

# Psychosocial Correlates of Optimism Among US Military Veterans

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Nearly a decade ago, Jeste and colleagues<sup>1</sup> published a review in this journal highlighting the importance of harnessing positive psychosocial characteristics (PPCs) in promoting psychiatric outcomes. Among these, optimism—the expectation that good as opposed to bad things will happen in the future—is the most extensively studied. Although optimism has been linked to subjective well-being and improved physical and mental health,<sup>2–5</sup> research on its population-level correlates remains limited. Existing studies have identified psychosocial factors such as depression, posttraumatic stress disorder, social support, and resilience as being associated with optimism,<sup>6–8</sup> but expanding these findings to populations at greater risk for adverse health outcomes is essential to inform effective interventions to bolster optimism.

Military veterans represent one such group, given their exposures to trauma (eg, combat) and higher prevalence of health conditions relative to nonveterans.<sup>9</sup> One study published 14 years ago found that dispositional optimism buffered veterans from the adverse effects of war-associated stress on symptoms of posttraumatic stress disorder and work impairment.<sup>10</sup> Despite this promising finding, limited research has since examined optimism in this population. Here, we conducted an exploratory study using data from a nationally representative sample of US veterans to examine the prevalence and correlates of optimism.

## Methods

**Sample.** Data were analyzed from the National Health and Resilience in Veterans Study, which surveyed a nationally representative sample of 4,069 US veterans between 2019–2020 from KnowledgePanel, a probability-based online survey panel of >50,000 US households.

**Measures.** Optimism was assessed using a single-item measure from the Life Orientation Test-Revised<sup>11</sup>: “Please indicate how much you agree or disagree with the following statement: In uncertain times, I usually expect the best,” rated on a 7-point scale ranging from Strongly Disagree to Strongly Agree. Table 1 lists other measures.

**Data Analysis.** Spearman correlation and linear regression analyses were conducted to identify correlates of optimism scores. A relative importance analysis was then conducted to quantify the variance in optimism scores attributable to each significant independent variable after accounting for intercorrelations among these variables.

## Results

The majority of the sample (67.1%) endorsed that they Slightly-to-Strongly Agreed that they were optimistic (18.0% endorsed Slightly Agree; 37.0%, Agree; and 12.1%, Strongly Agree).

As shown in Table 1, PPCs such as curiosity, perceived resilience, purpose in life, and gratitude explained the majority (58.1%) of the variance in optimism scores, with loneliness, emotional stability, and extraversion each explaining >5% of the variance in these scores.

## Discussion

This exploratory study sought to identify and quantify the level and correlates of optimism in a nationally representative sample of US veterans. While average optimism scores were slightly lower than those in a younger general population (mean age = 57.1 years), the magnitude of this difference was small (Cohen  $d = 0.05$ ).<sup>12</sup>

PPCs such as curiosity, perceived resilience, and purpose in life were strongly linked to higher optimism scores. These results suggest that, in addition to interventions directly targeting optimism (eg, Best Possible Self Intervention),<sup>13</sup> those that target other PPCs, such as growth mindset interventions to foster curiosity,<sup>14</sup> and cognitive-behavioral and mindfulness interventions to strengthen resilience and purpose in life,<sup>15–17</sup> may also help increase optimism. Such interventions could also play a critical role in reducing the risk of adverse health outcomes in veterans and other at-risk populations.

Study limitations include the cross-sectional design, reliance on self-reported data, and a single-item optimism measure. Further research using longitudinal and qualitative designs and interview-based measures is needed to elucidate key correlates and determinants of optimism. Given the association between optimism, positive health outcomes,<sup>2–5</sup> and suicide risk in military personnel,<sup>18</sup> further research is needed to evaluate whether interventions targeting optimism, related PPCs, and optimism bias<sup>19</sup> can effectively reduce risks and improve these outcomes.

**Table 1.**  
**Sample Characteristics and Results of Analyses of Correlates of Optimism in US Veterans**

	Weighted mean (SD) or n (weighted %)	Bivariate correlation analyses, <i>r</i>	Multiple regression analysis ( <i>R</i> <sup>2</sup> = 0.45)		Relative importance analysis, RVE
			<i>β</i>	<i>t</i>	
<b>Sociodemographic characteristics</b>					
Age, y	62.2 (15.7)	0.21***	.01	0.86	–
Male sex	3,564 (90.2%)	0.06***	.01	0.51	–
White, non-Hispanic race/ethnicity	3,318 (78.1%)	–0.04*	–.04**	3.26	0.2%
College graduate or higher education	1,827 (32.7%)	0.06***	–.02	1.68	–
Married or partnered	2,885 (72.4%)	0.12***	.01	1.08	–
Retired	2,225 (44.3%)	0.10***	.03*	2.02	0.6%
Household income \$60,000 or higher	2,357 (58.5%)	0.11***	–.01	1.00	–
<b>Military characteristics</b>					
Enlisted/commissioned vs drafted	3,583 (89.1%)	–0.07***	–.01	0.64	–
Combat veteran	1,353 (35.0%)	–0.03	–	–	–
10+ years in military	1,476 (36.4%)	0.01	–	–	–
Rank/pay grade in military	E-6 (4.7)	0.08***	–.01	1.14	–
Positive effect of military on life	2.0 (1.4)	0.19***	–.01	0.51	–
<b>Health characteristics</b>					
Physical health difficulties <sup>a</sup>	0 (1.0)	–0.13***	–.04**	3.11	0.2%
Physical exercise <sup>b</sup>	34.0 (40.5)	0.03	–	–	–
Adverse childhood experiences <sup>c</sup>	1.5 (2.0)	–0.22***	–.05***	3.33	1.6%
Cumulative trauma burden <sup>d</sup>	8.9 (8.5)	–0.13***	–.06***	4.20	1.3%
Current posttraumatic stress disorder <sup>e</sup>	219 (6.6%)	–0.20***	–.01	0.76	–
Current major depressive disorder <sup>f</sup>	292 (8.8%)	–0.28***	–.04*	2.43	3.9%
Current alcohol use disorder <sup>g</sup>	360 (10.5%)	–0.13***	–.04**	3.06	1.0%
Current drug use disorder <sup>h</sup>	314 (9.5%)	–0.11***	–.01	0.39	–
<b>Personality</b>					
Extraversion	3.8 (1.5)	0.34***	.11***	7.81	5.7%
Agreeableness	5.0 (1.2)	0.31***	.05***	3.73	4.7%
Conscientiousness	5.7 (1.2)	0.29***	.02	1.48	–
Emotional stability	5.2 (1.4)	0.38***	.06***	3.72	7.6%
Openness to experiences	4.8 (1.2)	0.23***	.04***	3.35	1.6%
<b>Psychosocial factors</b>					
Perceived resilience <sup>i</sup>	39.1 (6.8)	0.49***	.17***	9.91	15.1%
Purpose in life <sup>k</sup>	21.2 (4.9)	0.52***	.13***	7.09	14.6%
Gratitude <sup>j</sup>	6.2 (1.2)	0.49***	.13***	9.08	11.3%
Curiosity <sup>m</sup>	5.0 (1.4)	0.46***	.17***	11.09	17.1%
Grit <sup>n</sup>	3.7 (0.6)	0.33***	.03	1.76	–
Positive expectations regarding aging <sup>o</sup>	7.3 (1.8)	0.21***	.02	1.45	–
Social network size <sup>p</sup>	8.1 (10.9)	0.27***	.01	0.77	–
Secure attachment style <sup>q</sup>	2,870 (67.3%)	0.36***	.05**	3.09	4.6%
Perceived social support <sup>r</sup>	18.6 (5.2)	0.38***	.02	1.01	–
Loneliness <sup>s</sup>	4.7 (1.9)	–0.43***	–.08***	4.76	8.9%

References for measures are as follows:

- <sup>a</sup>Pietrzak RH, Goldstein RB, Southwick SM, Grant BF. Medical comorbidity of full and partial posttraumatic stress disorder in US adults: results from Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions. *Psychosom Med.* 2011;73(8):697–707.
- <sup>b</sup>Godin G. The Godin-Shephard leisure-time physical activity questionnaire. *Health Fitness J Canada* 2011; 4:18–22.
- <sup>c</sup>Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med.* 1998;14(4):245–258.
- <sup>d</sup>Weathers F, Blake D, Schnurr P, et al. The Life Events Checklist for DSM-5 (LEC-5). 2013.
- <sup>e</sup>Bovin MJ, Marx BP, Weathers FW, et al. Psychometric properties of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (PCL-5) in veterans. *Psychol Assess.* 2016;28(11):1379–1391.
- <sup>f</sup>Kroenke K, Spitzer RL, Williams JB, et al. An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics.* 2009;50(6):613–621.
- <sup>g</sup>Saunders JB, Aasland OG, Babor TF, et al. Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO Collaborative Project on Early Detection of Persons with Harmful Alcohol Consumption—II. *Addiction.* 1993;88(6):791–804.
- <sup>h</sup>Tiet QQ, Leyva YE, Moos RH, et al. Screen of Drug Use: diagnostic accuracy of a new brief tool for primary care. *JAMA Intern Med.* 2015;175(8):1371–1377.
- <sup>i</sup>Gosling SD, Rentfrow PJ, Swann WB. A very brief measure of the big-five personality domains. *J Res Pers.* 2003; 37:504e528.
- <sup>j</sup>Campbell-Sills L, Stein MB. Psychometric analysis and refinement of the Connor-Davidson Resilience Scale (CD-RISC): Validation of a 10-item measure of resilience. *J Trauma Stress.* 2007;20(6):1019–1028. doi:10.1002/jts.20271.
- <sup>k</sup>Schulenberg SE, Schnetzer LW, Buchanan EM. The Purpose in Life Test-Short Form: development and psychometric support. *J Happiness Stud.* 2011;12:861–876.
- <sup>l</sup>McCullough ME, Emmons RA, Tsang J. The grateful disposition: a conceptual and empirical topography. *J Pers Soc Psychol.* 2002;82:112–127.
- <sup>m</sup>Kashdan TB, Gallagher MW, Silvia PJ, et al. The Curiosity and Exploration Inventory-II: development, factor structure, and initial psychometrics. *J Res Pers.* 2009;43: 987–998.
- <sup>n</sup>Duckworth AL, Quinn PD. Development and validation of the Short Grit Scale (GRIT-S). *J Pers Assess.* 2009;91:166–174.

<sup>o</sup>Sarkisian CA, Steers WN, Hays RD, et al. Development of the 12-item Expectations Regarding Aging Survey. *Gerontologist*. 2005;45(2):240–248. doi:10.1093/geront/45.2.240.

<sup>p</sup>Sherbourne CD, Stewart AL. The MOS social support survey. *Soc Sci Med*. 1991;32(6):705–714.

<sup>q</sup>Hazan C, Shaver, PR. Love and work: An attachment-theoretical perspective. *J Pers Soc Psychol*. 1990;59:270–280.

<sup>r</sup>Hughes ME, Waite LJ, Hawtkley LC, et al. A short scale for measuring loneliness in large surveys: results from two population-based studies. *Res Aging*. 2004;26(6):655–672.

Overall model:  $F = 181.86$ ,  $P < .001$ ; significant association:  $*P < .05$ ,  $**P < .01$ ,  $***P < .001$ .

Abbreviation: RVE = relative variance explained.

Symbol: – = not included in model because not statistically significant.

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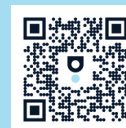
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