



Association Between MMPI-2-RF Somatic/Cognitive Scales and Pain-Related Medical Diagnoses among Forensic Psychiatric Inpatients

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Precision in self-report



- **Pain assessment is important in understanding whether people can accurately self-report the pain they are experiencing.**
- **Accuracy of self-report will help clinicians determine what form of treatment will best serve their patients.**



Importance of Pain Assessment



**Health Justice &
Ethical Pain
Treatment**

**Pain
Management**

Malingering

Abbott (2019); Peteet & Tobey (2017)

The Minnesota Multiphasic Personality Inventory 2 - Restructured Form



- **MMPI-2-RF has 338 items and 51 scales:**
 - **Validity Scales** (accuracy of test results)
 - **Personality Dysfunction:**
 - **Negative Emotionality/Neuroticism**
 - **Psychoticism**
 - **Aggressiveness**
 - **Introversion**
 - **Disconstraint**
 - **Psychopathology:**
 - **Internalizing disorders**
 - **Externalizing disorders**
 - **Psychotic disorders**
 - **Somatic complaints**



MMPI-2-RF Somatic/Cognitive Scales



MLS	Malaise	generalized poor health/debilitation
GIC	Gastrointestinal Complaints	poor appetite, nausea, vomiting, upset stomach
HPC	Head Pain Complaints	head/neck pain, headaches, head pain when upset
NUC	Neurological Complaints	dizziness, numbness, weakness, involuntary movement
COG	Cognitive Complaints	memory, intellectual, concentration, & confusion problems

MMPI-2-RF Somatic/Cognitive Scale Uses



**Somatic/Cognitive Scales
showed good reliability,
validity, and predictive utility
Marek et al. (2020)**

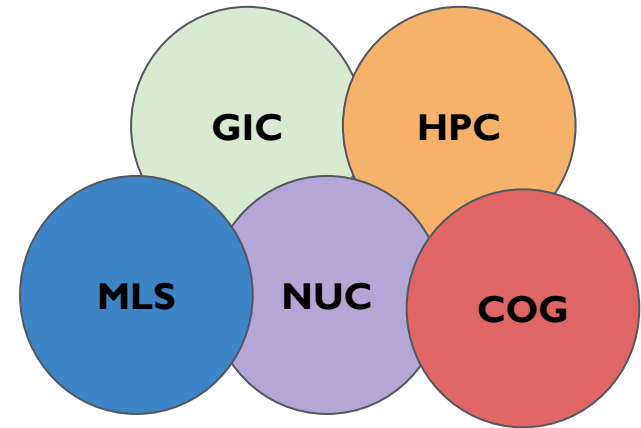
**COG not correlated with
cognitive performance tasks
Walvoort et al. (2016)**

**COG associated with higher
risk of poor therapeutic
outcomes
Tylicki et al. (2019)**

Current Study



- **Will patients with pain-related medical conditions score higher on all five scales?**
 - **Malaise (MLS)**
 - **Gastrointestinal Complaints (GIC)**
 - **Head Pain Complaints (HPC)**
 - **Neurological Complaints (NUC)**
 - **Cognitive Complaints (COG)**

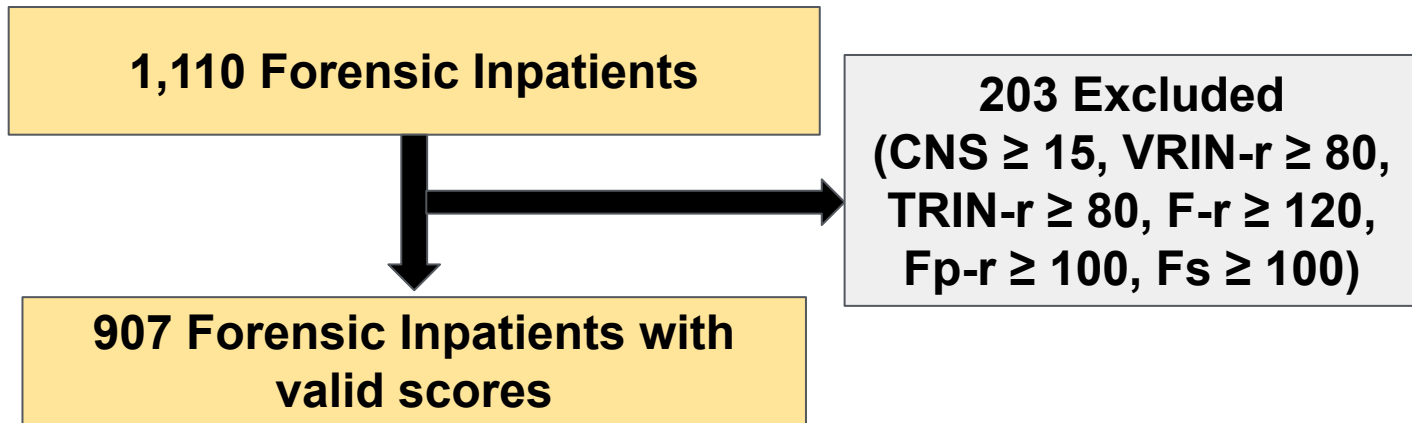


Method



1,110 Forensic Inpatients

Method



Method



1,110 Forensic Inpatients



**907 Forensic Inpatients with
valid scores**



267

Pain-Related Dx.

Method



1,110 Forensic Inpatients



**907 Forensic Inpatients with
valid scores**



267

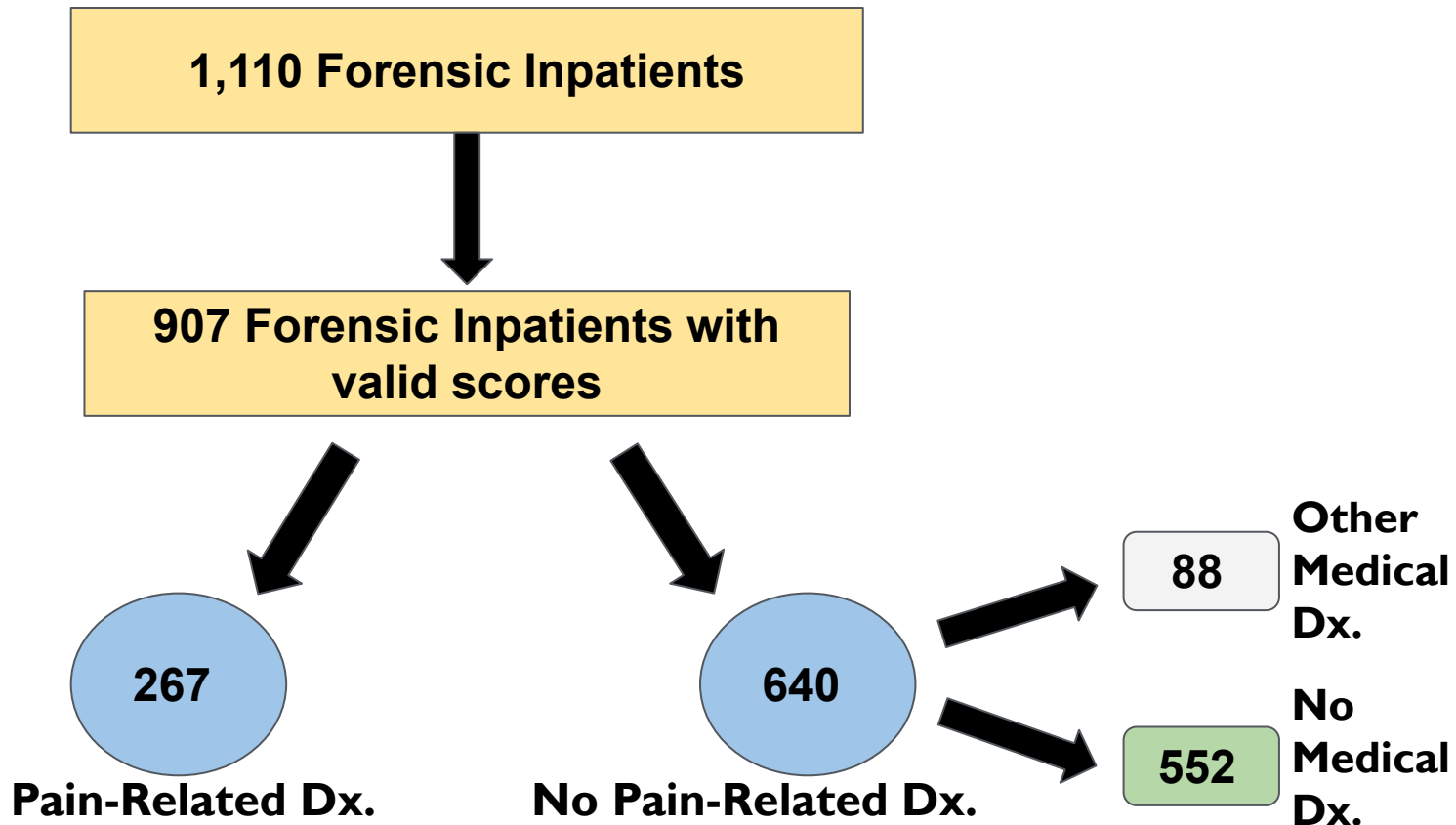
Pain-Related Dx.



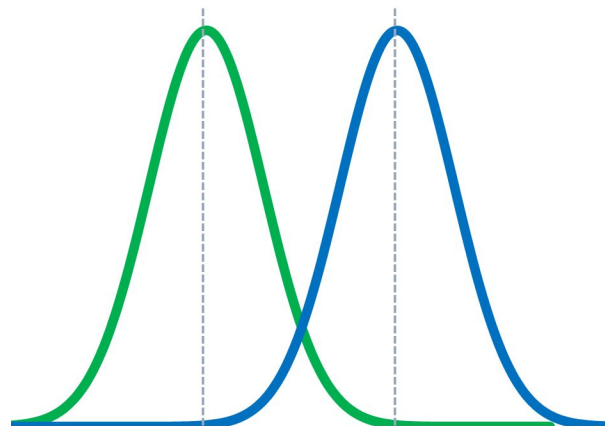
640

No Pain-Related Dx.

Method



Method & Hypotheses



$n = 267$

**Pain-Related
Diagnosis**

vs.

**No Pain-Related
Diagnosis**

$n = 640$

$n = 267$

**Pain-Related
Diagnosis**

vs.

No Medical Diagnosis

$n = 552$

Procedure



- **Independent samples t-test:**
 - Taking into account sample distribution standard deviations, are two sample means statistically significantly different?
- **Hedges' g:**
 - How **BIG** is the difference?
 - **.20-.49: Small Effect**
 - **.50-.79: Medium Effect**
 - **.80+: Large Effect**

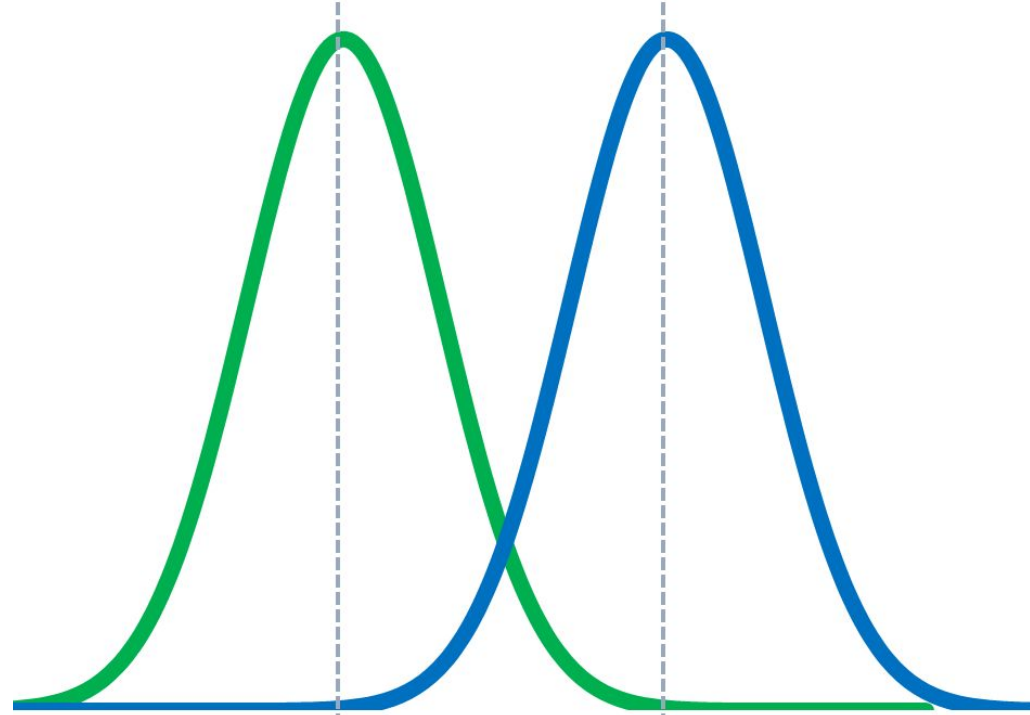


Table 4: Pain Diagnosis Present vs. No Medical Diagnosis



	Pain Diagnosis Present			No Medical Diagnosis				
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>p</i>	<i>g</i>
MLS	267	54.0	12.2	552	52.7	11.2	.14	0.11
GIC	267	52.0	11.4	552	49.9	9.0	<.01	0.20
HPC	267	51.6	10.2	552	50.3	9.9	.06	0.14
NUC	267	58.6	12.1	552	56.2	12.7	<.01	0.19
COG	267	53.1	12.6	552	51.3	11.7	.04	0.16

Discussion

**Associations with Pain Diagnoses
were mostly negligible**

Limitations & Future Directions

- **Multiple Physician Raters**
- **Considering Malingering**

GIC

NUC

COG



References, Acknowledgements, & Disclosures



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