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Supplementary Material

Article Title: Childhood Maltreatment and Lifetime Suicidal Behaviors Among New Soldiers in the US Army: Results From the Army Study to Assess Risk and Resilience in Servicemembers (Army STARRS)

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Supplementary eTable 1

Goodness-of-fit statistics¹ for models from an exploratory factor analysis with minimum residual estimation and promax rotation

	$\chi^2(df)$	RMR	TLI	RMSEA
1 factor ²	205754 (77)	0.17	0.552	0.208
2 factor ²	30705.43 (64)	0.07	0.823	0.131
3 factor ²	16465.74 (52)	0.05	0.847	0.122
4 factor ²	4372.74 (41)	0.02	0.905	0.096
5 factor ³	634.35 (31)	0.01	0.954	0.066
6 factor ⁴	49.32 (22)	0.00	0.997	0.017

Note. Analysis was conducted with data from 38,507 New Soldier Study respondents (the age-at-enlistment constraint applied for the main analyses was not applied for psychometric analysis).

¹Chi-square is reported but not relied upon to evaluate model fit due to its oversensitivity to sample size and restrictive assumptions.

²Model was rejected because it failed to meet conventional criteria for good model fit, which include RMSEA close to or below .06, RMR close to or below .08, and TLI close to or above .95.

³Model was selected because it met statistical criteria for good model fit and was readily interpretable.

⁴Model was rejected due to presence of a poorly defined factor (maximum item-factor loading = .29, which was a secondary loading).

Supplementary eTable 2

Global Maltreatment and Maltreatment Subtype scale scores in a sample of new soldiers ($N = 38,237$)

	25 th percentile	Median	75 th percentile	90 th percentile	95 th percentile
Global Maltreatment	1.0	1.2	1.5	2.1	2.5
Sexual Abuse	1.0	1.0	1.0	1.0	1.5
Physical Abuse	1.0	1.0	1.0	2.0	3.0
Emotional Abuse	1.0	1.0	2.0	3.0	4.0
Physical Neglect	1.0	1.0	1.3	2.0	2.7
Emotional Neglect	1.0	1.2	2.0	3.0	3.6

Note. 5th and 10th percentile scores are not shown because in all cases the value is the same as the 25th percentile score (1.0).

Supplementary eTable 3

Fit statistics for 1- through 6-class solutions from Latent Class Analysis ($N = 38,237$)

	LL	BIC	Adjusted BIC	AIC	Entropy	LMR p
1 class	-210243	420591	420560	420506	-	-
2 class	-174643	349454	349403	349317	0.987	0.328
3 class	-155979	312190	312120	312002	0.977	<.001
4 class	-141725	283746	283657	283506	0.982	<.001
5 class	-133330	267019	266910	266727	0.972	<.001
6 class	-125190	250781	250660	250456	0.974	0.729
7 class	Model did not converge					

Note. LL = log-likelihood; AIC = Akaike information criteria; BIC = Bayes information criteria; LMR = Lo-Mendell-Rubin adjusted likelihood ratio test. BIC and LMR were prioritized given evidence they are the most robust measures of model fit. BIC did not reach a minimum; thus, LMR was used as the primary statistical basis for model selection. Investigators also confirmed that classes from the final (5-class) model were readily interpretable.

Supplementary eTable 4: Sensitivity models of associations between maltreatment profile and suicidal behaviors adjusting for mental disorders

	Total Sample (N = 38,237)						Among Lifetime Ideators					
	Ideation		Plan		Attempt		Plan (n = 5280)		Planned Attempt (n = 807)		Unplanned Attempt (n = 4595)	
	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI	AOR	95% CI
No Maltreatment	1.0	-	1.0	-	1.0	-	1.0	-	1.0	-	1.0	-
Episodic Emotional Maltreatment	2.47	2.26-2.70	2.55	2.11-3.08	2.36	1.86-3.00	1.29	1.08-1.53	1.17	0.81-1.70	0.91	0.62-1.32
Frequent Emotional and Physical Maltreatment	2.75	2.37-3.19	3.76	2.76-5.13	3.34	2.47-4.52	1.81	1.37-2.39	1.82	1.23-2.68	0.78	0.50-1.24
Episodic Emotional and Sexual Abuse	2.92	2.55-3.35	4.08	2.87-5.80	3.81	2.70-5.38	1.98	1.38-2.82	2.13	1.39-3.26	1.11	0.66-1.86
Frequent Emotional, Physical, and Sexual Maltreatment	2.84	2.12-3.80	4.71	3.10-7.16	5.96	3.73-9.51	2.52	1.58-4.02	2.32	1.05-5.13	3.76	1.97-7.18

Notes. AOR = adjusted odds ratio. CI = confidence interval. Rows represent levels of the predictor variable of interest (childhood maltreatment profile). Results for 6 separate models are displayed in the columns; column labels (e.g., “Ideation”) denote the dependent variable. Models adjust for age, sex, race/ethnicity, marital status, religion, soldier and parental education level, nativity, service component, site of Basic Combat Training, person-year, mental disorder diagnoses (lifetime major depressive episode, mania, generalized anxiety disorder, panic disorder, posttraumatic stress disorder, intermittent explosive disorder, conduct disorder, oppositional defiant disorder, substance use disorder and past 6-month attention deficit-hyperactivity disorder), and total number of mental disorders. Childhood maltreatment profile remained a significant predictor of all 6 outcomes after adjusting for these other variables ($ps < .001$).