

MMPI-2 Personality Psychopathology Five (PSY-5) Facet Scales: Factor Structure Replication in a Spanish Sample

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Introduction

Harkness, McNulty, and Ben-Porath (1995) developed the original set of MMPI-2 scales to measure the Psychopathology Five (PSY-5) constructs. The facet-level subscales of the MMPI-2 PSY-5 scales were empirically developed by Arnau, Handel, and Archer (2005a) in a large, heterogeneous sample. However, some of the original factors did not replicate well in a different setting with an inpatient sample (Arnau, Handel, & Archer, 2005b). A new set of facet scales were developed, with factor structure replicability across three settings (inpatient, outpatient, and medical) as an explicit criterion for inclusion in the final set of scales (Arnau & Handel, 2006). The factor structure of these new facet scales has yet to be evaluated in any language other than English to determine its cross-cultural validity. Therefore, the purpose of the present study was to evaluate the replicability of the structure of the new PSY-5 facet scales, using the Spanish version of the MMPI-2 translated for Spain, South America, and Central America (Avila & Jimenez Gomez, 1996). In the current study, internal consistency reliabilities of the facet scale score were also evaluated.

METHOD

Participants

The sample was randomly selected from a larger sample that originally participated in the Spanish normative adaptation of the MMPI-2 currently distributed to Spain and Latin America. All participants were natives of Spain. After removing invalid protocols, the total consisted of 1,279 respondents: normal ($n = 1,011$) and mental health outpatients ($n = 268$). The normal group was composed of both men (38.4%) and women (61.6%), with a mean age of 31 ($SD = 11.6$). The clinical sample consisted of 44% men and 56%

women, with a mean age of 32.8 ($SD = 11.2$). Only valid protocols were considered, according to common criteria of exclusion (CNS >30, VRIN T-score >80, TRIN raw <5 or >12 for the total sample; Fb >25 and F >38 for men; Fb >22 and F >26 for women).

Procedure and Statistical Analysis

Reliability

Cronbach's alpha scores were obtained to determine the internal consistency reliability of the Spanish-language scales and subscales.

Factorial Validity: Analytic Procedure.

A separate PCA of each of the PSY-5 domain items was performed, extracting the same number of factors and using the same Promax rotation used by Arnau and Handel (2006), to facilitate direct comparison of the two solutions and to determine the replicability of the original component solution found with the American development sample. Pattern coefficients of .40 or greater were considered salient. Factor congruence coefficients were computed in order to provide a quantitative indicator of the degree of replicability of the facet- level factor structure in the Spanish version.

RESULTS

Reliability

Table 1 presents the internal consistency reliabilities of facet scale scores for the Spanish sample, along with the alphas for the developmental American sample, for comparison. Overall, alphas were lower than the ones obtained for the American outpatient sample. Alphas ranged from .34 for the Low Diligence/ Hypomania facet to .79 for the Angry Hostility facet.

PCA Results and Factor Congruence

The goal of the study was to determine the replicability of the facet-level subscales originally derived for the MMPI-2 PSY-5 in a representative Spanish sample. A five-factor solution was extracted, which exhibited good replicability across the Spanish and the American samples. Coefficients of congruence for all components of the PSY-5 facets ranged from $R_c = .81$ to $.98$. Most congruence coefficients exceeded .90, indicating excellent replicability. Results provide strong evidence for the replicability of the component structure originally derived in the American sample.

CONCLUSIONS

In general the scales and subscales achieved reliability coefficients that were consistent with the original American sample and demonstrated acceptable reliability, with exception of two facets (INTR3 and DISC3) which require further research to determine their permanence in the factorial set because of the low reliability in both the Spanish and American samples.

Further research with the facets scale is warranted. Because the facets tap more narrow-bandwidth personality constructs, they may have the potential to add to the description and prediction of personality disorders. The PSY-5 facets have the potential to add to the description of personality disorders provided by the broad PSY-5 domains.

The PSY-5 facet level subscales show remarkable replicability in a different setting and in a different language, providing strong evidence for the cultural validity of the test when applied to groups similar to the one tested, and proving useful for Spanish speakers in Spain and in Latin America.

Future research should explore the clinical and predictive utility of scores from this measure used in other Spanish speakers groups such as Spanish natives from USA.

References

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Table 1: Reliabilities and Factor Congruences of MMPI-2 Personality Psychopathology Five (PSY-5) Domain and Facet Scales

| <i>Facet</i> | <i>Cronbach's Alpha</i> | | <i>Rc</i> |
|--|-------------------------|------------------------|-----------|
| | <i>Spaniard Sample</i> | <i>American Sample</i> | |
| AGGR | .626 | .687 | |
| AGGR1 Physical/Instrumental Aggression | .583 | .698 | +0.961 |
| AGGR2 Assertiveness | .594 | .723 | +0.970 |
| AGGR3 Grandiosity/Indignation | .469 | .555 | +0.976 |
| PSYC | .776 | .842 | |
| PSYC1 Paranoia | .567 | .726 | +0.953 |
| PSYC2 Mistrust/ Withdrawal | .580 | .696 | +0.904 |
| PSYC3 Psychotic Experiences | .643 | .715 | +0.971 |
| INTR | .776 | .836 | |
| INTR1 Disengagement/Anhedonia | .722 | .825 | +0.940 |
| INTR2 Low Sociability | .739 | .769 | +0.969 |
| INTR3 Low Diligence/Hypomania | .343 | .448 | +0.939 |
| NEGE | .853 | .898 | |
| NEGE1 Angry Hostility | .794 | .831 | +0.896 |
| NEGE2 Dysphoria | .675 | .802 | +0.814 |
| NEGE3 Worry/Stress | .503 | .689 | +0.951 |
| NEGE4 Phobias | .707 | .660 | +0.829 |
| DISC | .652 | .720 | |
| DISC1 Antisocial History | .577 | .618 | +0.951 |
| DISC2 Norm Violation | .509 | .618 | +0.864 |
| DISC3 Impulsivity/Low Harm Avoidance | .478 | .461 | +0.861 |