

Shooting and Weeping: Moral Injury Process and its Psychological Consequences among Israeli Combat Veterans

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“To understand in order to prevent”

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Aims:

- To describe Moral Injury (MI) and differentiate MI from PTSD.
- To present findings about the implications of exposure to potentially morally injurious events (PMIEs) during army service in the mental health of Israeli veterans.
- To present findings about some psychological mechanisms for the links between PMIEs, PTSD and suicidal thoughts and behaviors (STB).

Moral Injury- Background

- PTSD may not stem only from exposure to life-threatening events.
- There is high variability in veterans' PTSD prevalence, course of disease, and response to therapeutic interventions.
- **Participation in or exposure to certain acts that involve violations, or transgressions, of deeply held moral beliefs and expectations.**

Moral Injury- Definition

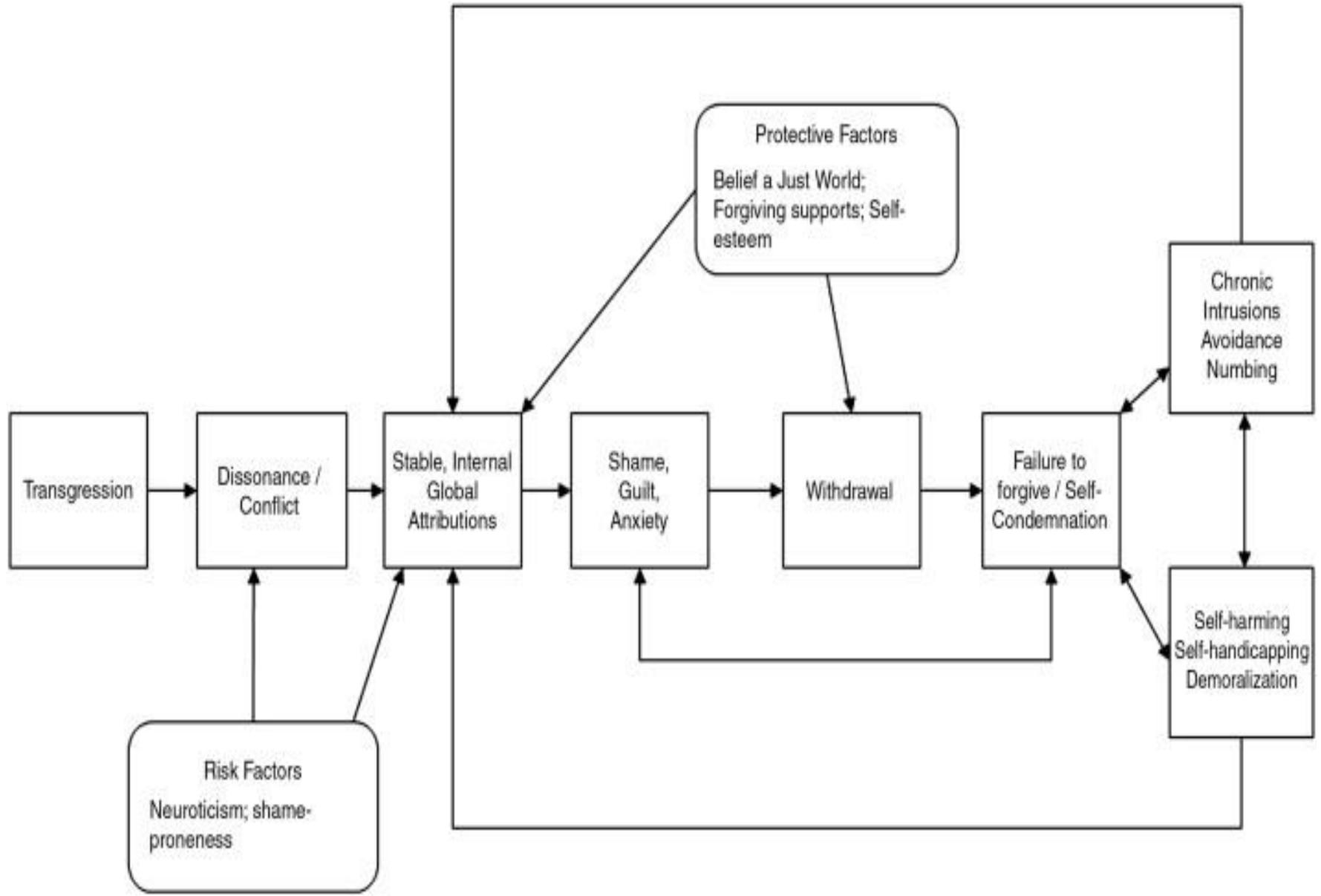
- MI is a trauma-related syndrome with biological, psychological, spiritual, behavioral, and interpersonal components.
- **PMIEs are perpetration-based acts of commission (e.g., killing), omission (e.g., failing to prevent atrocities), bearing witness to perceived immoral acts, and experiencing the betrayal of trusted others** (Drescher et al., 2011; Litz et al., 2009; Shay, 1994).

Prevalence of PMIEs

- Tends to vary between eras, areas, branches of military service, and the specific transgressive acts assessed (e.g., Frankfurt & Frazier, 2016).
 - Personal transgression: ~10%
 - transgressions by others: ~25%
 - Betrayal by others: ~25%
- (Jordan et al., 2017; Wisco et al., 2017)

The MI integrative model

Litz et al., 2009



PMIEs outcomes

- The act of killing in combat → PTSD (Maguen et al., 2011).
- Committing atrocities → PTSD (Maguen et al., 2009).
- Perpetration and betrayal-based PMIEs by others → PTSD (Bryan et al., 2015; Jordan et al., 2017).
- Self and other transgression acts → SITB (Bryan et al., 2014, 2017).
- Exposure to acts of abusive violence → SITB (Currier et al., 2013).



Israeli combat veterans exposure:

- Securing Israel's borders.
- Preparing and participating in conventional modern combat-related experiences (e.g., being attacked or ambushed).
- Administration of the Palestinian civilian population in the West Bank: "traditional" active combat + policing assignments such as checkpoints, patrols, arrests.
- **Urban environments involving exposure to Palestinian militants, but also often in close proximity to civilians.**

Outcomes of Israeli veterans exposure to PMIEs

- Compared to veterans with no exposure to the civilian Palestinian population (CPP), veterans who served among the CPP had greater exposure to civilian-related violent incidents, more PTSS and higher rates of PTSD (Bleich et al., 2008).
- 19.7% of Israeli veterans who served in the West Bank and Gaza regions have reported high moral objection to the commands they were expected to act upon (e.g., the commands violate human dignity). Veterans with high moral objection reported significantly more PTSS in comparison to participants with low moral objection (Ritov & Barnett, 2014).

Study 1: Moral injury process and its psychological consequences among Israeli combat veterans

(Zerach & Levi-Belz, JCP, 2018)



RESEARCH ARTICLE

Moral injury process and its psychological consequences among Israeli combat veterans

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Abstract

Objectives We aim to examine the link between exposure to potentially morally injurious events (PMIEs) and posttraumatic stress disorder symptoms (PTSS). We also aim to explore the mediating roles of depressive attributions, trauma-related guilt and shame, and self-disgust in the relationship between PMIEs and PTSS among combat veterans.

Method A volunteers' sample of 191 Israeli combat veterans responded to self-report questionnaires in a cross-sectional design study.

Results More than one-fifth of the sample reported experiencing PMIEs but only betrayal based experience was related to PTSS. Importantly, betrayal based experience was associated with depressive attributions which increased the level of trauma-related distressing guilt, intrinsic shame and self-disgust, which in turn were associated with high levels of PTSS.

Conclusions PMIEs, and especially betrayal based experiences, are related to PTSS among Israeli veterans. Depressive attributions, trauma-related distressing guilt, intrinsic shame, and self-disgust might serve as possible mechanisms for the links between PMIEs and PTSS.

Research Questions:

1. Are there differences in PMIEs prevalence between Israeli veterans and veterans of western armies?
2. Are PMIEs positively associated with PTSS?
3. Do depressive attributions, trauma-related guilt and shame and self-disgust mediate the relationship between PMIEs and PTSS?



Research Methods

- **Research design-** Cross-sectional data was collected in 2017.
- **Participants-** 191 Israeli combat veterans in the IDF.
- **Inclusion criteria:** at least 20 years of age who served in combat troops and were released from military service within the previous 10 years.
- Most veterans were male (85.4%), born in Israel (88.9%), and single (70.1%).
- The mean age was 25.39 ($SD = 22.37$), and mean years of education was 12.46 ($SD = 1.15$).
- Time since deployment= 4.37 ($SD = 2.27$) years; majority still active in reserve duty (81.7%); 17.8% were officers.

Measures:

- ***Posttraumatic stress disorder checklist*** (PCL-5; Weathers et al., 2013); 20 DSM-5 symptoms, how often they suffered from each symptom in the previous month on a 0-4 scale; Cronbach's $\alpha = .95$.
- ***Moral injury event scale*** (MIES; Nash et al., 2013); exposure to perceived transgressions committed by the respondent and/or others, and perceived betrayals by other military and nonmilitary individuals; 9-items; 1-6 scale; Cronbach $\alpha = .83$ to $.90$).
- ***The Depressive attributions questionnaire*** (DAQ; Kleim, Gonzalo, & Ehlers, 2011). Internal and external shame, 32 items; 3-sub-scales: Cognitions, Global, Distress; 0-4 scale; Cronbach $\alpha = .83$ to $.88$).
- ***Trauma-Related Shame Inventory*** (TRSI; Oktedalen et al., 2014). Internal and external shame, 24 items; 2-sub-scales: Internal and external; 0-3 scale; Cronbach $\alpha = .91$ to $.96$).
- ***Trauma-Related Guilt Inventory*** (TRGI; Kubany et al., 1996). 32 items; 3-sub-scales: Cognitions, Global, Distress; 0-4 scale; Cronbach $\alpha = .83$ to $.88$).
- ***The Self-Disgust Scale*** (SDS; Overton et al., 2008). 18 items; 2-sub-scales: Self and Ways; 1-7 scale; Cronbach $\alpha = .91$ to $.93$).



Results

Prevalence of Transgression Acts

- **MIES items:**
- *"I saw things that were morally wrong"* **(29.6%)**
- *"I feel betrayed by leaders who I once trusted"* **(25.2%).**
- **MIQ items:**
- *"I had an encounter(s) with the enemy that made him/ her seem more 'human' and made my job more difficult"* **(45.2%)**
- *"I had to make decisions in the war at times when I didn't know the right thing to do"* **(31.4%).**

Prevalence of Transgression Acts and PTSS

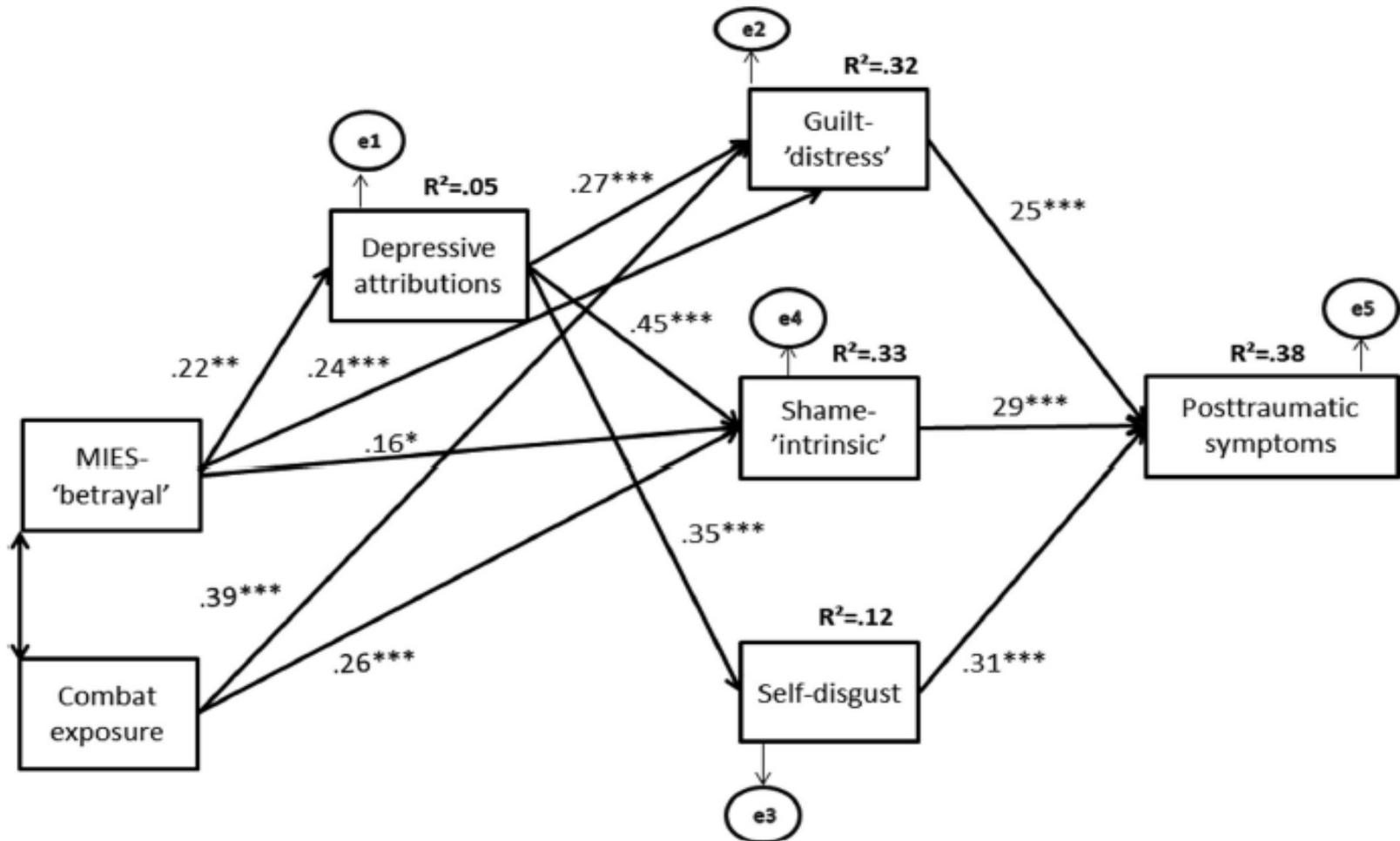
- **21.9%** endorsed at least one of the MIES-perpetration by oneself items, **33.7%** of the veterans endorsed at least one of the MIES-perpetration by others items, and **31%** endorsed at least one of the MIES betrayal items
- According to the PCL-C-5, **15 participants (9.6%)** exceeded the 38 cutoff score following stressful experiences in military service according to the *DSM-5* (APA, 2013) criteria.

Pearson correlations coefficients between the study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Combat exposure -														
2. MIQ 'causes'	.47***	-												
3. MIES-other	.08	.59***	-											
4. MIES-self	.06	.58***	.66***	-										
5. MIES-betrayal	.10	.32***	.45***	.42***	-									
6. DAQ	-.06	.10	.20**	.29***	.24**	-								
7. Guilt-global	.15*	.42***	.43***	.60***	.34***	.28***	-							
8. Guilt-distress	.41***	.35***	.29***	.37***	.31***	.30***	.48***	-						
9. Guilt-cognitions	.13	.43***	.40***	.69***	.25**	.25**	.73***	.35***	-					
10. Shame-intrinsic	.30***	.28***	.18*	.24**	.27***	.51***	.37***	.59***	.35***	-				
11. Shame-extrinsic	.26**	.33***	.24**	.29***	.28***	.49***	.41***	.44***	.42***	.86***	-			
12. SDS-self	.07	.04	.01	.06	.01	.30***	.19*	.21**	.06	.22**	.27***	-		
13. SDS-ways	-.10	.02	.09	.08	.18*	.17*	.12	.09	.04	.14	.07	.44***	-	
14. PTSS	.24**	.11	.12	.11	.31***	.43***	.28***	.61***	.18*	.57***	.46***	.40***	.14	-
M	5.10	18.72	4.84	6.73	6.42	10.33	.24	.45	.78	.12	.09	15.05	18.66	14.13
SD	3.86	4.82	2.77	4.18	3.65	9.49	.47	.64	.49	.30	.25	3.80	2.52	15.45

Notes. * $p < .05$. ** $p < .01$. *** $p < .001$; MIQ, moral injury questionnaire; MIES, moral injury exposure scale; DAQ, depressive attribution questionnaire; SDS, self-disgust scale; PTSS, posttraumatic stress symptoms

A serial mediational integrated model for posttraumatic symptoms by depressive attributions, trauma related guilt-distress and shame-intrinsic and self-disgust



Study 2: Moral Injury, Suicide Ideation and Behavior among Combat Veterans: The Indirect Effects of Entrapment and Depression

(Levi-Belz & Zerach, PR, Under Revision)



Measures:

- ***Moral injury event scale*** (MIES; Nash et al., 2013); exposure to perceived transgressions committed by the respondent and/or others, and perceived betrayals by other military and nonmilitary individuals; 9-items; 1-6 scale; Cronbach $\alpha = .83$ to $.90$).
- ***Entrapment Scale*** (Gilbert and Allan, 1998). the perception of being trapped by internal and external events, as well as the desire to escape from those events (, 16 items; 3-sub-scales: Cognitions, Global, Distress; 1-5 scale; Cronbach $\alpha = .96$).
- ***The Patient Health Questionnaire-8*** (PHQ-8; Kroenke et al., 2009). prevalent symptom comprising the diagnostic criteria for major depressive disorder ; 8-items; 0-3 scale; Cronbach $\alpha = .88$).
- ***Suicidal Behaviors Questionnaire-Revised*** (SBQ-R; Osman et al., 2001). lifetime levels of both suicide ideation and behavior. 4-items; 0-3 scale; Cronbach $\alpha = .88$).
- ***Posttraumatic stress disorder checklist*** (PCL-5; Weathers et al., 2013); 20 DSM-5 symptoms, how often they suffered from each symptom in the previous month on a 0-4 scale; Cronbach's $\alpha = .95$.

Differences in PMIEs, Entrapment, and Depression, according to Participants' SIB history

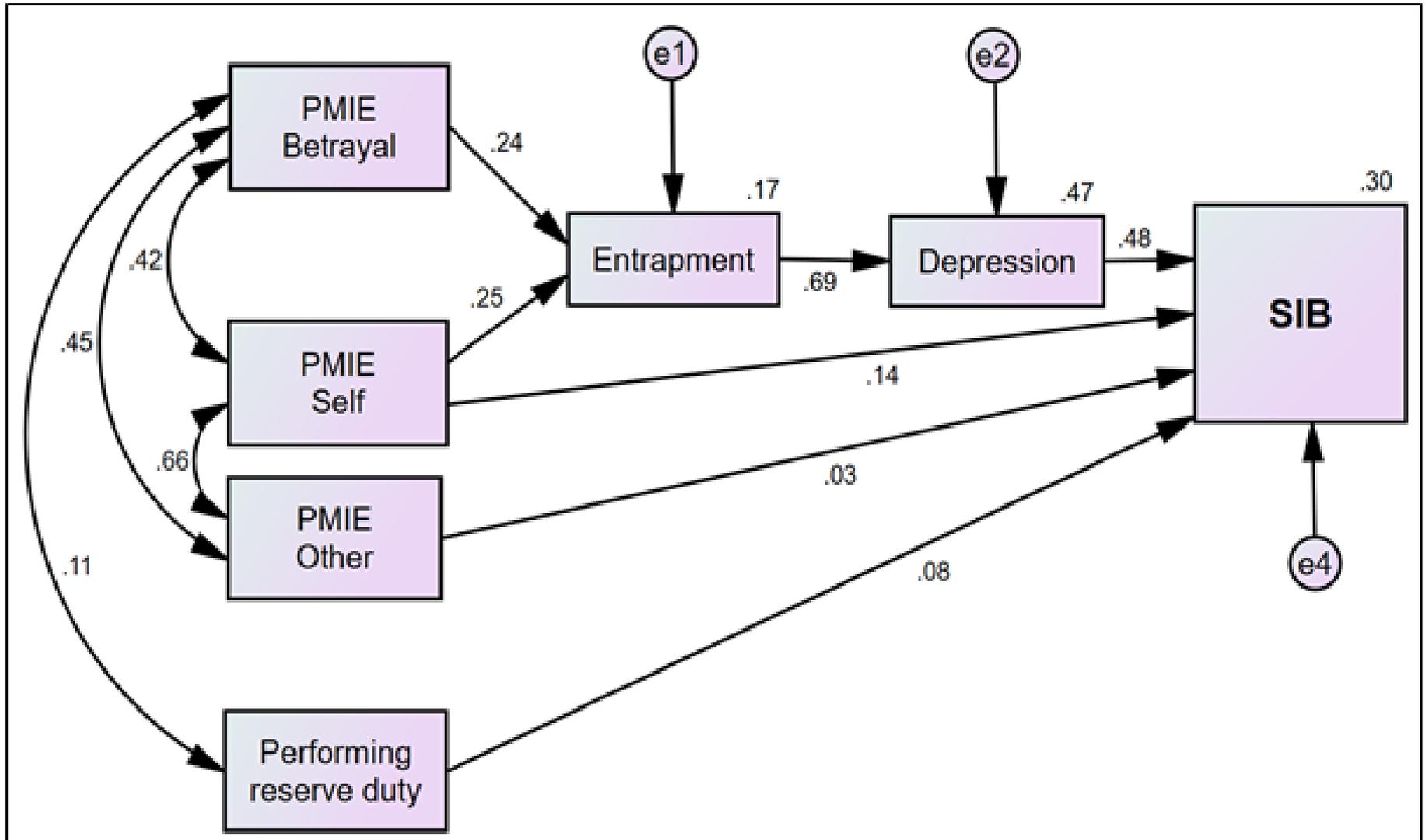
Measure		No SIB	SI	SB	<i>F</i> (2,145)	Eta ²	Post-hoc Test
		(1) <i>n</i> = 120	(2) <i>n</i> = 31	(3) <i>n</i> = 8			
MIES- Self	<i>M</i>	6.22	8.53	10.75	7.34**	0.09	3>2>1
	<i>SD</i>	3.89	4.84	4.21			
	<i>Range</i>	4.00-24.00	4.00-19.00	4.00-20.00			
MIES- Other	<i>M</i>	4.64	6.16	6.00	4.28*	0.05	2>1
	<i>SD</i>	2.67	0.63	0.61			
	<i>Range</i>	2.00-12.00	2.00-12.00	2.00-12.00			
MIES- Betrayal	<i>M</i>	6.62	7.54	7.75	1.15	0.01	
	<i>SD</i>	3.72	4.28	1.98			
	<i>Range</i>	3.00-18.00	3.00-18.00	4.00-14.00			
Entrapment	<i>M</i>	1.51	2.46	2.71	25.86***	0.25	1<2 1<3
	<i>SD</i>	0.52	1.12	.72			
	<i>Range</i>	1.00-3.63	1.00-4.94	1.00-4.33			
Depression	<i>M</i>	2.76	7.84	9.26	35.45***	0.31	1<2 1<3
	<i>SD</i>	2.72	5.20	4.80			
	<i>Range</i>	0.00-11.00	0.00-24.00	3.00-18.00			

Note: **p* < 0.05 ***p* < 0.01 ****p* < 0.001; SIB = Suicide ideation and behaviors, SI = Suicide ideation; SB = Suicidal behavior; MIES = Moral Injury Exposure Scale; PTSS = Posttraumatic stress symptoms.

Pearson correlations coefficients between the study variables

	1	2	3	4	5	6	7	8
1. Performing reserve duty	1							
2. MIES- Total	-0.10	1						
3. MIES- Self	-0.07	0.87***	1					
4. MIES- Other	-0.04	0.82***	0.66***	1				
5. MIES-Betrayal	-0.14	0.76***	0.43***	0.45***	1			
6. Entrapment	-0.10	0.42***	0.34***	0.29***	0.39***	1		
7. Depression	-0.14	0.24**	0.18*	0.25***	0.17*	0.71***	1	
8. SIB	-0.15*	0.27***	0.26**	0.26**	0.15*	0.43***	0.53***	1
<i>M</i>	0.82	18.01	6.73	4.85	6.42	1.70	3.93	3.86
<i>SD</i>	0.38	8.67	4.18	2.77	3.65	0.79	4.18	2.04

A serial mediational integrated model for SIB by entrapment and depression



Limitations of Study:

- A cross sectional design.
- Retrospective self-report measures.
- Non-representative, volunteer sample.
- The suicide variable was indexed to lifespan.



Conclusions and Clinical Implications

- Findings highlight the necessity **to screen and treat** veterans that could be at risk for PTSD, stemming not exclusively from exposure to life-threatening events.
- Clinicians should be aware of and assess carefully transgressive acts of **betrayal** as they seem to be important risk factors for PTSD.
- Specific interventions designed for MI experiences and outcomes such as '**adaptive disclosure**' (Litz et al., 2017), could incorporate the possible inner experience of perceptions of defeat and entrapment.



Thanks For Listening

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