The Moderating Role of Resilience: ACEs and Soldiers-in-Training Mental Health

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INTRO

Given the inherent stress of the military operating environment, it is important to investigate factors that may influence a person's mission readiness in both positive (e.g., resilience) and negative (e.g., adverse childhood experiences [ACEs]) ways. By investigating such factors and how they are associated with mental health, practitioners may be better able to promote targeted prevention/intervention efforts to help improve an individual's mission readiness.

METHOD

- Identified how resilience factors (i.e., stress tolerance, positive orientation, social resources) moderated the relationship between ACEs groups (previously identified; see figure) and mental health.
- 2. Used weighted data from 30,836 soldiers-in-training (ages 18-25) from the Army STARRS New Soldier Study.
- 3. Conducted a series of three-stage hierarchical linear regressions for 3 DVs (anxiety, depression, PTSD) x 3 resilience factors (stress tolerance, positive orientation, social resources). *Referent group: Low adversity*

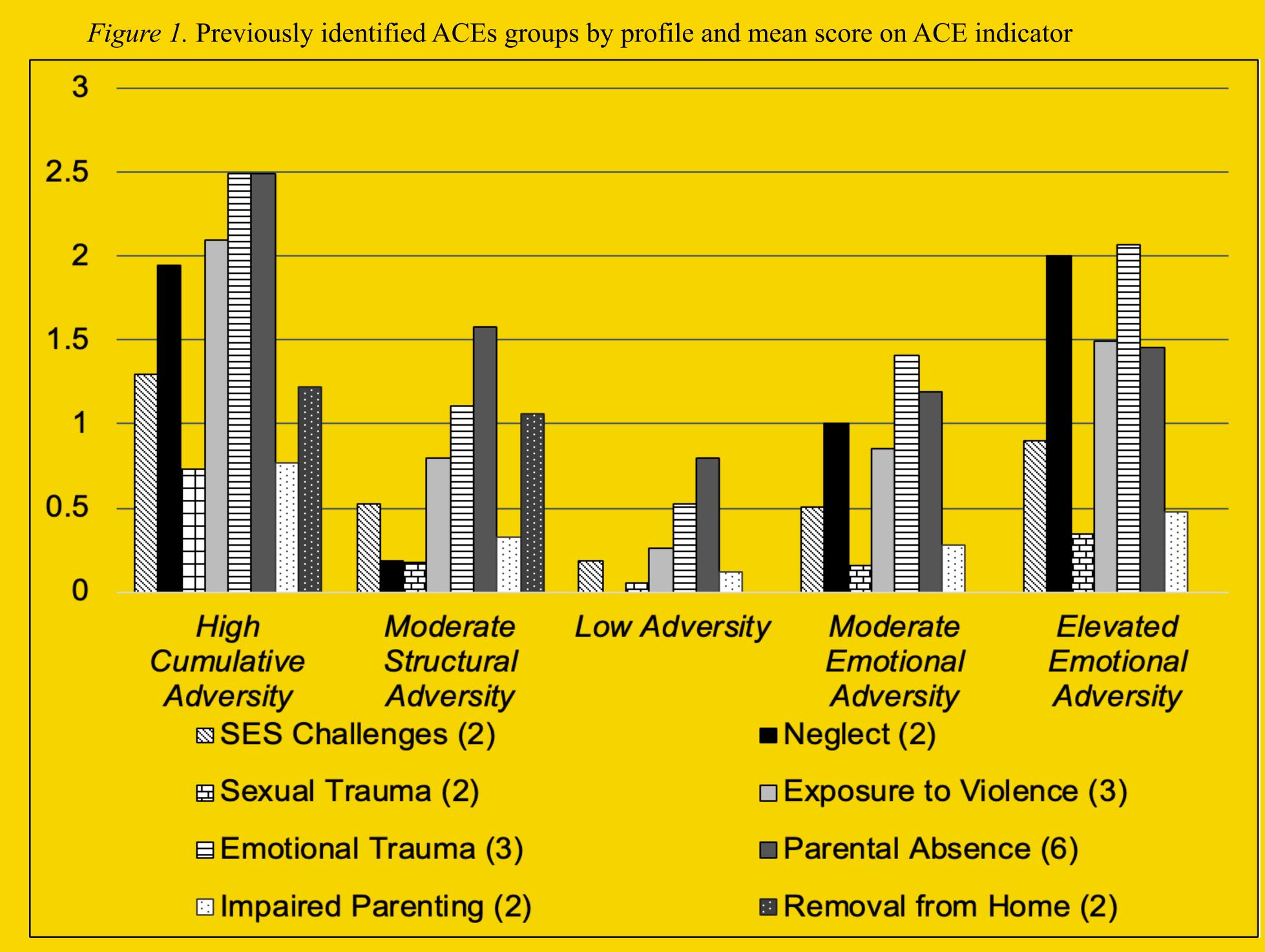
RESULTS

- Stress tolerance mitigated relationships b/w most of the adversity groups and anxiety, depression, and PTSD.
- Positive orientation mitigated relationships b/w high cumulative and moderate structural adversity groups & anxiety & PTSD.
- A willingness to use social resources exacerbated the relationship b/w elevated emotional adversity and PTSD.

DISCUSSION

 Findings underscore the complexity and relative contribution of resilience in protecting service members against the negative effect of childhood adversity on mental health. For **soldiers-in-training** that have a history of **ACEs** with moderate to high levels of structural and/or emotional adversities, *positive orientation* and *stress tolerance*

mitigate the effects of ACEs on mental health



Note. The number provided in parentheses indicates the maximum value possible for that indicator.

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Model	R^2	R ² Change	F(df)
DV: Anxiety		-	
Stress Tolerance	.139	.002	F(4) = 14.36***
Positive Orientation	.056	.001	F(4) = 3.14*
Social Resources	.028	.000	F(4) = .32
DV: Depression			
Stress Tolerance	.130	.003	F(4) = 22.04***
Positive Orientation	.079	.000	F(4) = 1.22
Social Resources	.029	.000	F(4) = 1.16
DV: PTSD			
Stress Tolerance	.123	.002	F(4) = 10.64***
Positive Orientation	.057	.001	F(4) = 3.37*
Social Resources	.044	.001	F(4) = 4.45 **

Table 2. Interactions between ACEs profile membership, stress tolerance, positive orientation, and social resources, and soldier-in-training's anxiety, depression, and PTSD.

training's anxiety, depression, and P13D.			
DV: Anxiety Models (Step 3)	В	SE	в
Stress Tolerance			
High cumulative x stress tolerance	03	.02	01
Moderate structural x stress tolerance	05	.02	02***
Moderate emotional x stress tolerance	06	.01	03***
Elevated emotional x stress tolerance	04	.01	02***
Positive Orientation			
High cumulative x positive orientation	04	.02	01*
Moderate structural x positive orientation	04	.02	02**
Moderate emotional x positive orientation	01	.02	01
Elevated emotional x positive orientation	00	.01	00
Social Resources			
High cumulative x social resources	.00	.03	.00
Moderate structural x social resources	.01	.03	.00
Moderate emotional x social resources	02	.02	01
Elevated emotional x social resources	.00	.02	.00
DV: Depression Models (Step 3)			
Stress Tolerance			
High cumulative x stress tolerance	02	.02	01
Moderate structural x stress tolerance	01	.01	00
Moderate emotional x stress tolerance	05	.01	03***
Elevated emotional x stress tolerance	06	.01	04***
Positive Orientation			
High cumulative x positive orientation	01	.02	00
Moderate structural x positive orientation	.00	.01	.00
Moderate emotional x positive orientation	01	.01	01
Elevated emotional x positive orientation	02	.01	01
Social Resources			
High cumulative x social resources	.04	.02	.01
Moderate structural x social resources	.01	.02	.00
Moderate emotional x social resources	01	.01	01
Elevated emotional x social resources	.00	.01	.00
DV: PTSD Models (Step 3)			
Stress Tolerance			
High cumulative x stress tolerance	28	.04	04***
Moderate structural x stress tolerance	02	.03	01
Moderate emotional x stress tolerance	03	.02	01
Elevated emotional x stress tolerance	04	.02	01
Positive Orientation			
High cumulative x positive orientation	20	.06	02***
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Moderate structural x positive orientation

Moderate emotional x positive orientation

Elevated emotional x positive orientation

High cumulative x social resources

Moderate structural x social resources

Moderate emotional x social resources

Note. Age, sex, race, and education were entered at Step 1. ACEs

profiles and resilience factors were entered at Step 2.

Elevated emotional x social resources

Social Resources

.02 .04 .00

-.01 .03 -.00

-.01 .03 -.01

-.02 .04 -.00

-.03 .03 -.01

.02 .02 .01

.09 .02 .03***

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