

# Psychometric Evaluation of Moral Injury and Distress Scale in a sample of Veterans and Military Personnel

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## Introduction

- Measuring Moral Injury (MI) remains elusive with measures' varying focus on exposure to a potentially morally injurious event (PMIE) or the exposure outcomes.
- Norman and colleagues (2024) developed the Moral Injury and Distress Scale (MIDS), which specifically links MI symptoms to a specific PMIE.
- We examined MIDS factor structure in treatment-seeking veterans and military personal.

## Methods

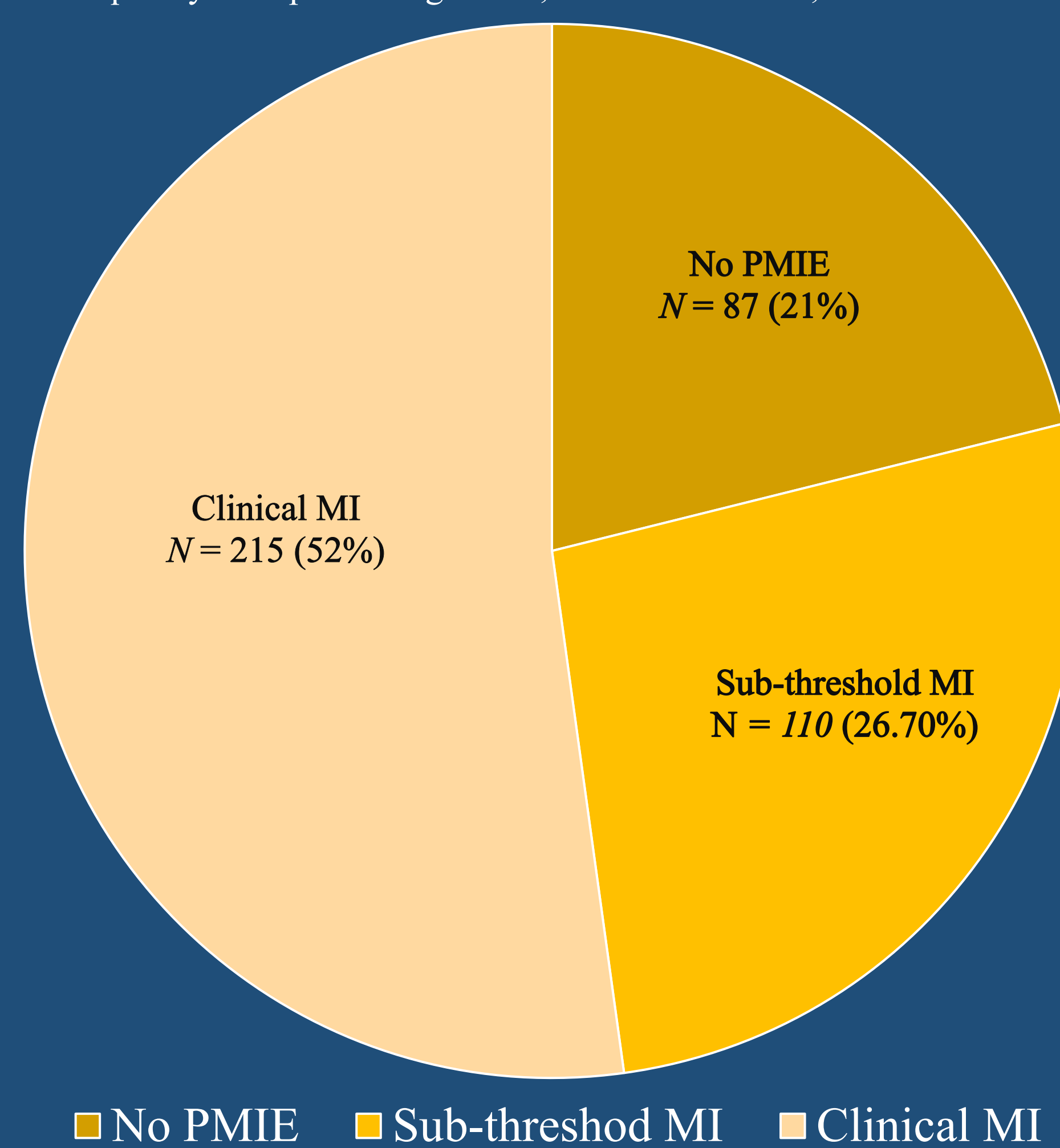
- Four hundred and twelve veterans and active-duty personnels completed the scale. Data was randomly split into two groups (G1  $N = 163$ ; G2  $N = 163$ ).
- Iterated principal factor analysis (PFA) with oblique rotation (Promax rotation), and confirmatory factor analysis (CFA) were conducted.

Table 1. Demographic Table ( $N = 412$ )

Variable		<i>N</i>	Percentage
Gender	Female	119	28.88%
	Male	292	70.87%
Race	White	241	58.50%
	Black	111	26.94%
	<i>Mean</i>	<i>SD</i>	<i>Range</i>
Age	42.96	10.08	20 – 72
Moral Injury	36.13	16.96	0 - 72

After 5 items were removed, Norman's single-factor-model was supported in a sample of treatment-seeking military personnel and veterans.

Frequency of experiencing PMIE, sub-threshold MI, and clinical MI



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## Results

- PFA supported Norman's one-factor model and explained 42.4% of the total item variance.
- Items 1, 12, 13, 14, & 17 were removed (low loadings and high uniqueness).
- Remaining item loadings ranged from .60 and .84.
- 13-item one-factor-model was submitted to CFA using maximum likelihood
- Model initially poor fit ( $\chi^2 = 182.958, p < .0001$ ; RMSEA = .106 (95% CI [0.088, 0.124]); CFI = 0.90; SRMR = 0.053).
- Modification to allow three pairs of error terms to correlate substantially improved fit.
- Final model showed acceptable fit ( $\chi^2 = 138.946, p < .0001$ ; RMSEA = .088 (95% CI [0.068, 0.107]); CFI = 0.94; SRMR = 0.047).
- Norman's single factor original model did not represent adequate fit ( $\chi^2 = 443.530, p < .0001$ ; RMSEA = .119 (95% CI [0.107, 0.132]); CFI = 0.82; SRMR = 0.071).
- Modification to allow five pairs of error terms to correlate improved fit ( $\chi^2 = 334.497, p < .0001$ ; RMSEA = .099 (95% CI [0.086, 0.112]); CFI = 0.88; SRMR = 0.062).
- Model AIC value comparison (10+ Difference = superior fit).
- Original Norman AIC = 8909.0 and Revised model AIC = 6243.3- significantly better fit.
- MIDS full scale ( $\alpha = .93$ ) demonstrated excellent internal consistency.

## Discussion

- With 5 items removed, Norman's factor structure was replicated in a sample of treatment seeking veterans and military service members.
- MIDS provides a useful measure of a unified construct of moral injury related distress.