



Background

- As a complex disorder (Galatzer-Levy & Bryant, 2013), improving treatment for PTSD relies on strong diagnostic measurement of the symptoms associated with the disorder. This makes assessment critical to providing mental health services to veterans with PTSD.
- The Personality Assessment Inventory (PAI; Morey, 1991) offers such possible utility
- Previous research has found support for the PAI in the measure of PTSD but has typically involved small non-treatment seeking samples (Bellet et al., 2017), evaluated only select scales on the PAI (Calhoun et al., 2010), or emphasized non-veteran samples (McDevitt-Murphy et al., 2007).
- Likewise, no research to date has examined the potential of empirical subtypes on the PAI

Participants (n = 327)

| | |
|--|----------------------|
| PTSD | n=279, 85.3% |
| Demographics based on PTSD-positive group | |
| Male | n=265, 95% |
| Age | M = 43.6 (SD = 13.7) |
| MST | n = 22, 7.9% |
| Era | |
| OEF/OIF/OND | n=165, 59.1% |
| Desert Storm | n = 30, 10.8% |
| Vietnam | n = 49, 17.6% |
| Other | n = 31, 11.1% |
| Race | |
| African American | n = 51, 18.6% |
| White / Caucasian | n = 183, 65.6% |
| Hispanic | n = 23, 8.2% |
| Native American | n = 8, 2.9% |
| Asian American | n = 4, 1.4% |
| Multi-racial or other | n = 8, 2.9% |
| Combat Exposure | |
| Light | n = 33, 11.8% |
| Light-Moderate | n = 58, 20.8% |
| Moderate | n = 79, 28.3% |
| Moderate-Heavy | n = 68, 24.4% |
| Heavy | n = 27, 9.7% |

Methods and Results

All assessments were conducted at a PCT clinic at a VAMC between January 2013 and October 2016. MANOVAs between PTSD and non-PTSD groups (based on PCL score) were conducted on the PAI. Scale scores for veterans diagnosed with PTSD using a structured interview are provided for comparison. Latent Class Analyses (2-class to 7-class) were run to evaluate presentation of clinical subtypes (e.g., Miller, Greif, & Smith, 2003). Results of the best fitted model are presented below.

Table 1. Validity, Clinical, Treatment, and Interpersonal Scales

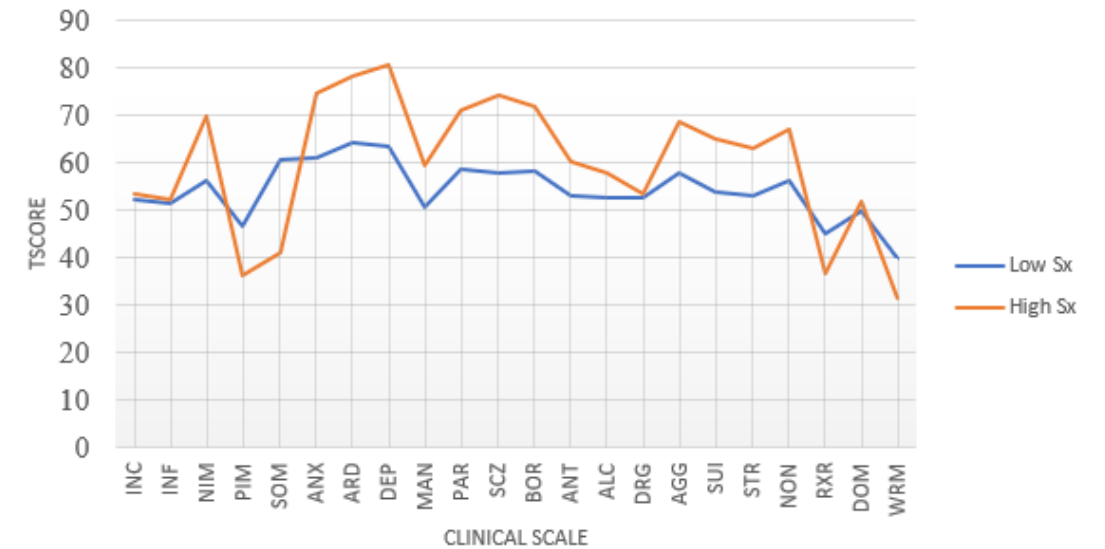
| Scale | No PTSD-PCL (n = 48) | | PTSD-CAPS (n = 23) | | PTSD-PCL (n = 279) | | % ≥ RCS | F-Value | Partial η ² |
|-------|----------------------|------|--------------------|------|--------------------|------|---------|-----------|------------------------|
| | M | SD | M | SD | M | SD | | | |
| INC | 52.4 | 11.8 | 49.8 | 8.2 | 53.7 | 8.9 | - | 0.592 | 0.00 |
| INF | 51.4 | 11.1 | 54.2 | 7.8 | 52.4 | 8.7 | - | 0.420 | 0.00 |
| NIM | 56.3 | 14.1 | 68.4 | 17.6 | 70.0 | 14.8 | - | 29.935*** | 0.18 |
| PIM | 46.8 | 11.1 | 39.1 | 10.4 | 36.3 | 10.1 | - | 31.720*** | 0.18 |
| SOM | 60.9 | 14.0 | 69.9 | 16.0 | 71.3 | 12.1 | 49.5% | 23.728*** | 0.14 |
| ANX | 61.2 | 12.1 | 71.6 | 15.0 | 74.8 | 12.4 | 57.3% | 36.125*** | 0.20 |
| ARD | 64.5 | 15.0 | 74.9 | 13.7 | 78.5 | 11.6 | 72.3% | 51.180*** | 0.27 |
| DEP | 63.7 | 12.1 | 79.3 | 15.7 | 80.9 | 13.5 | 76.3% | 47.492*** | 0.25 |
| MAN | 50.7 | 12.1 | 57.0 | 8.9 | 59.5 | 10.9 | 15.1% | 21.031*** | 0.13 |
| PAR | 58.8 | 13.0 | 71.9 | 13.7 | 71.1 | 13.4 | 48.7% | 23.682*** | 0.14 |
| SCZ | 58.1 | 12.0 | 71.2 | 16.8 | 74.5 | 14.1 | 58.1% | 42.008*** | 0.23 |
| BOR | 58.2 | 13.9 | 69.2 | 13.6 | 72.0 | 11.9 | 52.7% | 44.52*** | 0.24 |
| ANT | 53.1 | 12.6 | 56.0 | 12.9 | 60.5 | 12.5 | 20.8% | 14.271*** | 0.09 |
| ALC | 52.6 | 13.7 | 56.7 | 14.0 | 57.9 | 15.5 | 21.5% | 3.022* | 0.02 |
| DRG | 52.7 | 12.6 | 54.6 | 19.4 | 53.6 | 11.9 | 10.0% | 1.500 | 0.01 |
| AGG | 57.9 | 15.2 | 68.4 | 11.8 | 68.9 | 14.2 | 42.3% | 19.745*** | 0.12 |
| SUI | 54.1 | 16.5 | 57.3 | 19.3 | 65.1 | 17.5 | 33.0% | 12.425*** | 0.08 |
| STR | 53.2 | 11.8 | 65.5 | 13.1 | 63.2 | 11.7 | 23.7% | 21.216*** | 0.13 |
| NON | 56.4 | 11.8 | 69.5 | 17.1 | 67.1 | 11.8 | 36.6% | 21.631*** | 0.13 |
| RXR | 45.1 | 10.1 | 36.8 | 10.0 | 36.8 | 9.0 | 0.0% | 25.819*** | 0.15 |
| DOM | 49.9 | 9.9 | 52.3 | 10.0 | 52.1 | 12.4 | 4.7% | 3.956* | 0.03 |
| WRM | 39.8 | 11.8 | 34.7 | 10.9 | 31.5 | 11.8 | 0.4% | 12.227*** | 0.08 |

Note. *p<.01, **p<.05, ***p<.001. Clinical scales were statistically significant between groups using Wilks Lambda, $F(262,22) = 8.11, p < .001, \text{Partial } \eta^2 = .405$. Cohen (1988) classifies η^2 effect sizes as small (.01 to .06), medium (.06 to .14), or large (.14 or larger). RCS = % of PTSD group exceeding recommended cut scores (see Morey, 2003). PTSD-CAPS scores reflect PAI scale scores for veterans meeting diagnostic criteria for PTSD using the Clinician Administered PTSD Scale (CAPS) by Bellet, McDevitt-Murphy, Thomas, & Luciano (2017) and are presented to compare profiles using a PROM.

Table 2. Latent Class Analysis Solution Fit Results

| Model | AIC | BIC | Sample Size Adj. BIC | VLMR Likelihood Ratio | Adj LMR | Entropy |
|---------|----------|----------|----------------------|-------------------------------|---------|---------|
| 2-Class | 46781.58 | 47024.88 | 46812.42 | 2LL diff(23)=136.356, p = .03 | 1355.89 | 0.92 |
| 3-Class | 46238.56 | 46565.37 | 46279.98 | 2LL diff(23)=589.027, p = ns | 584.51 | 0.94 |
| 4-Class | 46070.79 | 46481.12 | 46122.80 | 2LL diff(23)=213.769, p = ns | 212.13 | 0.90 |
| 5-Class | 45892.28 | 46386.13 | 45954.88 | 2LL diff(23)=224.508, p = ns | 222.79 | 0.91 |
| 6-Class | 45826.21 | 46403.57 | 45899.40 | 2LL diff(23)=112.070, p = ns | 111.21 | 0.92 |
| 7-Class | 45757.08 | 46417.96 | 45840.85 | 2LL diff(23)=115.132, p = ns | 114.25 | 0.93 |

Note. VLMR = Vuong-Lo-Mendell-Rubin Likelihood Ratio Test which assesses probability of improved fit between the proposed number of classes (C) and a model with C-1 classes. LMR = Lo-Mendell-Rubin LRT Test.



Note. The figure presents the 2-class solution. Additional class elevations in subsequent models did not meaningfully distinguish across scales (e.g., SCZ or MAN for dissociative subtype).

Discussion

1. The PCL offers utility in screening PTSD in a manner consistent with the results seen on diagnostic interviews
2. Those screening positive for PTSD do not present differently across empirically validated subtypes (e.g., internalizing, externalizing, etc.)
3. PTSD profiles on the PAI are most characterized on DSM-V Criteria B (SOM), Criteria C (DEP, ANX, ARD), and Criteria D (PAR, SCZ)
4. PAI elevations do not differ between those screening positive for PTSD on the PCL-4 and PCL-5 (supplemental analysis; results not presented)
5. Elevation of BOR in PTSD profiles may reflect Avoidance (Criteria C) or arousal changes because of the innate hostility (Criteria B). Defining its relationship to diagnostic requirements is difficult given the complexity of the clinical symptom set, which may explain why previous studies have found mixed results about its importance in PTSD

