-obs* = Obsessiveness, *A-dep* = Depression, *A-hea* = Health, *A-aln* = Alienation, *A-biz* = Bizarre Mentation, *A-ang* = Anger, *A-cyn* = Cynicism, *A-con* = Conduct Problems, *A-lse* = Low Self-Esteem, *A-las* = Low Aspirations, *A-sod* = Social Discomfort, *A-fam* = Family Problems, *A-sch* = School Problems.

For Peruvian boys, differences on all the clinical scales between the Peruvian sample and the U.S. Hispanic normative sample were less than half a standard deviation. For girls, differences of greater than half a standard deviation were found on three scales, the *K* (*Defensiveness*), *Pt* (*Psychasthenia*) and *Si* (*Social Introversion-Extroversion* scales). All differences between the groups were less than one standard deviation.

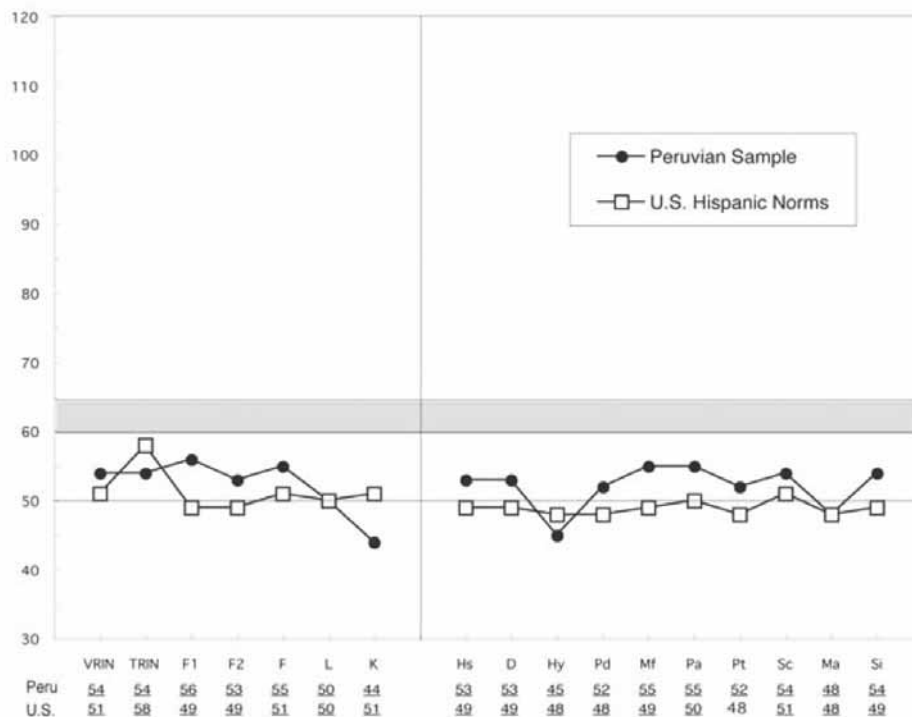
Similar results were also observed between the two groups, by gender, on the supplementary and content scales (see Tables 1 and 2). For boys, an elevation of more than one half a standard deviation (but less than one standard deviation) was found on only the following scales, *A-cyn* (*Cynicism*), *A-trt* (*Negative Treatment Indicators*), *MAC-R* (*MacAndrew Alcoholism Scale*) and *IMM* (*Immaturity*). For girls, no elevation of more than one half a standard deviation was found for any of the content or supplementary scales.

FIGURE 1. MMPI-A Validity and Clinical scale profiles for adolescent boys Peruvian sample and U.S. Hispanic adolescent sample plotted on U.S. norms.



Note. *VRIN* = Variable Response Inconsistency, *TRIN* = True Response Inconsistency, *F1* Infrequency (on first half), *F2* = Infrequency (on second half), *F* = Infrequency, *L* = Lie, *K* = Defensiveness, *Hs* = Hypochondriasis, *D* = Depression, *Hy* = Hysteria, *Pd* = Psychopathic Deviate, *Mf* = Masculinity-Femininity, *Pa* = Paranoia, *Pt* = Psychastenia, *Sc* = Schizophrenia, *Ma* = Mania, *Si* = Social Introversion.

FIGURE 2. MMPI-A Validity and Clinical scale profiles for adolescent girls Peruvian sample and U.S. Hispanic adolescent sample plotted on U.S. norms.



Note. VRIN = Variable Response Inconsistency, TRIN = True Response Inconsistency, F1 Infrequency (on first half), F2 = Infrequency (on second half), F = Infrequency, L = Lie, K = Defensiveness, Hs = Hypochondriasis, D = Depression, Hy = Hysteria, Pd = Psychopathic Deviate, Mf = Masculinity-Femininity, Pa = Paranoia, Pt = Psychastenia, Sc = Schizophrenia, Ma = Mania, Si = Social Introversion.

Discussion

The primary conclusion that can be drawn from the present study is that the Peruvian samples of adolescents responded quite similarly to normative Spanish-speaking U.S. sample on the MMPI-A. It also supports the view that this Spanish version of the MMPI-A represents a significant improvement over the Nuñez translation of the MMPI which was previously used in Peruvian clinical and research applications.

This study adds additional perspective on one of the most basic questions in the internationalization of psychological assessment—can an instrument, like the MMPI-A Hispania, developed for use in one country (the United States, for example) be used to assess adolescents in another country (like Peru)? As Scott *et al.* (2002) point out there are important practical reasons to explore this question, including the fact that the availability of instruments like the MMPI-A can facilitate cross-cultural research on

psychopathology and serve as the basis for personality assessment research across cultures. Further, it can encourage the development of clinical psychology in other countries.

Although it would be desirable to have MMPI-A norms for the Peruvian population, this cannot be established until a large normative sample of the general population is obtained. The cost of developing psychological tests with a substantial validation base for some other countries like Peru is probably prohibitive, as this is both time and labor intensive. Until then, it is the role of research to establish the clinical validity of the instrument in employing the U.S. norms as “itinerant norms” (Butcher, 1996; Butcher and Garcia, 1978).

Butcher (1996) suggests that itinerant norms from one country or culture can serve another country or culture for the purpose of MMPI-2/MMPI-A interpretation until local norms are developed. In other words, Butcher argues that the U.S. norms can be applied in other countries, but should be done so with significant caution and judicious reasoning. This view is supported by the absence of differences, in this case, between the Peruvian sample and the U.S. Hispanic normative sample. Still, special interpretive consideration should be given to the few scales where significant differences are found until additional normative sample investigations, such as the present study, are conducted in Peru.

While the results from this work appear promising, there are some caveats that should be noted. First, the sample size of this study is relatively small and somewhat heterogeneous in make up. Second, the sample was collected in a “field research” setting rather than under controlled research conditions. It was not possible, therefore, to balance or stratify the samples on factors such as age or socio-economic status. The profiles collected in this sample were not selected for a particular reason other than they were students attending public schools in the city of Arequipa who were native Spanish-speakers and who indicated the absence of a history of emotional problems. Having larger samples from across the country in different sites would have allowed additional item analytic comparisons and more heterogeneity in the sample. In addition, clinical utility needs to be established by administering the instrument to psychiatric populations in Peru to determine if elevations on scales are associated with symptomatic or syndromal psychopathology. Finally, future research could also be conducted on the equivalence of the English and Spanish versions with bilingual Peruvian adolescents.

In spite of these limitations, this initial MMPI-A Hispania study advances the cumulative research and clinical application of psychological assessment in Peru. The results of this study suggest that mental health professionals can effectively employ the English U.S. norms for Spanish-speaking adolescents, as itinerant norms for the Peruvian population. The MMPI-A Hispania is likely to be an appropriate and relevant measure to assess the problems and behavior of Peruvian adolescents. The findings are encouraging for the internationalization and generalizability of psychological assessment.

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