



Rates of potentially morally injurious events, combat, and lifetime traumas among Black/African American, White, Hispanic/Latino/a/e and non-Hispanic/Latino/a/e U.S. combat veterans

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ABSTRACT

Objective: Potentially morally injurious events (PMIEs) involve transgressions of one's deeply held sense of right and wrong. Race-related stress may be a source of PMIEs, but no studies have investigated how PMIE exposures differ by racial or ethnic identity. This study explored variations in reported rates of PMIEs among Black/African American, White, Hispanic/Latino/a/e, and non-Hispanic/Latino/a/e United States post-9/11 combat veterans. **Methods:** Secondary data analysis were conducted using observational cohort data from a repository on post-deployment functioning among combat veterans ($n = 487$). Participants completed two measures of PMIEs (Moral Injury Questionnaire – Military Version [MIQ-M], Currier et al., 2015; Moral Injury Events Scale [MIES], Nash et al., 2013) and measures of combat exposure and trauma exposure. Participants self-identified as White (57 %), Black or African American (31 %), Hispanic/Latino/a/e (20 %), and non-Hispanic/Latino/a/e (80.5 %). Racial/ethnic differences were analyzed at the item level using item response theory models.

Results: All latent mean differences between racial and ethnic groups on the PMIE measures were small. The largest difference was between Black/African American and White veterans on the MIES ($d = 0.38$) and the smallest difference was between Hispanic/Latino/a/e and non-Hispanic/Latino/a/e veterans on trauma exposure ($d = -0.01$).

Conclusions: Possible reasons for results include that: 1) between-group differences are negligible; 2) differences are greater within groups than between groups; 3) the MIES and MIQ-M do not assess race-based PMIEs. Future studies should use mixed methods to investigate cultural processes operative in PMIEs with an emphasis on the perspectives of people from diverse racial and ethnic identities.

1. Introduction

Potentially morally injurious events (PMIEs) involve a violation of one's deeply held morals through one's actions or inactions, witnessing others' actions, or another's betrayal. PMIEs may lead to moral injury which is characterized by guilt, shame, isolation and increased depression, anxiety, substance use, and suicidality (Griffin et al., 2019). The "moral injury" construct was developed in response to United States (U.S.) combat veterans' experiences in the Vietnam War (Shay, 1994) and,

among veterans, is associated with more severe or intense combat exposure and trauma exposure (Frankfurt and Frazier, 2016). Little is known about if or how veterans of different racial and ethnic identities experience PMIEs. This stands in contrast to the substantial and increasing racial and ethnic diversity in the U.S. military: about one third of active-duty service members identify as Black, Asian, or American Indian or Alaska Native (AI/AN); one fourth identify as Hispanic or Latino/a/e (U.S. Department of Defense et al., 2022), and Hispanic/Latino/a/e persons are the fastest-growing racial or ethnic

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group in the military and in the U.S. (Barroso, 2019). The Department of Defense is making pointed efforts to recruit diverse racial and ethnic groups into the U.S. military (Alley-Young, 2023). The current study aims to investigate differences in rates of reporting PMIEs among U.S. combat veterans with different racial and ethnic identities. We also examined reported rates of combat exposure and trauma exposure to contextualize our main findings.

Rates of PMIEs may vary between Black/African American, Hispanic/Latino/a/e, and White individuals because racialized discrimination and violence may be PMIEs for historically minoritized veterans and prompt moral injury-like experiences of alienation and guilt; however, this has not been directly assessed (Elbasheir et al., 2024; Ford, 2008; Hall-Clark et al., 2017; Koo et al., 2016; Stoute, 2021; Ward et al., 2021). Military racism is well documented in military culture, institutional practices, and individual experiences (Burk and Espinoza, 2012; Marable, 1981; Pole et al., 2005) and discrimination may increase risk for trauma-related psychopathology (Coleman, 2016; Dohrenwend et al., 2008; Foynes et al., 2015; Leidner et al., 2015; Ward et al., 2021). Further, Black/African American and Hispanic/Latino/a/e veterans report higher prevalence rates of trauma exposure and Post-Traumatic Stress Disorder (PTSD; Dohrenwend et al., 2008). Race-related stress, or the stress that follows acts of racial discrimination, racial violence, or microaggressions, is a source of moral injury. One study identified moral injury as a mediating mechanism of the positive association between race-related stress and PTSD symptoms in a sample of trauma-exposed Black/African American civilians ($\beta = 0.10$, $p < .005$; Elbasheir et al., 2024). Given that racism and discrimination may be morally injurious and that Black/African American and Hispanic/Latino/a/e veterans experience disproportionate rates of trauma-related psychopathology, veterans from historically minoritized backgrounds may encounter more PMIE exposures. The Minority Stress Model proposes that stressors unique to those from historically minoritized identities, such as prejudice and stigma, differentially impact mental health outcomes through environment, identity, and coping/social support (Frost and Meyer, 2023) and perpetuate cycles of intergenerational trauma (Coleman, 2016). Speculatively, moral injury that arises from racialized PMIEs may present differently than moral injury resulting from non-racialized PMIEs leading to potential disparities in PMIE rates across race and ethnicity. Overall, the moral injury field lacks an understanding of differences in PMIE endorsement for veterans of different racial and ethnic identities. Improving our conception of the military experiences of people from diverse racial and ethnic identities could inform more tailored assessments and interventions on the impact of PMIEs.

To date, a handful of studies have examined PMIEs in the context of veteran's racial and ethnic identities. Among a large nationally representative sample of U.S. combat veterans collected in 2013, self-identifying as White was negatively associated with PMIEs involving transgressions by others or betrayal (r 's = -0.12 to -0.18 , $p < .05$), but was not correlated with transgressions by oneself (Wisco et al., 2017). In a large multisite observational study of post-9/11 combat veterans ($n = 618$; 40 % Black, 2 % Asian/Pacific, 5 % Hispanic, 4 % Other/multiple), self-identifying as "non-White race" (including Latino/a/e) was associated with greater endorsement of PMIEs involving others' actions ($OR = 1.61$, 95 % CI[1.14, 2.28]) and one's own actions ($OR = 1.61$, 95 % CI [1.09, 2.39]; Nieuwsma et al., 2022). In a large sample of U.S. veterans recruited online, self-identified "non-White" veterans were more likely to be classified into a "high all moral injury event types" class compared to a "troubled by failing to act" class ($OR = 10.92$, 95 % CI[5.26, 22.69]; Saba et al., 2022). Overall, the limited existing research suggests that PMIEs may differ across racial and ethnic groups, though the pattern of these differences is unclear.

Some research suggests that servicemembers who identify as Black/African American and/or Hispanic/Latino/a/e report a greater number and more severe PTEs and combat exposures, compared to White-identifying servicemembers, though findings are mixed (Dohrenwend et al., 2008; Merians et al., 2023; Ward et al., 2021). Among a nationally

representative sample of post-9/11 veterans ($n = 7690$), participants who self-identified as Black, Hispanic/Latino/a/e, or multiracial reported more childhood trauma, military trauma, post-military trauma, and life stress compared to White veterans ($d = 0.09 - 0.27$), but did not report different rates compared to each other (McClendon et al., 2019). Similarly, results from the National Health and Resilience in Veterans Study ($n = 4069$ post-9/11 veterans) found that Hispanic veterans reported more direct ($\chi^2 = 9.82$, $p < .001$) and total trauma ($\chi^2 = 6.59$, $p < .001$) exposures compared to White ($d = 0.22$) and Black veterans ($d = 0.27$; Merians et al., 2023). Studies on Vietnam-era Veterans, in particular, show significant differences in trauma exposure between Black/African American, Hispanic/Latino/a/e, and White veterans (Dohrenwend et al., 2008; Frueh et al., 1998; Lewis-Fernández et al., 2008; Ruef et al., 2000). In contrast, Mustillo and Kysar-Moon (2017) found that White men and women veterans endorsed greater traumatic combat exposures relative to Black men and women, respectively ($n = 48,718$ post-9/11 veterans). Because Black/African American and Hispanic/Latino/a/e generally report more PTEs and combat exposure than White veterans, it stands to reason that these veterans may also report more PMIEs.

1.1. Current study

Given the conceptual parallels in military-related PTEs and military-related PMIEs (Litz et al., 2009), disparities in rates of PMIE exposures may mirror disparities in PTEs and combat exposure among racial and ethnic identities; the current study is a first step in exploring this possibility. To contextualize our findings, we examined whether Black/African American, Hispanic/Latino/a/e, and White veterans reported different rates of combat exposure and trauma exposure. We assessed PMIEs using the two most common military-related PMIE assessments: the Moral Injury Questionnaire – Military Version (MIQ-M; Currier et al., 2015a,b) and the Moral Injury Events Scale (MIES; Nash et al., 2013); because of psychometric limitations of these measures, we assessed differences at the item level (see Myers et al., 2024). We focused on comparisons between Black/African American, White, Hispanic/Latino/a/e, and non-Hispanic/Latino/a/e veterans due to low rates of other groups in the sample. We hypothesized that, compared to White non-Hispanic/Latino/a/e veterans, 1) Black/African American and Hispanic/Latino/a/e veterans would report greater PMIEs, 2) Black and Hispanic/Latino/a/e veterans would report greater combat exposure and, 3) Black and Hispanic/Latino/a/e veterans would report greater instance and frequency of traumatic events.

2. Method

2.1. Participants

The current study was a secondary analysis using repository data of 487 post-9/11 veterans who resided in Texas and participated in the Study Evaluating Returning Veterans Experiences, a longitudinal cohort study investigating modifiable psychosocial factors impacting post-deployment functioning in veterans enrolled in the VA healthcare system. All hypotheses in this study were developed independently and are separate from the aims of the parent study. Veterans were included in the current study if they agreed to have their data stored in the parent study's data repository (CTVHCS IRB Protocol #00534). Veterans were excluded from the parent study if they had a psychotic or bipolar disorder diagnosis, if they planned to relocate from the area in the following four months. Participants in mental healthcare were required to reach stable mental health treatment for at least three months before participating. See Frankfurt et al. (2018) for details on the parent study procedures and recruitment methods.

2.2. Procedures

The Institutional Review Board of the last author's institution approved all current study procedures (CTVHCS IRB Protocol #00679). The parent study took place between 2014 and 2018 and involved four assessments at approximately 8-month intervals (baseline, 8-month, 16-month, 24-month assessments). Initial eligibility was identified by phone screens and informed consent was completed at baseline. We used data collected at the 24-month assessment because all the variables of interest were measured at this timepoint. Participants gave written informed consent and were compensated for participation.

2.3. Measures

Self-Reported Racial and Ethnic Identity. Participants self-identified their racial identity using a list of six racial identities based on U.S. census categories (Black/African American, White, American Indian or Alaska Native, Asian, Native Hawaiian or Pacific Islander, or other). Participants who identified as “Black/African American” or “White” were included in the current study; veterans who identified as both “Black/African American” and any other race were included in the “Black/African American” group. Veterans who self-identified as American Indian or Alaska Native, Asian American, or Native Hawaiian or Pacific Islander were not included due to low subsample size numbers. Ethnicity was assessed by one question, “Are you Hispanic/Latino?”

Moral Injury Questionnaire – Military Version (MIQ-M). The 19-item MIQ-M assesses the frequency of warzone deployment-related PMIEs (Currier et al., 2015). Items are rated on a four-point frequency scale from never (1) to often (4), with a total score ranging from 19 to 76; higher scores indicating a higher frequency of PMIEs.

Moral Injury Events Scale (MIES). The 9-item MIES assesses self- and other-directed PMIEs and betrayals (Nash et al., 2013). The measure is endorsed using a six-point scale ranging from strongly disagree (1) to strongly agree (6); scores range from 9 to 54 and higher scores indicate a greater likelihood of PMIEs.

Full Combat Exposure Scale (FCES). A shortened (18-item) version of the FCES (Hoge et al., 2004) assessed combat exposure in a variety of combat situations. Participants indicate how often they encountered each situation on a scale from never (0) to ten or more times (4). Total scores range from 0 to 170; higher numbers indicate greater exposures.

Traumatic Life Events Questionnaire-Lite (TLEQ-L). The 23-item TLEQ-L assesses the presence, frequency, and severity of potentially traumatic events (Kubany et al., 2000); events include a natural disaster, vehicle accidents, witnessing violent events, and interpersonal violence. The frequency of events is rated from ‘never’ (0) to ‘more than 5 times’ (6). Total scores range from 0 to 144; with higher scores indicating greater number and frequency events.

2.4. Data analysis plan

We performed all analyses in R (R Core Team, 2024) using the tidyverse (Wickham et al., 2019) brms packages (Bürkner, 2017a). We analyzed the MIES, MIQ-M, FCES, and TLEQ-L items in a series of graded response models (Samejima, 2016) using a Bayesian multilevel item response theory (IRT) approach (see Myers et al., 2024 for example). This multilevel IRT approach accommodates missing item values through full-information estimation and provides stable population estimates via multilevel partial pooling.

For each of the four questionnaires, we ran two parallel series of three models for a total of 24 models to examine differences in frequency and severity. For each questionnaire, one of the model series was based around the grouping variable of race, and the other was based around the grouping variable of ethnicity. Taking the MIES as an example, the three models focused on race were (1) an unconditional model, (2) a conditional model where the thresholds varied by the race, and (3) a

conditional model where the latent mean, but not the thresholds, varied by race. The remaining three MIES models followed the same structure but used ethnicity rather than race. All models handled the ordinal nature of the Likert-type responses with the cumulative logit link.

In each series, the first model served as a baseline. For the second model in each series, we expressed the grouping difference effect sizes as a series of differences in percentage points of the probability of each Likert response category, by item. To help bring focus to the many contrasts, we have defined our smallest effect size of interest as a difference of 10 percentage points (Kruschke and Liddell, 2018). For the third models in each series, we have expressed the latent mean effect sizes in a Cohen's d metric using the Cox logit transform (Sánchez-Meca et al., 2003). We interpreted $d \sim 0.2$ as small effect; $d \sim 0.5$ as medium effect, $d \sim 0.8$ as large effect (Sullivan and Feinn, 2012).

We used weakly-regularizing priors for all models. We checked the quality of the Markov chains for all models using visual diagnostics (e.g., trace plots) and statistical diagnostics (e.g., effective sample sizes), and checked the overall quality of the models using visual posterior-predictive checks (see McElreath, 2020). All models passed the diagnostic checks. For a detailed account of the statistical models, including the priors, and of the various diagnostic checks, see the supplemental materials. The posterior distributions for all major parameters and the parameter contrasts are summarized by their posterior means and percentile-based 95 % credible intervals (95 % CIs), which are analogous to frequentist point estimates and confidence intervals (Bürkner, 2017; Kruschke and Liddell, 2018; McElreath, 2020).

3. Results

3.1. Descriptives

Baseline descriptive statistics for the sample are displayed in Table 1; the supplementary material contains demographic tables broken down by race and ethnicity. Approximately 30 % of veterans self-identified as Black/African American, 57 % as White, and 20 % as Hispanic/Latino/a/e. The majority (89.4 %) of veterans reported at least one PMIE on the MIES and the majority (93.1 %) reported at least one on the MIQ-M. See supplemental materials for the sum-score and item-level distributions of measures by race and ethnicity. The most endorsed response on the MIES and MIQ-M was “never”, though each item varied in the rate of endorsement. Veteran respondents tended to endorse higher rates of PMIEs involving others' wrongdoing, betrayal, or existential angst (i.e., guilt, not knowing the right thing to do, tragic and chaotic environment of war) versus PMIEs that involved one's own actions.

3.2. Moral Injury Questionnaire – Military Version

Fig. 1 presents item-level contrasts in MIQ-M responses by veterans' racial identity. Fig. 2 presents item-level contrasts in MIQ-M responses by ethnic identity. All item-level response-probability contrasts were near zero, and none exceeded the ± 10 % range. In the racial identity model with the conditional latent means, the point estimate for the latent Cohen's d was small ($d = 0.23$, [0.02, 0.45]). With item response-probabilities held constant, the model suggests that Black/African American veterans had higher MIQ-M latent means compared to White veterans and that the magnitude of the difference was small. In the ethnic identity model with the conditional latent means, the point estimate for the latent Cohen's d was small ($d = 0.33$, [0.14, 0.52]). With item response-probabilities held constant, the model suggests Hispanic/Latino/a/e veterans had higher MIQ-M latent means compared to non-Hispanic/Latino/a/e veterans, and the magnitude of the difference was small.

3.3. Moral Injury Events Scale

Fig. 3 shows item-level contrasts in MIES responses based on racial

Table 1
Demographic statistics.

Variable	Category	<i>n</i>	%	
Gender	Woman	120	24.6	
	Man	365	74.9	
	Transgender Woman	1	0.2	
	Transgender Man	1	0.2	
Race	American Indian/Alaska Native	30	6.2	
	Asian	18	3.7	
	Black/African-American	152	31.2	
	Hawaiian/Pacific Islander	6	1.2	
	White	277	56.9	
	Other	18	3.7	
Ethnicity	Hispanic/Latino	96	19.7	
Highest level of Education	Some High School	1	0.2	
	High School Diploma or GED	29	6.0	
	Some College	202	41.5	
	Associate's Degree	67	13.8	
	Technical School Certification	30	6.2	
	Bachelor's Degree	82	16.8	
	Some Graduate School	24	4.9	
	Graduate Degree	52	10.7	
Work Status	Employed Full Time	183	37.6	
	Employed Part Time	52	10.7	
	Disabled	108	22.2	
	Retired	130	26.7	
	Full Time Student	187	38.4	
	Part Time Student	17	3.5	
	Full Time Homemaker	15	3.1	
	Unemployed (looking for work)	47	9.7	
	Unemployed (not actively looking for work)	28	5.7	
Annual Income	\$0 - \$14,999	58	11.9	
	\$15,000 - \$29,999	96	19.7	
	\$30,000 - \$44,999	128	26.3	
	\$45,000 - \$59,999	78	16.0	
	\$60,000 - \$74,999	49	10.1	
	\$75,000 - \$89,999	38	7.8	
	\$90,000 or higher	35	7.2	
Military Service	Air Force	20	4.1	
	Army	440	90.3	
	Marine Corps	23	4.7	
	National Guard	56	11.5	
	Navy	22	4.5	
Variable	mean	<i>SD</i>	min	max
Age	41.0	9.0	23	67.0
Years of Education	14.4	2.3	9	25.5
Years Served in Active Duty	12.6	7.7	1	31.0
# Deployments	2.0	1.1	0	7.0

identity. Fig. 4 shows item-level contrasts in MIES based on ethnic identity. Again, all item-level response-probability contrasts were near zero and none exceeded the $\pm 10\%$ range. In the racial identity model with conditional latent means, the point estimate for the latent Cohen's d was small ($d = 0.38$, [0.06, 0.68]). With item response-probabilities held constant, the model suggests that Black/African American veterans had higher MIES latent means compared to White veterans and that the magnitude of the difference was small. In the ethnic identity model with conditional latent means, the point estimate for the latent Cohen's d was small ($d = 0.21$, [−0.18, 0.52]). With item response-probabilities held constant, the model suggests that Hispanic/Latino/a/e veterans had higher MIES latent means compared to non-Hispanic/Latino/a/e veterans and that the magnitude of the difference was small.

3.4. Full Combat Exposure Scale

Item-level contrasts on the FCES are provided in supplementary

material. For both comparisons, all item-level response-probability contrasts were near zero, and none exceeded the $\pm 10\%$ range. In the racial identity models with conditional latent means, the point estimate for the latent Cohen's d was small ($d = -0.20$, [−0.45, 0.07]). With item response-probabilities held constant, the model suggests that Black/African American veterans had lower FCES latent means compared to White veterans and that the magnitude of the difference was small. In the ethnic identity model with conditional latent means, the point estimate for the latent Cohen's d was near zero ($d = 0.10$, [−0.18, 0.37]). With item response-probabilities held constant, the model suggests that Hispanic/Latino/a/e veterans had similar FCES latent means compared to non-Hispanic/Latino/a/e veterans.

3.5. Traumatic Life Events Questionnaire-Lite

Item-level contrasts on the TLEQ-L are displayed in supplementary material. For both comparisons, all item-level response-probability

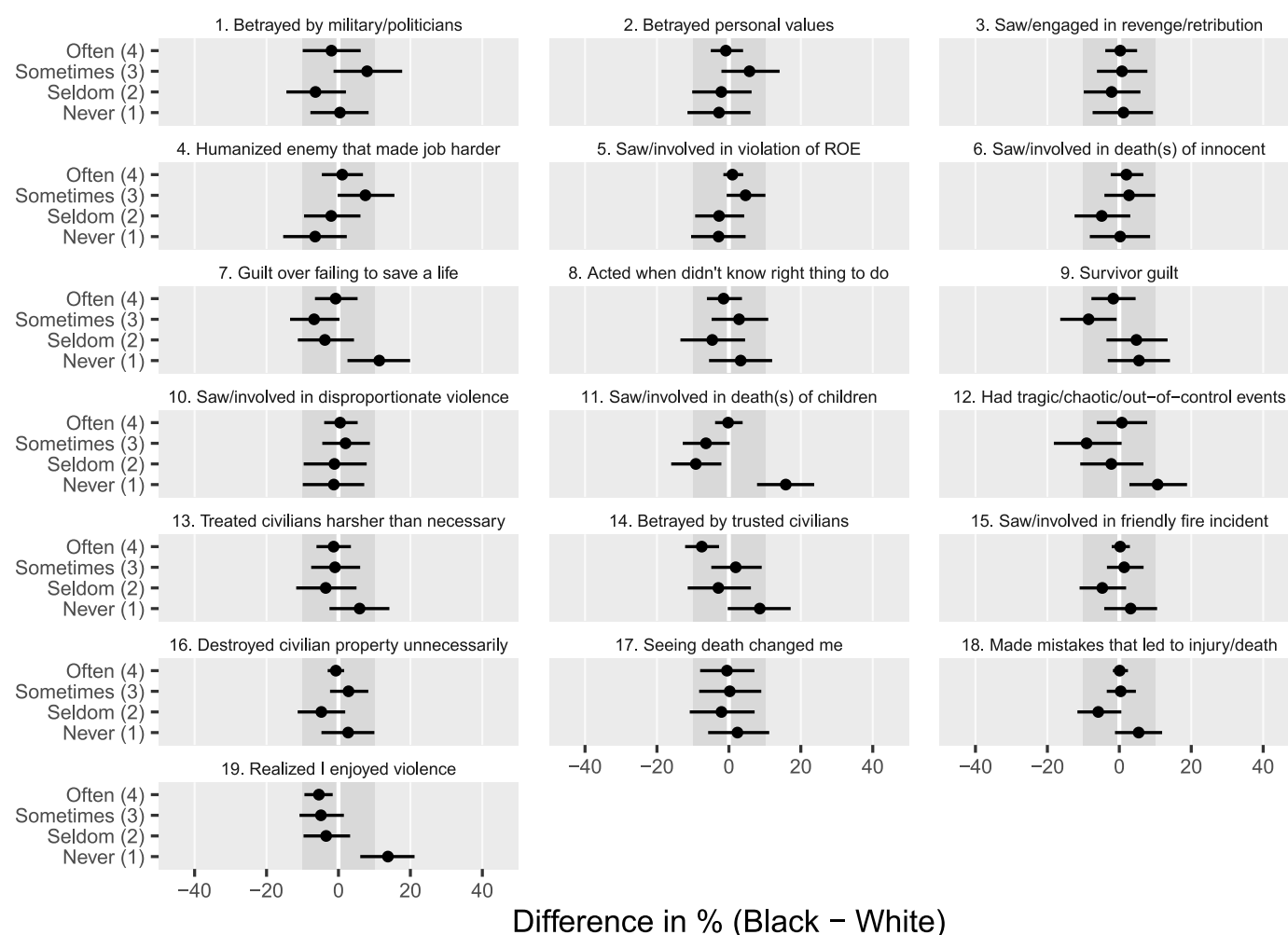


Fig. 1. MIQ-M item-level contrasts between Black/African American and White veterans.

Note. The posterior distributions for each contrast, in percentage points, are expressed by posterior means (dots) and 95 % Cris (horizontal lines). The gray bands in the middle of each panel marks off the -10 %-10 % range of near-zero effect sizes. All contrasts fall within that range.

contrasts were near zero, and none exceeded the $\pm 10\%$ range. The latent-mean contrasts from the TLEQ-L models with conditional latent means were both near zero, with $d = -0.03$, $[-0.16, 0.09]$ for the Black/African American versus White contrast, and $d = -0.01$, $[-0.14, 0.12]$ for the Hispanic/Latino/a/e versus non-Hispanic/Latino/a/e contrast. Both indicated that the group-level latent means for the TLEQ-L are near identical when holding the item-response thresholds constant between groups.

4. Discussion

The U.S. military is a racially and ethnically diverse institution with documented discriminatory practices towards those with marginalized identities (Stafford et al., 2021); thus, veterans' racial and ethnic identities likely impact their experience of moral injury events. In partial support of our first hypothesis, we found that Black/African American veterans reported slightly more PMIEs than White veterans, but Hispanic/Latino/a/e veterans reported slightly fewer PMIEs than non-Hispanic/Latino/a/e veterans. Contrary to our second hypothesis, Black/African American veterans reported slightly lower combat exposure than White veterans and Hispanic/Latino/a/e veterans reported similar levels of combat exposure compared to non-Hispanic/Latino/a/e veterans. Contrary to our third hypothesis, no meaningful differences were found related to lifetime or combat trauma exposure.

We speculate on a few reasons for minimal differences in PMIE

endorsement rates between Black/African American, Hispanic/Latino/a/e, and White veterans. First, Black/African American, White, Hispanic/Latino/a/e, and non-Hispanic/Latino/a/e veterans may not differ in PMIE exposures. PMIEs entail confrontations with deep violations of right and wrong, which is a universal risk of the human condition (Litz and Walker, 2025). Thus, each person may have some non-zero likelihood of experiencing any PMIE, although the nature of each person's PMIE may be meaningfully different in context, content, and meaning. Second, the high variability in responses at the item-response level (i.e., within-group variability) may preclude conclusions about between-group difference. Racial groups tend to have as much within-group heterogeneity as between-group heterogeneity – due, for instance, to class, gender, physical appearance, or histories of immigration and colonization (Carvajal et al., 2024; Celious and Oyserman, 2001) – although these differences are missed when people are categorized solely by race. Third, items on the MIES and MIQ-M do not directly assess for racialized PMIEs (e.g., PMIEs that involve racism or racial violence) that may differentially affect veterans. MIES and MIQ-M items are broadly worded (e.g., “I saw things that were morally wrong” [MIES], “I saw/was involved in violence that was out of proportion to the event” [MIQ-M]) and many items do not specify the type of wrongdoing (O'Brien et al., 2024). Neither the MIQ-M nor the MIES measure race-related stress, which is strongly associated with moral injury and distress (Elbasheir et al., 2024). Thus, group-level differences in the experience of PMIEs and/or the moral injury may not be captured

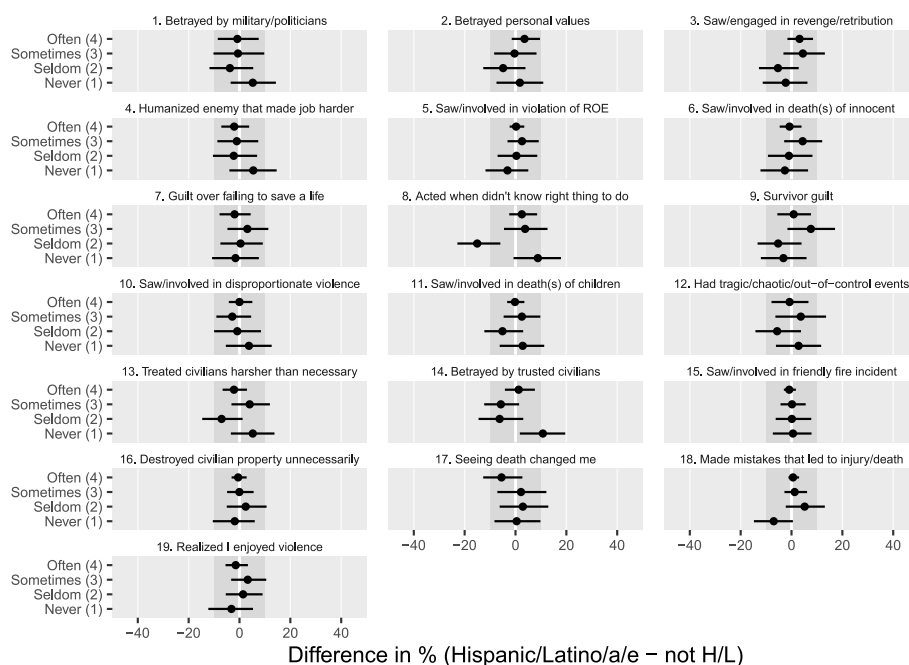


Fig. 2. MIQ-M item-level contrasts between Hispanic/Latino/a/e and Non-Hispanic/Latino/a/e veterans.

Note. The posterior distributions for each contrast, in percentage points, are expressed by posterior means (dots) and 95 % CrIs (horizontal lines). The gray bands in the middle of each panel marks off the -10 %–10 % range of near-zero effect sizes. All contrasts fall within that range.

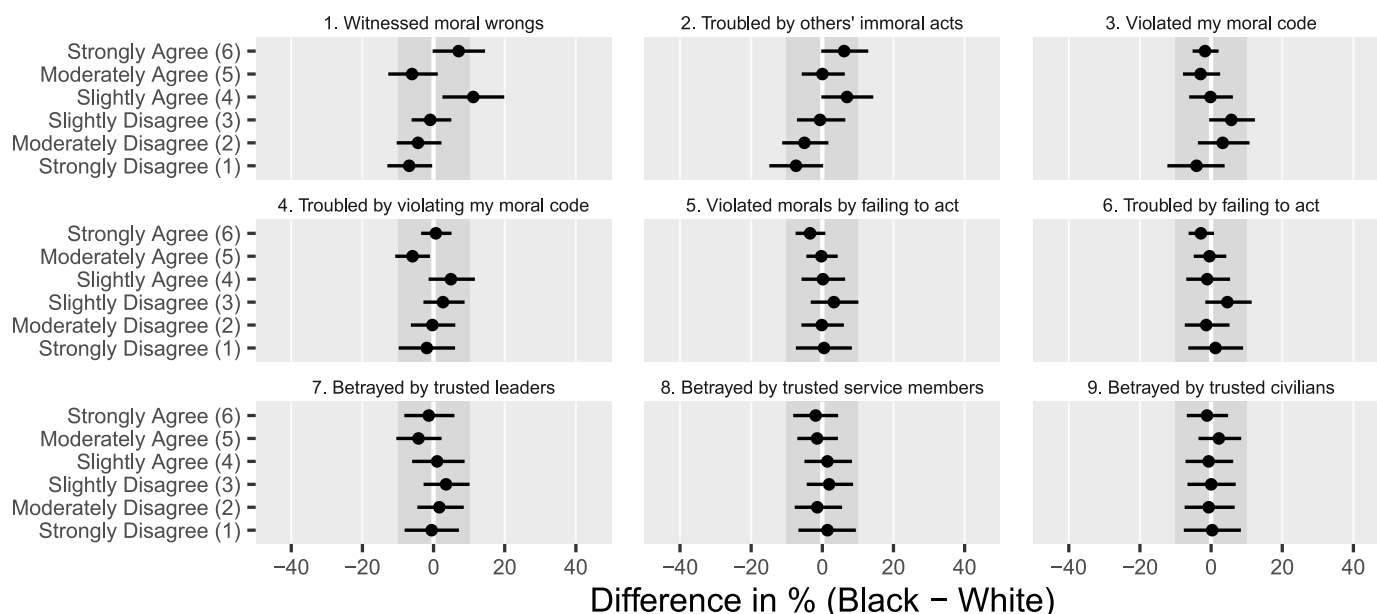


Fig. 3. MIES item-level contrasts between Black/African American and White veterans.

Note. The posterior distributions for each contrast, in percentage points, are expressed by posterior means (dots) and 95 % CrIs (horizontal lines). The gray bands in the middle of each panel marks off the -10 %–10 % range of near-zero effect sizes. All contrasts fall within that range.

with these scales.

Consistent with our primary findings, lifetime trauma exposure and combat exposure did not vary between Black/African American and White veterans, or Hispanic/Latino/a/e and non-Hispanic/Latino/a/e veterans. Visually inspecting the item-level plots of the TLEQ-L and FCES measures showed no consistent pattern of differential exposures between people with different racial and/or ethnic self-identifications. Much of the literature has found contrary results: veterans of different racial and ethnic identities report a differential risk of exposure to PTE and combat (McClendon et al., 2019; Ward et al., 2021). A few studies,

however, concord with ours. Mustillo and Kysar-Moon (2017) reported that White veterans experience slightly more combat exposures than Black veterans. Two studies on samples of police officers and veterans found no significant differences in trauma exposures across ethnicity (Pole et al., 2001; Rosenheck and Fontana, 1996). Given the inconsistencies in past literature and the unexpected nature of our findings, further research is warranted to clarify these results. Of note, the parent study recruited from Central Texas where many veterans from around the U.S. settle after transitioning out of the U.S. military; thus, the active study sample may be more homogenous in major life

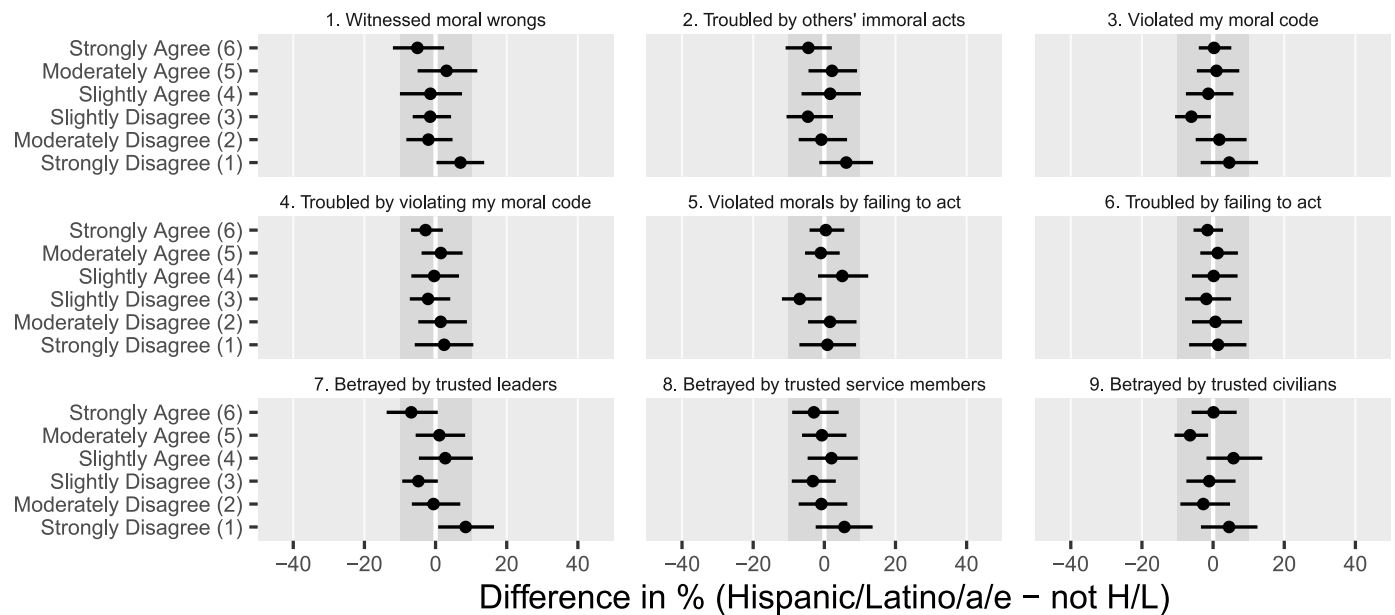


Fig. 4. MIES item-level contrasts between Hispanic/Latino/a/e and Non-Hispanic/Latino/a/e veterans.

Note. The posterior distributions for each contrast, in percentage points, are expressed by posterior means (dots) and 95 % CrIs (horizontal lines). The gray bands in the middle of each panel marks off the -10 %–10 % range of near-zero effect sizes. All contrasts fall within that range.

background experiences than would be reflected at a national level.

Theories informed by culture, ethnic socialization, and the assumptive world may provide insight to these results. The Minority Strengths Model, an analogue to the Minority Stress Model, posits that the specific strengths of minority groups may protect against the negative effects of discrimination (Perrin et al., 2020). Hispanic/Latino/a/e culture is diverse and complex, but commonly emphasizes collectivistic values involving strong social networks, connectedness, and religious affiliation, all of which may protect against the perception and effects of stress (Cervantes and Castro, 1985; National Alliance on Mental Illness, n.d.; Pole et al., 2005). Research examining resilience in Black/African American and White caregivers found that Black/African American individuals experienced more satisfaction with their social networks and were more likely to rely upon faith-based coping, compared to White caregivers (Clay et al., 2008; Vines and Demissie, 2013). Social connectedness may protect against suicidality following moral injury (Kelley et al., 2019) and positive religious coping is associated with positive mental health outcomes (Lucchetti et al., 2021). Some suggest that, at its core, moral injury is a violation of one's assumptive world, or an incongruence between one's beliefs about how the world should function and the experience of a traumatic event (Litz et al., 2009). Based on this evidence, we speculate that experiences of racial violence and discrimination may not shatter assumptions for adults with racial and ethnic minoritized identities, thus these events may be less likely to be reported as PMIEs. For instance, Black/African American parents communicate racial socialization messages to their children, which often involves preparing children for bias (Scott and Varner, 2023) and prejudice (Phinney and Chavira, 1995). Finally, experiences of racial and ethnic discrimination may be present, even common, for some veterans (31.2 % of Black/African American servicemembers report an experience of racial discrimination and/or harassment in the past year; Coughlin, 2021) while severe violence (e.g. killing in war or military sexual trauma) may be less common (10.8 % of Black/African American and 7.8 % of Hispanic/Latino/a/e veterans report “very high” war-zone stress exposure; Dohrenwend et al., 2008), thus more salient as a PMIE.

5. Implications and future directions

This is the first study to examine differences in PMIE rates based on

veterans' racial and ethnic self-identifications. As such our findings raise questions about the field's measurements for PMIEs and moral injury, as well as the broader experience of moral injury for racially and ethnically minoritized individuals. The current study highlights the need for advancements in PMIE and moral injury measurements which capture the array of PMIE and moral injury experiences for racially and ethnically minoritized veterans. It is well established that structural inequalities, including betrayals and race-related stress, profoundly impact the mental health and general wellbeing of Black/African American and Hispanic/Latino/a/e individuals (Elbasheir et al., 2024). Simultaneously, protective factors, as established by the Minority Strengths Model, may mitigate the negative impact of PMIEs among veterans from historically minoritized backgrounds. These findings are novel; as such, further investigation is warranted.

Future research would benefit from mixed methods designs that pay careful attention to intragroup racial heterogeneity, intersecting identities, cultural processes and include the perspectives of veterans with different racial and ethnic identities in study conception and execution (Arshad and Chung, 2022; Celious and Oyserman, 2001). Additional research is needed examining historically minoritized veterans' experiences of resilience, as well harm, in the context of race-related PMIEs and moral injury. Further investigation on whether combat and trauma exposure are related to PMIEs, and how this association varies across race and ethnicity, would help to elucidate the role of trauma and combat exposures in PMIE endorsement and subsequent moral injury.

5.1. Limitations

Our study is tempered by a few limitations. First, the parent study was not designed to examine variation in trauma-related experiences between Black/African American and White, or Hispanic/Latino/a/e, and non-Hispanic/Latino/a/e veterans. Participants' racial and ethnic identities were assessed using U.S. census categories which may not reflect participants' self-identifications and conflate race, ethnicity, ancestry, and cultural background (Ahmadzadeh, 2021). Additionally, the parent study did not include measures of cultural processes, including measures of experienced racism or bias, that would contextualize findings (Arshad and Chung, 2022; Roberts and Rizzo, 2021). The psychometric and measurement invariance properties of the MIES

and MIQ-M have not been compared across different racial and ethnic identities (Houle et al., 2023); we obviated scale-level problems, however, by conducting item-level analyses.

6. Conclusion

Whether morally injurious experiences are differentially troubling to people of different identities (and why) remains an open question that likely cannot be addressed using solely broad survey methods. Veterans of different racial or ethnic identities may experience circumstances that contribute to PMIEs (Currier et al., 2015) differently— that is, that the person-specific experience of organizational, environmental, cultural, relational, and psychological factors are shaped by one's racial, ethnic, or cultural identity, as well as personal history. This remains an open question to which the field's cultural and developmental psychology, as well as sociology and psychological anthropology, can fruitfully contribute.

CRedit authorship contribution statement

Emma Harris: Writing – review & editing, Writing – original draft, Visualization, Project administration, Conceptualization. **Sheila F. O'Brien:** Writing – review & editing, Writing – original draft, Supervision, Funding acquisition, Conceptualization. **A. Solomon Kurz:** Writing – original draft, Software, Formal analysis, Data curation. **Alison Krauss:** Writing – review & editing, Methodology. **Lance Roehl:** Writing – original draft. **Marcus G. Wild:** Writing – review & editing, Writing – original draft, Supervision, Methodology, Formal analysis.

Previously published data statement

This manuscript involves secondary data analysis of previously collected deidentified data; data was obtained from an IRB-approved data repository. Only one other study has been published using both the Moral Injury Events Scale and the Moral Injury Questionnaire-Military Version, from this data repository.; those analyses focused on gender-related differences in potentially morally injurious events. Thus, the current study and previous study are non-overlapping.

Declaration of competing interest

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jpsychires.2025.10.029>.

Data availability

The present data set is not publicly available due to institutional policies. The minimal data set underlying the results described in the manuscript may be made available on request from the corresponding author pending appropriate institutional approval.

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Glossary

Moral Injury (MI): The psycho-social-spiritual distress following a potentially morally

injurious event

Potentially Morally Injurious Event (PMIE): One's on actions or inactions that violate deeply held morals, or being directly impacted by another's actions that violate deeply held morals

Item Response Theory (IRT): A group of statistical models which describe the relationship between latent variables (unobservable traits) and their outcomes. IRT models

“establish a link between the properties of items on an instrument, individuals responding to these items, and the underlying trait being measured.” ([Item Response Theory, 2016](#); para. 1). The current study uses a latent variable approach to psychometrically evaluate questionnaire items by creating a latent continuum on the trait of interest, then comparing individual responses to each question to the latent variable to see how much an item discriminates among the variable of interest