



Validating the Compulsivity Scale of the MMPI-3

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Introduction

Background:

- The Minnesota Multiphasic Personality Inventory (MMPI) instruments are one of the most commonly used measures of personality and psychopathology (Sellbom, 2019).
- Historically, MMPI instruments have long tried to assess content related to OCD with the MMPI and MMPI-2 item pools (Ben-Porath & Sherwood, 1993).
- The MMPI-2 has a content scale titled "Obsessiveness," which was created to assess OCD related content, but yields low reliability coefficients and poor convergent validity with OCD criteria (Ben-Porath & Sherwood, 1993).
- A new version of the test, the MMPI-3, has been developed (Ben-Porath & Tellegen, 2020ab). New item content is being introduced and new scales are being added to the test – including one labeled "Compulsivity."
- The Compulsivity (CMP) scale aims to assess compulsive behaviors, obsessions, and rigidity/perfectionism.
- A valid scale of compulsiveness on the MMPI-3 could improve the abilities for clinicians to properly diagnose obsessive-compulsiveness in patients, particularly because MMPI instruments are so widely used.

Objective:

- This study examined the construct validity of the new Compulsivity scale of the MMPI-3 in an undergraduate sample.

Method

Participants:

- Participants included 86 undergraduate students enrolled at the University of Houston-Clear Lake; 11 were removed due to having an invalid MMPI-3 protocol.
- The sample comprised of mostly women (73.2%) with a mean age of 26.8 years old, and an age range of 18-63 years old.
- Race/Ethnicity of the participants was fairly diverse: 42.7% Caucasian, 25.3% LatinX, 14.7% Multiracial, 6.7% African-American, and 10.6% of other ethnicities.
- Participants consented to be part of this validation study, completing the MMPI-2-RF-EX and various self-report questionnaires that measure OCD severity (used to assess convergent validity), as well as those unrelated to OCD (used to assess discriminant validity).

Measures:

- **Minnesota Multiphasic Personality Inventory – 3 (MMPI-3;** Ben-Porath & Tellegen, 2020ab). The MMPI-3 was scored from an expanded item pool (MMPI-2-RF-EX). The MMPI-3 contains 335 true/false items and scores a wide range of psychopathology and personality.
- **Obsessive Compulsive Inventory- Revised (OCI-R;** Foa et al., 2002; Huppert et al., 2007) is an 18-item, self-report measure that assesses symptomatology of OCD. It consists of six groups of symptoms: washing, checking, ordering, hoarding, neutralizing, and obsessing.
- **Florida Obsessive Compulsive Inventory (FOCI;** Storch et al., 2007) is a self-report assessment that examines symptoms and severity of OCD.
- **Dimensional Obsessive-Compulsive Scale (DOCS;** Abramowitz et al., 2010) is a measure that assesses four obsessive-compulsive symptom dimensions: contaminating/washing, harm obsessions/checking compulsions, symmetry/ordering, and unacceptable thoughts.
- **Inventory of Depression and Anxiety Symptoms –II (IDAS-II;** Watson et al., 2012) a self-report broadband measure that assesses depression, anxiety, and bipolar symptoms.
- **Eating disorder examination questionnaire (EDE-Q 6.0;** Fairburn et al., 2008) is used to assesses a wide range of symptoms & severity of eating-related pathology.

Procedure:

- At a designated classroom on campus (pre-COVID), participants were administered a battery of paper/pencil questionnaires containing the aforementioned measures; a test proctor and other participants (up to 10 max) were present.

Results

- Bivariate correlation analyses were conducted to determine convergent and discriminant validity of the MMPI-3 Compulsivity Scale by comparing the scores between the Compulsivity Scale and measures related/unrelated to compulsiveness. Correlations $\geq .30$ were considered to be evidence of convergent validity. (Highlighted in Table 1.) Correlations $< .30$ were considered to be evidence of discriminant validity.
- The Compulsivity Scale of the MMPI-3 was modestly to substantially associated with the OCI Total Score, FOCI scores, DOCS Total Score (and Contamination and Symmetry sub scores), and the IDAS Order and Social Anxiety subscales. To a lesser extent, the CMP scale is associated with the IDAS Dysphoria scale. (See Table 1)
- The Compulsivity Scale expectedly did not correlate with IDAS Well Being, IDAS Panic, and Global EDEQ scores, as expected. (See Table 1). The Compulsivity Scale also did not correlate with DOCS Harm and Thoughts subscales, which was somewhat unexpected.

Table 1. Correlations with MMPI-3 Compulsivity Scale

OCI-R – Total Score	.65**
FOCI – Part A	.48**
FOCI – Part B	.45**
DOCS – Total Score	.36**
DOCS – Contamination	.30**
DOCS – Symmetry	.30**
DOCS – Harm	.25**
DOCS – Thoughts	.22*
IDAS – Order	.51**
IDAS – Social Anxiety	.37**
IDAS – Clean	.30**
IDAS – Dysphoria	.29**
IDAS – Panic	.22*
IDAS – Well Being	-.15
Global EDE-Q Score	.07

*p<.05; **p<.001

Discussion

Implications:

- Our data provides good evidence of construct validity for the Compulsivity scale of the MMPI-3.
- The correlations (esp. high correlation with OCI-R) point to an association of a general construct of compulsiveness but not so much with obsessiveness (e.g., intrusive thoughts or images).
- Item content on the MMPI-3 Compulsivity seems to be mostly reflective of compulsive behaviors, notably counting and checking behaviors.

Limitations and Future Research:

- Due to the Covid-19 pandemic, data collection and entry was considerably impeded. More participants and data could further clarify our findings.
- Use of additional OCD and compulsiveness-related measures in future studies could parse out if the Compulsivity scale is more related to general compulsiveness (i.e., OCPD) or obsessive-compulsiveness (i.e., OCD).
- Future studies using a clinical OCD or OCPD population could clarify our results and indicate a significant use for this MMPI-3 scale in diagnosing disorders related to compulsivity.
- Continuance of this study could lead to a pre-/post-pandemic analysis to determine if the pandemic has affected compulsivity or other personality traits.