



Patterns and Correlates of Racial/Ethnic Differences in Posttraumatic Stress Disorder Screening among Recently Separated Veterans

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Introduction

- Despite the high prevalence of posttraumatic stress disorder (PTSD) among military veterans, there is a lack of knowledge about differences by race/ethnicity and gender.
- A small body of research shows that compared with White veterans, Black/African-American and Hispanic/Latinx veterans have higher rates of PTSD, and Asian-American veterans have similar or lower rates.
- In post-9/11 Veterans, there is some evidence that racial/ethnic differences in PTSD persist after accounting for factors such as socioeconomic status, trauma exposure & clinical factors.
- Racial/ethnic minorities experience more life stress and lower social support than their white peers, which may contribute to differences in PTSD risk.
- Limited research on intersection of race/ethnicity & gender.
- It is unclear whether racial/ethnic differences in PTSD will operate similarly among men and women.
- Past research limited by a focus on predominantly older veterans, infrequent consideration of gender differences, small sample sizes for racial/ethnic subgroups, and reliance on VA medical records.
- The current study describes patterns and correlates of PTSD screening across race/ethnicity and gender in a sample of 9,420 Veterans recently separated from the military.
- Elucidating PTSD screening patterns by race/ethnicity and gender can inform targeted outreach, prevention, and intervention during transition out of the military.

Methods

Participants

- The Veterans Metrics Initiative (TVMI) is a longitudinal sample of 9,420 Veterans recruited within 90 days of separation from the military.
- Veterans included in analyses identified as White (n=6,222), Hispanic/Latinx (n=1,313), Black (n=1,027), Asian/Hawaiian/Pacific Islander (n=420) & multiracial (n=438).
- Eligible veterans were identified from a VA/Department of Defense repository.
- Outreach methodology followed a modified Dillman mail survey procedure.

Measures

- Self-reported race and ethnicity were assessed based on National Institutes of Health clinical research reporting policies.
- Trauma exposure: 4 dichotomous variables (childhood, adulthood before military, military, after separation).
- PTSD screen: 5-item *Primary Care PTSD Screen for DSM-5*; Positive screen ≥ 3 .
- Life stress: 5-point scale assessed intensity of stress related to various life domains (e.g., discrimination, caregiving, finances) over the previous three months ($\alpha = .82$).
- 8-item Medical Outcomes Study Social Support Survey assessed practical and emotional support from others ($\alpha = .95$).
- SES: Highest education attained & Household income.

Analyses

- Analyses conducted with STATA 8.0 using survey analysis methods to include probability sampling weights.
- Group differences: Design-corrected Pearson chi-squared test (categorical outcomes) or independent samples t-tests (continuous outcomes) w/effect sizes (Cohen's d).
- Main analyses: Logistic regression for complex survey designs, fitting the odds ratio (OR) of having a positive PTSD screen as a function of variables of interest, stratified by gender.
- Model 1: Race/ethnicity; Model 2: SES; Model 3: Add trauma exposure; Model 4: Add life stress; Model 5: Add social support.
- Reference group = White

Results

Between-race/ethnicity group differences in trauma exposure and PTSD screening rates

- Rates of positive PTSD screens **lowest among AHPI Veterans (20.7%)**.
- Highest rates among Black (36.3%) and multiracial (35.7%) Veterans**, followed by Hispanic/Latino (30.6%), and White (22.5%) Veterans.
- Among Native American or Alaska Native veterans (n=67), 43.3% had a positive PTSD screen (not included in regressions).
- Largest group differences in PTSD :
 - AHPI and Black (d=.31); White and Black (d=.29)
 - AHPI and multiracial (d=.31); White and multiracial (d=.28)
 - Hispanic/Latinx and AHPI (d=.21).
- AHPI veterans reported lower trauma exposure compared with all other racial/ethnic groups** to any trauma (any trauma: d's=.23 to .37; military trauma: d's=.25 to .39).

Table 2. Weighted prevalence and effect sizes for within-race/ethnicity gender differences in positive PTSD screening and trauma exposure

Variables	White			Black			Hispanic/Latino			AHPI			Multiracial		
	W	M	d	W	M	d	W	M	d	W	M	d	W	M	d
Positive PTSD Screen	23.6	22.3	.03	32.0	37.9	.11	36.0	29.5	.13	25.0	19.8	.12	48.1	32.0	.30*
Any Trauma	65.0	66.1	.02	66.4	73.9	.14*	72.5	68.3	.08	62.1	51.8	.18	80.5	66.7	.21
Childhood Trauma	28.7	19.7	.19*	28.5	27.2	.03	41.9	24.5	.36*	27.1	20.6	.15	46.2	25.9	.40*
Adult Pre-military Trauma	18.3	12.8	.14*	16.4	18.9	.06	16.1	15.5	.02	20.0	15.9	.10	31.9	14.8	.39*
Military Trauma	53.3	59.0	.10*	58.8	64.8	.11	55.8	59.7	.07	48.6	43.9	.09	71.3	63.9	.14
Post-military Trauma	7.8	10.2	.07*	12.4	17.7	.13	17.7	12.9	.13	7.4	12.4	.15	14.2	18.7	.11

*p<.05

PTSD = posttraumatic stress disorder; W = Women; M = Men; d = Cohen's d effect size; AHPI = Asian, Native Hawaiian or Pacific Islander

Group Differences in Demographics

- Greater proportion of women among Black Veterans (27.9%).
- Fewer Veterans of Color are officers.
- Fewer AHPI Veterans deployed.
- More White Veterans have graduate degrees & household income of \geq \$100,000.
- Greater proportion of Black, H/L & multiracial Veterans report trauma in childhood and post-military, cf. White & AHPI.
- Greater proportion of Black and multiracial Veterans report military trauma, cf. White & AHPI.
- More life stress among Veterans of Color.
- Lower social support among Veterans of Color.

Multivariable models for women

- Model 1** (pseudo R²=.027, p<.001):
 - Higher odds of positive screens among Black (OR=1.50), Hispanic/Latina (OR=1.76) and multiracial (OR=2.86) women.**
- Model 2** (SES; pseudo R²=.038, p<.001) slightly reduced ORs.
- Model 3** (Trauma; pseudo R²=.241, p<.001) **fully explained elevated positive screening rates among Black women.**
- Model 4** (Life stress; pseudo R²=.312, p<.001) slightly reduced ORs.
- Model 5** (Social support; pseudo R²=.328, p<.001) **fully explained elevated positive screening rates for Hispanic/Latina women.**
- Multiracial women continued to be 2x more likely to screen positive for PTSD.**

Multivariable models for men

- Model 1** (pseudo R²=.018, p<.001)
 - Higher odds of positive screens among Black (OR=2.07), Hispanic/Latino (OR=1.48) and multiracial (OR=1.68) men.**
- Model 2** (SES; pseudo R²=.040, p<.001) and **Model 3** (Trauma; pseudo R²=.241, p<.001) slightly reduced ORs.
- Model 4** (Life stress; pseudo R²=.313, p<.001) **fully explained elevated positive screening rates among Hispanic/Latino and multiracial men.**
- Model 5** (Social support; pseudo R²=.326, p<.001) reduced ORs.
- Black men continued to be 1.5x more likely to screen positive for PTSD.**

Conclusions

- Findings suggest that there are significant racial/ethnic differences in positive PTSD screening within this cohort of recent post-9/11 veterans.**
- In line with past research, positive PTSD screening rates were highest among Black, Hispanic/Latino and multiracial veterans, and lowest among White and AHPI veterans.
- Multiracial women had the highest positive screening rates of all subgroups.
- Past reported rates of PTSD among Veterans (~23%) in reviews and meta-analyses reflect rates for White Veterans.**
- These patterns likely reflect group differences in PTSD diagnostic rates, but research is needed to confirm this hypothesis.
- Sociodemographics, trauma exposure, life stress and social support explained elevated rates of positive PTSD screens among Black women, Hispanic/Latinx veterans, and multiracial men.
- The unique constellations of contextual factors that are most effective to target may differ depending on the subgroup under consideration.
 - Social support for Hispanic/Latinx women vs. reducing chronic stress for Hispanic/Latinx men.
- Multiracial women Veterans should be considered as a distinct, high-risk subgroup in future research.**
- Some potential unassessed explanatory variables for Black men & multiracial women: Lifetime discrimination; trauma severity; post-trauma coping.
- It is important to examine patterns and correlates of PTSD at the intersection of race/ethnicity and gender.**

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