

# Construct Validity of Internalizing and Thought Dysfunction Scales within a Forensic Inpatient Hospital Setting

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## INTRODUCTION

- ▶ Many psychiatric inpatients experience mood or psychotic symptoms, and comorbid mood and psychotic disorders are not uncommon. However, there are different treatment implications for patients who experience mood symptoms, psychotic symptoms, or both.
- ▶ Personality and psychopathology measures inform diagnosis and treatment practice. MMPI measures (e.g., Minnesota Multiphasic Personality Inventory-2 Restructured Form; MMPI-2-RF<sup>2</sup>) are widely used by clinicians<sup>3</sup>.
- ▶ It is imperative to examine whether MMPI-2-RF scales distinguish between conceptually-relevant diagnostic groups.
- ▶ Previous studies<sup>4</sup> should be replicated in forensic inpatient settings where individuals may be likely to distort test responses and consequently threaten protocol validity.

## AIMS & HYPOTHESES

- ▶ The current study aimed to extend our understanding of the diagnostic construct validity of the MMPI-2-RF internalizing and thought dysfunction-related substantive scales by comparing mean scores for forensic inpatient subsamples diagnosed with: (1) mood disorder(s), (2) mood and psychotic disorder(s), (3) psychotic disorder(s), and (4) all other psychiatric disorder(s).
- ▶ **Hypotheses:**
- ▶ **1.** We hypothesized the (1) mood and (2) comorbid mood/psychotic disorder(s) diagnostic groups would exhibit higher scores on internalizing scales (e.g., EID, RCd, RC2, SUI, HLP, SFD, NFC, NEGE-r), as compared to the (3) psychotic disorder(s) and (4) all other disorder(s) diagnostic groups.
- ▶ **2.** We hypothesized the (3) psychotic and (2) comorbid mood/psychotic disorder(s) groups would exhibit higher scores on thought dysfunction scales (e.g., THD, RC6, RC8, PSYC-r), as compared to the (1) mood and (4) all other disorder(s) diagnostic groups.

## METHOD

### Participants

- ▶ Deidentified archival data were examined from 1,076 inpatients with DSM-IV-TR psychiatric disorder(s) and treated at a large forensic psychiatric facility in the western United States. Mean age = 41 years ( $SD = 11.4$ ).
- ▶ **Group 1:** Diagnosed with mood disorder(s) ( $n = 120$ ).
- ▶ **Group 2:** Diagnosed with mood and psychotic disorder(s) ( $n = 368$ ).
- ▶ **Group 3:** Diagnosed with psychotic disorder(s) ( $n = 508$ ).
- ▶ **Group 4:** Diagnosed with neither mood nor psychotic disorders ( $n = 80$ ).

### Measure

- ▶ MMPI-2-RF is a 338-item self-report measure that includes 51 scales measuring protocol validity, psychopathology, and personality constructs<sup>2</sup>.

### Procedure

- ▶ Invalid protocols due to non-content-based invalid responding, underreporting, and overreporting were removed using standardized procedures ( $n = 119$  cases excluded).

### Final Samples:

- ▶ **Group 1:** Mood Disorder(s) Diagnostic Group ( $n = 80$ ).
- ▶ **Group 2:** Mood and Psychotic Disorder(s) Diagnostic Group ( $n = 223$ ).
- ▶ **Group 3:** Psychotic Disorder(s) Diagnostic Group ( $n = 280$ ).
- ▶ **Group 4:** All Other Disorder(s) Diagnostic Group ( $n = 43$ ).
- ▶ Independent samples  $t$ -tests were examined to assess whether differences between diagnostic groups were statistically significant.
- ▶ Hedges'  $g$  effect size indices were examined to evaluate the magnitude of differences between mean scores.

## RESULTS

- ▶ **Hypothesis 1** was generally supported, as most scales demonstrated statistically and practically significant effects in distinguishing between mood and psychotic disorder(s) groups. EID demonstrated the largest effect ( $g = 0.55$ ; see Table 1,  $g_{13}$ ).
- ▶ All hypothesized internalizing scales demonstrated statistically significant differences, with small to moderate effects observed between the comorbid mood and psychotic disorder(s) diagnostic group and the psychotic disorder(s) diagnostic group (see Table 1,  $g_{23}$ ).
- ▶ Unexpectedly, the all other disorder(s) group reported many depressive symptoms and therefore exhibited few differences compared to the mood groups (see Table 1,  $g_{14}$ ,  $g_{24}$ ).
- ▶ **Hypothesis 2** was partially supported with small, practically significant differences observed between groups with and without psychotic disorders on psychoticism-related scales. The broad Higher-Order THD scale was most effective in distinguishing these groups (see Table 1,  $g_{12}$ ,  $g_{13}$ ,  $g_{24}$ ,  $g_{34}$ ).

## DISCUSSION

- ▶ The present study extended the empirical literature demonstrating the ability of the MMPI-2-RF to differentiate between forensically committed groups of individuals diagnosed with mood, psychotic, and comorbid conditions.
- ▶ In line with existing literature as well as the MMPI-2-RF Technical Manual<sup>2</sup>, individuals with mood disorders tended to display higher levels of internalizing and depressive symptomology as compared to individuals with psychotic disorders.
- ▶ Replicating previous studies<sup>4</sup>, the broad Higher-Order EID and THD scales exhibited the largest differences across mood and psychotic disorder(s) diagnostic groups. This is consistent with the broad diagnostic criterion used in this study. Future studies should examine whether more specific scales are especially effective in distinguishing between patients with and without specific symptoms associated with mood and psychotic disorders.
- ▶ Patients not diagnosed with a mood or psychotic disorder reported notable depression-related symptoms, suggesting mental health clinicians should evaluate and provide treatment for symptoms of depression across diagnostic groups within these settings.
- ▶ Despite being diagnosed with severe mental illnesses and being screened for underreporting, patient groups exhibited mean scores that were only moderately elevated above the normative mean of 50T. Future studies should examine whether the extant MMPI-2-RF underreporting validity scales adequately identify underreporting of mood and psychotic symptoms in patients with significant motivation to underreport.

**Table 1. Selected MMPI-2-RF Means, Standard Deviations, and Hedges'  $g$  Effect Size Indices for Four Diagnostic Groups**

	Group 1: Mood Disorders ( $n = 80$ )		Group 2: Mood & Psychotic Disorders ( $n = 223$ )		Group 3: Psychotic Disorders ( $n = 280$ )		Group 4: All Other Disorders ( $n = 43$ )		Hedges' $g$ Effect Sizes						
	$M$	$SD$	$M$	$SD$	$M$	$SD$	$M$	$SD$	$g_{12}$	$g_{13}$	$g_{14}$	$g_{23}$	$g_{24}$	$g_{34}$	
<b>Higher-Order Scales</b>															
EID: Emotional/Internalizing Dysfunction	55	12	53	13	49	10	53	13	0.13	<b>0.55*</b>	<u>0.13</u>	<b>0.38*</b>	0.00	-0.40	
THD: Thought Dysfunction	54	11	59	16	58	15	54	15	<u>-0.33</u>	<b>-0.25</b>	0.04	0.08	<u>0.34</u>	<u>0.27</u>	
<b>Restructured Clinical Scales</b>															
RCd: Demoralization	56	12	56	12	51	10	54	13	0.04	<b>0.43*</b>	<u>0.15</u>	<b>0.37*</b>	<u>0.11</u>	-0.26	
RC2: Low Positive Emotions	55	14	53	14	50	11	56	15	0.15	<b>0.42*</b>	<u>-0.03</u>	<b>0.22*</b>	<u>-0.18</u>	-0.45	
RC6: Ideas of Persecution	59	14	63	16	61	16	61	16	<u>-0.23</u>	<u>-0.17</u>	-0.13	0.07	<u>0.11</u>	<u>0.05</u>	
RC8: Aberrant Experiences	54	11	56	13	55	12	52	13	<u>-0.16</u>	<u>-0.08</u>	0.14	0.09	<u>0.27</u>	<u>0.20</u>	
<b>Internalizing Specific Problems Scales</b>															
SUI: Suicidal/ Death Ideation	55	18	54	15	50	10	53	14	0.06	<b>0.42*</b>	<u>0.11</u>	<b>0.34*</b>	<u>0.06</u>	-0.31	
HLP: Helplessness/Hopelessness	54	15	52	14	49	11	52	14	0.11	<b>0.38*</b>	<u>0.10</u>	<b>0.25*</b>	<u>-0.01</u>	-0.27	
SFD: Self-Doubt	54	12	53	12	49	9	52	13	0.05	<b>0.46*</b>	<u>0.09</u>	<b>0.38*</b>	<u>0.04</u>	-0.35	
NFC: Inefficacy	52	10	54	11	50	10	51	12	-0.15	<u>0.17</u>	<u>0.08</u>	<b>0.32*</b>	<u>0.22</u>	-0.09	
<b>Personality Psychopathology Five (Revised) Scales</b>															
PSYC-r: Psychoticism	52	11	57	16	56	15	54	14	<b>-0.34*</b>	<b>-0.28</b>	-0.12	0.07	<u>0.23</u>	<u>0.17</u>	
NEGE-r: Negative Emotionality	53	11	52	11	48	10	51	14	0.06	<b>0.49*</b>	<u>0.16</u>	<b>0.41*</b>	<u>0.10</u>	-0.29	

Note. \* = statistically significant  $t$ -tests;  $p < .05$ . Small ( $|0.20|$ - $|0.49|$ ), medium ( $|0.50|$ - $|0.79|$ ), and large ( $|0.80+$ ) Hedges'  $g$  values are bolded. Hypothesized differences are underlined.

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