

# New Study Examines VA Disability Compensation Awards for Race Discrimination During Military Service

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*The study found that the VA has increasingly provided reparations for the psychological impact of prejudice in tandem with the Nation's awakening over systemic racial discrimination.*

GAINESVILLE, Fla. , July 12, 2022 /PRNewswire/ -- Veteran's benefits attorney and Fellow of the National Institute of Military Justice, Dr. Evan R. Seamone, has published the first ever study examining the award of disability benefits by the Department of Veterans Affairs (VA) for the impact of prejudice during military service. The *Administrative Law Review* article, "Disability Compensation for the Psychological Impact of Race Discrimination: Lessons from the Board of Veterans' Appeals," [https://administrativelawreview.org/wp-content/uploads/sites/2/2022/07/74.2-Seamone\\_Final\\_Crop.pdf](https://administrativelawreview.org/wp-content/uploads/sites/2/2022/07/74.2-Seamone_Final_Crop.pdf), documents trends in case decisions in the 26 years between 1993 and 2019.

Seamone found that the VA historically denied more discrimination claims than it granted consistently through 2015. However, since 2017, approval rates skyrocketed in a sharp reversal of outcome trends. The modern era marks the best success rates for VA discrimination appeals and distinguishes the VA from other courts in which discrimination claims have proven the most likely to fail, such as civil rights employment law cases for racial discrimination in the federal courts.

Seamone used natural language processing and machine learning to classify discrimination cases in a database of over 1 million VA appellate opinions.

Through a detailed analysis of 535 race

discrimination and 118 sexual and gender identity minority discrimination decisions, the study provides an in-depth understanding of the characteristics of successful and unsuccessful claims, including:

- Veterans who claimed anxiety or depression as a result of discrimination won claims much more frequently than those who claimed Posttraumatic Stress Disorder (PTSD);
- Claims for more than one mental health disorder as a result of discrimination (as opposed to just one type of mental disorder) were substantially more likely to succeed;
- For veterans claiming PTSD, the greatest obstacle was establishing, through psychiatric evaluation, that the discriminatory events met the threshold for "trauma" under PTSD Criterion A of the *Diagnostic and Statistical Manual for Mental Disorders*;
- PTSD claims for discrimination also frequently failed to meet the VA regulatory requirement for independent corroborating evidence that the discriminatory stressor event occurred. Contrary to the stringent requirement for evaluating PTSD claims, VA regulations do not require independent corroborating evidence to establish other mental health disorders;
- Review of written decisions revealed that over two dozen BVA decisions contained "sanitized" descriptions of the discriminatory events, which made it impossible to determine the type and nature of the discrimination.

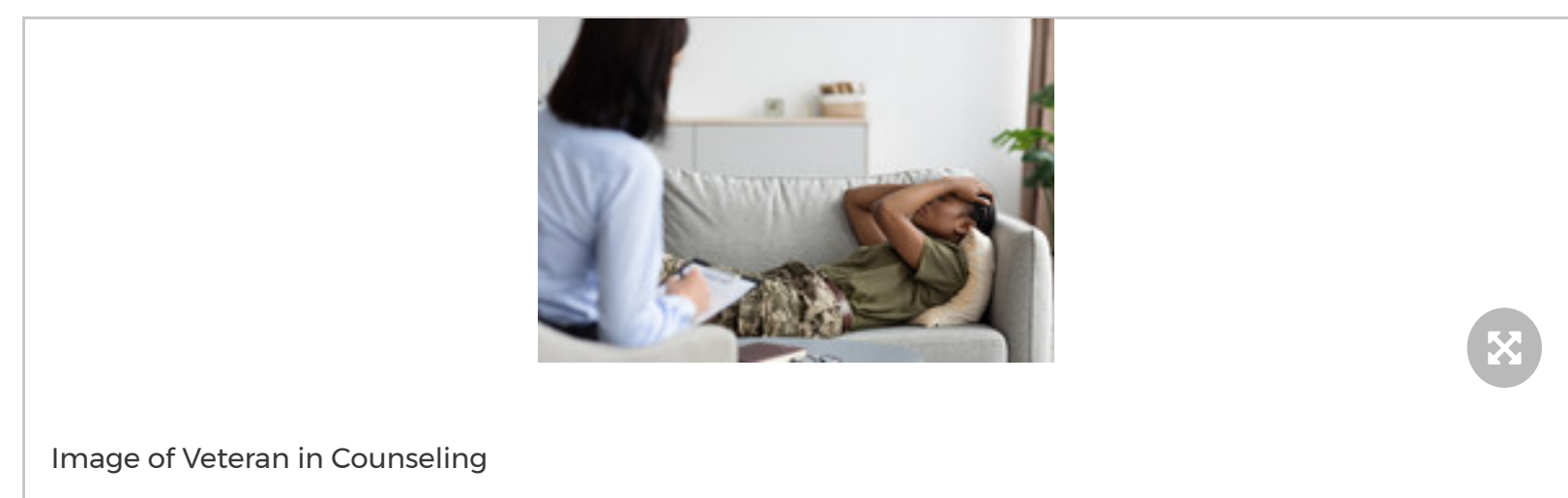
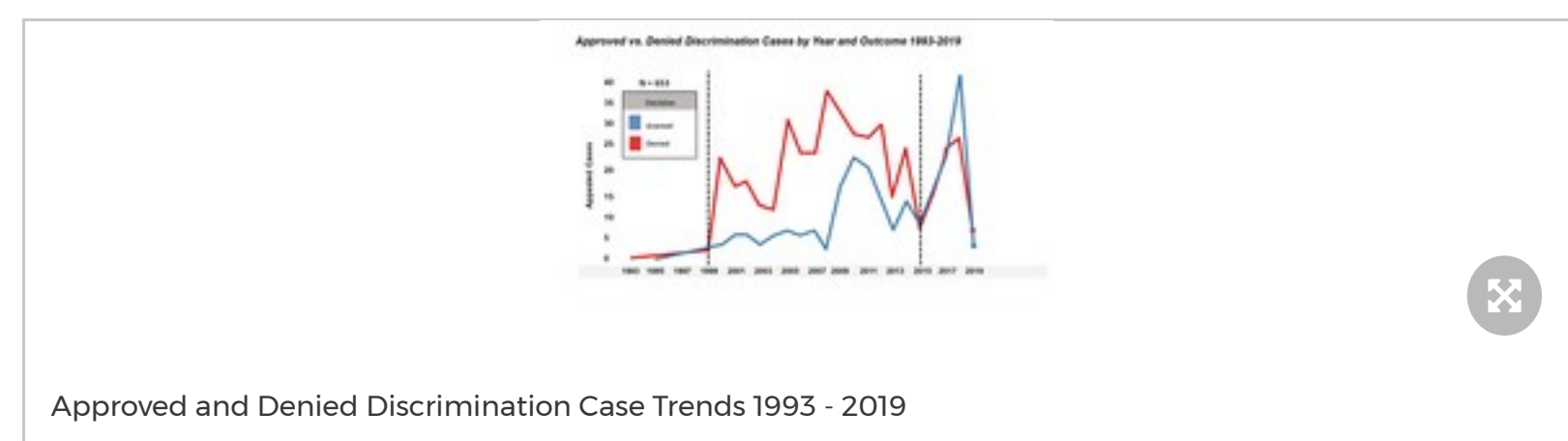
Seamone draws on these findings to recommend a requirement for judges to articulate specific facts in all discrimination cases to ensure that the public can accurately assess case trends. He further recommends that mental health evaluators use established and objective psychiatric tests designed to measure the impact of racial discrimination, such as the Race-Based Traumatic Stress Symptom Scale or the UConn Racial/Ethnic Stress & Trauma Survey. Because veterans and their advocates may believe that discrimination claims will fail, Seamone advocates for greater outreach to veterans to educate them that VA discrimination claims are not only winnable, but most likely to succeed at the present time.

To learn more about Evan Seamone's scholarly interests and publications, visit his SSRN author page at [https://papers.ssrn.com/sol3/cf\\_dev/AbsByAuth.cfm?per\\_id=1502236](https://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=1502236) and his LinkedIn page at <https://www.linkedin.com/in/evan-seamone>.

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## Racial Differences in Veterans' Satisfaction With Examination of Disability From Posttraumatic Stress Disorder

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### Abstract

**Objective**—The examination to determine if a veteran has service-connected posttraumatic stress disorder (PTSD) affects veterans' lives for years afterwards. This study examined factors potentially associated with veterans' perception of their examination's quality.

**Methods**—Three hundred eighty-four veterans participated in a clinical trial in which they received either a semi-structured interview or the examiner's usual interview. Immediately after the interview, veterans completed confidential ratings of the examination's quality and of their examiners' interpersonal qualities and competence. Extensive data characterizing the veterans, the 33 participating examiners, and the examinations themselves were collected.

**Results**—Forty-seven percent of Caucasian veterans versus 34% of African American veterans rated their examination quality as "excellent." In multivariate analysis, African Americans were less likely than Caucasians to assign a higher quality rating (odds ratio .61, 95% confidence interval .38 – .99). African Americans also rated their examiners as having significantly worse interpersonal qualities but not lower competence. Ratings were not significantly related to the veterans' age, gender, marital status, eventual diagnosis with PTSD, Global Assessment of Functioning score, the examiners' perception of the prevalence of malingering, or the presence of a third party in the examination.

**Conclusions**—Ratings of disability examinations were generally high, although African American veterans' ratings were less favorable than Caucasian veterans' ratings.

### BACKGROUND

Veterans who claim a mental health condition was caused or exacerbated by their military service can apply for disability payments from the Department of Veterans Affairs. Once an application is filed, the veteran has an examination with a mental health professional that is central to assessing the claim. The approval or denial of a PTSD claim has far-reaching implications (1) as it can result in lifelong priority access to VA care, financial remuneration, and an official acknowledgement that the veteran was harmed by military service. As of 2009, there were 345,520 veterans receiving service-connected payments for PTSD (2), a number reflecting that disability awards are often continued for decades after the initial award (3).

Many veterans find the PTSD Compensation interview to be stressful and indicate that the Compensation examinations are conducted by examiners who do not understand them, question them skeptically, and display unfamiliarity with the military (4). These views are shared by many representatives of organizations that support veterans with their applications (5).

Veterans' perceptions that their examinations were of lower quality are damaging. Compensation examinations are a potential portal of entry to engagement in VA treatment,

and an off-putting interview may make veterans less pre-disposed to engage in VA treatment (6). Veterans' perceptions that examinations are unfair can also become self-fulfilling prophecies, in that distrustful veterans may be more difficult to interview. Perceptions that disability determinations are capricious might also undermine public support for this indemnification program (7). For all these reasons, it is important to understand veteran satisfaction with the Compensation examination and whether there are factors associated with veterans' perceptions that their Compensation examination was of lower quality.

In this study, we examined veteran, examiner, and examination characteristics potentially associated with satisfaction among veterans evaluated for service connection for PTSD. A wide range of potential predictors were considered because there are few data concerning claimants' satisfaction with evaluative, forensic examinations of any type (8). Of particular interest was veterans' race. Abundant literature has shown that African American patients, compared with Caucasians, have less trust in medical professionals than do Caucasians (9). Prior analyses that accounted for potentially confounding differences in PTSD disability awards, such as PTSD symptom severity and degree of disability, showed that African-American veterans were 13% less likely to receive such awards than Caucasians (10). Furthermore, this racial difference in PTSD disability award was found to directly mediate a higher subsequent burden of poverty among African American veterans relative to other veterans (32).

## METHODS

### Parent Study

This study was embedded within a multi-site cluster randomized clinical trial of veterans being evaluated for an initial PTSD service-connection claim. Veterans were randomly assigned either to examiners who conducted their usual examination or to examiners who incorporated semi-structured assessments of PTSD and associated functional impairment into the interview. The semi-structured interviews incorporated the Clinician Administered PTSD Scale (CAPS) (11) to assess PTSD and the World Health Organization Disability Assessment Scale (WHODAS-II) (12) to assess functional impairment. The study design was hierarchical with veterans clustered within clinicians who were nested within medical centers. Examiners remained in their study arm throughout the study and did not cross over. Both veterans and examiners provided written, voluntary informed consent for participation and the study was approved by all participating study sites' institutional review boards. As part of study participation, veterans and examiners agreed to audio recording of the Compensation examination.

### Veterans' Ratings of Their Compensation Examinations

Veterans' subjective experiences of their Compensation examinations were assessed by research staff immediately after each veteran had undergone the PTSD examination using a brief paper-and-pencil questionnaire. The questionnaire items were adapted from measures used for similar purposes by the Veterans Benefits Administration to assess satisfaction with Compensation examinations and from other consumer satisfaction surveys (13, 14).

On the questionnaire, veterans were asked the summary question, "Overall, how would you rate the quality of today's Compensation & Pension examination?" with response options of excellent, very good, good, fair, and poor. Given zero "poor" ratings and very few ratings in the "fair" category (n=17, 5%), combining the "fair" and "good" response categories yielded a three-level ordinal scale for analysis (fair/good, very good, excellent), and ratings were coded so that higher scores corresponded to higher quality. This summary measure was the

pre-defined primary outcome because it allowed veterans to consider the quality of all facets of the examination (13).

Veterans also rated their agreement with statements about the examiner's interpersonal qualities and competence. The *interpersonal qualities* statements veterans rated began with "My examiner was..." and continued with "courteous," "paid attention to what I had to say," "took a personal interest in me," and "was reassuring." Agreement was rated on a Likert scale anchored by 1 = strongly disagree, 2 = somewhat disagree, 3 = neither agree nor disagree, 4 = somewhat agree, and 5 = strongly agree. These items rating *interpersonal qualities* had acceptable internal consistency (Cronbach's  $\alpha=.71$ )

Veterans rated the examiner's *competence* by rating separate items on the extent the examiner "was very thorough," "seemed to know what s/he was doing," "seemed very experienced," "had a lot of skill when working with me" and was "fair." These items rating *competence* had high internal consistency (Cronbach's  $\alpha=.85$ ). The distinction between professional competence and personal qualities has been a key feature of surveys of satisfaction with healthcare providers (15).

### Covariate Measurements

We hypothesized that veterans' satisfaction with their examinations would be impacted by characteristics of the veteran, examiner, and examination. Demographic data collected on veterans and included as predictors included age, gender, marital status, race, and education. Data extracted from the disability examination report included PTSD diagnosis (present, absent), substance use disorder, and the Global Assessment of Functioning (GAF) score. The GAF is a global rating scale that rates combined psychiatric and social functioning on a 0–100 scale (16). Demographics were also collected on examiners.

In addition, examiners completed a paper questionnaire (17), consisting of questions about examiners' training to conduct PTSD Compensation examinations, years conducting PTSD Compensation examinations, and attitudes towards claimants. Examiners were asked separate questions about whether they had received formal training in each of seven PTSD examination-related topics.

To elucidate examiners' general attitudes concerning whether veterans are prone to either exaggerate or avoid discussing and thus minimize symptoms (18), each examiner was asked: "What percentage of the veterans you interview exaggerate symptoms?" The same question was asked regarding the percentage of examined veterans who minimize symptoms.

### Data Collected About the Examinations

After each examination, the examiner recorded how much time had been spent conducting the interview. Examiners also indicated whether someone other than the veteran--such as a spouse or a Veterans' Service Organization representative --- had been present during the examination.

## DATA ANALYSIS

The veteran rating of the overall quality of the PTSD examination was the primary dependent variable. A proportional odds logistic regression was used to assess the relationship between rating of overall quality and the covariates listed above. To account for the data structure of veteran ratings clustered within PTSD examiner, standard errors were obtained using bootstrap covariance matrix estimates. For continuous covariates, odds ratios are presented comparing the 75th percentile to the 25th percentile of the respective distribution. An alternative analysis was conducted treating quality as a dichotomous

(excellent vs. not excellent) variable. The Interpersonal Quality and Competence scales were analyzed using linear regression on the same set of pre-specified covariates as above. A variance stabilizing log transformation was also employed to assess robustness to non-normality.

All statistical analysis was performed using R version 2.13.1 and R packages rms and Hmisc (19). Statistical significance was assessed at the  $\alpha=.05$  level

## RESULTS

### Sampling

As described in detail elsewhere (20), 999 eligible veterans were assigned to clinicians who were participating in the study between March 17, 2009 and September 29, 2010. Altogether, 406 of the 999 potentially eligible veterans consented (41%). The retention rate for data collection was 95%, yielding 384 veterans, of whom 384 completed the evaluation of the examiners. The 384 veterans were examined by 33 examiners at six geographically scattered sites. The average number of veterans examined per examiner was 12 (range 1–42).

### Veteran Characteristics

Most veterans in the study were male ( $n=366$ , 95%) and were married ( $n=239$ , 62%). Forty percent ( $n=154$ ) had had some education after high school. With regard to race, 60% ( $n=228$ ) were Caucasian, 26% percent ( $n=100$ ) were African-American, and 14% ( $n=54$ ) indicated "other" race. Of those indicating "other" race, 60% ( $31/52$ ) were Hispanic. Study veterans had served mainly in the Army (67%), in combat (91%), and in Vietnam (56%) or in the Iraq and/or Afghanistan (36%) conflicts. Veteran age reflected the war era of the veterans, with twelve percent ( $n=45$ ) aged 27 or younger and sixty-four percent ( $n=246$ ) aged 51 or older.

In the Compensation examination reports, 65% ( $250/384$ ) were diagnosed with PTSD, and 49% ( $188/382$ ) were found to have a substance use disorder. Average GAF score was 55.0  $\pm$  10.5, reflecting moderate disability.

### Examiner Characteristics

One examiner was Hispanic and the rest were non-Hispanic Caucasians. Clinical examiners were 61% female, 97% psychologists, with an average of 5.5 years of PTSD diagnostic experience. They had received an average of 5.2 of the seven PTSD/Compensation-related trainings inquired about. On average, these examiners estimated that about 10.6% ( $\pm$  9.3% of veterans exaggerate symptoms and 13.6%  $\pm$  15.9% of veterans minimize them. Examiners reported having spent an average of 184.6 minutes  $\pm$  81.7 on the examination itself.

### Unadjusted Relationship Between Outcome Measures

Forty-one percent ( $156/377$ ) of the veterans rated their overall examination quality as "excellent," 38% ( $n=142$ ) rated it as "very good" and 21% ( $n=77$ ) as "fair" or "good." On a five-point scale, the mean rating of examiner competence was 4.72  $\pm$  .46 and that of examiner interpersonal qualities was 4.71  $\pm$  .43. Ratings of examiners' competence and interpersonal qualities were correlated with Pearson's  $r = .72$  ( $p < .001$ ). The correlations between the rating of overall quality and the competence and interpersonal qualities scales were .62 ( $p < .001$ ) and .54 ( $p < .001$ ), respectively.

### Factors Associated with Overall Quality

Overall examination quality ratings were high with 79% (294/372) of veterans rating their examinations as "excellent" or "very good". As indicated in Table 1, while many predictor variables yielded relatively large coefficient estimates, the only factor significantly associated with overall rating of quality was race. Specifically, the estimated odds ratio for African American veterans versus Caucasian veterans for higher quality rating was .61 ( $p = .047$ , 95% CI = .40 – .99). Thus, the odds for a rating in a higher quality category among African American veterans was estimated to be 39% less than that for Caucasian veterans. Although the confidence interval is relatively wide, this result is consistent with the unadjusted raw data shown in Table 2: a lower proportion of African Americans (34%) indicated that their examination had been excellent than Caucasians did (47%).

Because this difference appeared concentrated at the highest end of the rating scale, an alternative analysis was conducted in which the overall rating of quality was treated as dichotomous (excellent vs. not excellent). In this multivariable logistic regression, the effect size for African-American veterans' versus Caucasian veterans' ratings were heightened even more (odds ratio = .54 ( $p = .016$ , 95% CI = .33 – .89). Thus, as indicated by both the unadjusted and adjusted analysis, African-Americans were, compared with Caucasians, less satisfied with the quality of their exam.

### Factors Associated with Competence/ Interpersonal Qualities

Table 3 presents the results of the linear regression model on examiner competence on the pre-specified list of covariates. None of the coefficient estimates approached statistical significance, nor were the effects very large in magnitude.

Table 4 presents the results of the linear regression model on interpersonal quality. Compared with Caucasian veterans, African American veterans rated their examiners' interpersonal qualities lower ( $p = .01$ , 95% CI = -.18 – -.02). The coefficient for the race category "Other" was similar to that of African-American (indicating lower interpersonal quality ratings compared with Caucasians), albeit not estimated with the same amount of certainty and not reaching statistical significance.

### Follow-Up Analyses

Several follow-up analyses were conducted to further elucidate the relationship between race and Compensation examinations. Because a structured examination might be more consistently delivered and less prone to differentially upset African American veterans, we reviewed the rates of low examination quality ratings within the structured and unstructured examination groups. African Americans rates of excellent quality ratings were 32% in the structured examination group and 36% in the unstructured group ( $p = .91$ ), and the interaction of group (semi-structured exam or not) and race was not significant when added to the model. Thus, there was no evidence that the race effect was ameliorated by use of the semi-structured examination.

## DISCUSSION

Overall ratings of C&P examination quality were predominantly "excellent" or "very good" by both African American and Caucasian veterans. However, African American veterans rated their examinations as having been of lower quality and rated their examiners lower on interpersonal qualities than Caucasian veterans did. This finding persisted even after controlling for other potential predictors of dissatisfaction. It is remarkable that despite the limited range of satisfaction in this study, only veterans' race and race alone predicted lower

ratings by veterans. There was no support in the data that other measured covariates accounted for veteran satisfaction.

African American veterans' lower quality ratings may relate to characteristics of the veterans or of their examiners. When compared with patients of other races, African Americans have been shown to provide less information and to be less assertive with medical providers (21, 22); lack of assertiveness may be related to less trust in medical providers (21–24). It is also possible that African American veterans are treated differently than other veterans in the disability examination, because they tend to have received less previous PTSD treatment (25). Consequently, they may be less experienced and less comfortable discussing their PTSD symptoms with a medical professional than Caucasian veterans. Alternatively, it is possible that examiners are less empathic with African American veterans than with Caucasian veterans, a phenomenon described in medical settings (26). Reliance on pre-existing stereotypes by examiners may also be exacerbated in stressful situations (27, 28), such as a Compensation examination. Only Caucasian examiners evaluated African American veterans in this study, and such racial discordance has been associated with worse outcomes in clinical settings (30, 31).

A better qualitative understanding of the mechanisms behind the disproportionately lower ratings by African American veterans would have clinical implications. If the differences are attributable to African American veterans' reticence, for example, teaching veterans the advantages of volunteering information before their examination might reduce future racial differences (29). On the other hand, differences arising from examiner-based characteristics would suggest the need for examiner-based solutions such as further examiner training and monitoring. While standardizing the Compensation examination with use of semi-structured interviews did not reduce the racial difference in satisfaction in the present study, perhaps more targeted examiner training (e.g., on cultural awareness) would.

It is important to note that the veteran's perspective is only one component of high quality examinations. Other important stakeholders whose judgment of quality may differ from veterans' are the Veterans Health Administration that conducts the examinations, the Veterans Benefits Administration which must decide service-connection based on the examination reports, and government and taxpayers who fund the awarded benefits (14).

The strength and generalizability of the study findings are open to more than one interpretation. The findings of racial differences did not reflect substantial dissatisfaction with the examinations---they reflected African Americans' assigning relatively more ratings that were not excellent but were still mostly quite satisfactory (i.e. very good ratings) compared with Caucasian veterans. Two main interpretations of this are possible: one is that the range and extent of racial differences would be even greater in a non-research setting, but it is also possible that the racial difference in Compensation ratings is in fact a modest effect. A concern for generalizability is that the study data do not include descriptions of the standard examinations conducted. The range of examiner styles and methods employed do not allow for conclusions about what components of examinations might account for racial differences.

Overall, the findings suggest veterans' race is important to how they perceive their examinations' quality. In future studies of digitally-recorded examinations, we hope to elucidate the provider-veteran interactions that might be changed to improve veterans' satisfaction with their examinations.

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Table 1

Predictor	Odds-ratio	95% Confidence Interval
<b>Veteran Factors</b>		
Age <sup>a</sup>	1.37	.92 – 2.0)
Female	1.25	.49 – 3.21
Married or Living with Partner	1.24	.70 – 2.21
<b>African American Race</b>		
Neither African American nor Caucasian Race	.76	.35 – 1.70
Some Post-High School Education	1.04	.66 – 1.62
PTSD Diagnosed by Examiner	1.72	.61 – 4.89
Substance Abuse Diagnosed by Examiner	1.51	.95 – 2.41
Global Assessment of Functioning Score <sup>b</sup>	1.07	.86 – 1.34
<b>Examiner Factors</b>		
Estimated Prevalence of Malingering <sup>c</sup>	1.13	.40 – 3.17
Estimated Prevalence of Minimizing <sup>d</sup>	1.21	.76 – 1.93
Number of Compensation Exam Trainings <sup>e</sup> Participated In (out of 7 possible)	1.41	.62 – 3.19
Female	1.29	.24 – 6.83
Examiner is a veteran	1.70	.25 – 11.39
Years Conducting Compensation Exams <sup>f</sup>	1.104	.40 – 3.06
Minutes Spent Preparing for Compensation <sup>g</sup> Exam	1.20	.87 – 1.66
<b>Examination Factors</b>		
Semi-structured Examination Group	.81	.16 – 4.26
Face-to-face Exam (minutes) <sup>h</sup>	.57	.24 – 1.39
Presence of Third Party at Exam	.85	.44 – 1.65

<sup>a</sup>High/Low Reference for Odds Ratio is 63/40 representing third and first quartiles

<sup>b</sup>High/Low Reference for Odds Ratio is 60/49 representing third and first quartiles

<sup>c</sup>High/Low Reference for Odds Ratio is 20/5 representing third and first quartiles

<sup>d</sup>High/Low Reference for Odds Ratio is 15/5 representing third and first quartiles

<sup>e</sup>High/Low Reference for Odds Ratio is 6/4 representing third and first quartiles

<sup>f</sup>High/Low Reference for Odds Ratio is 13/2 representing third and first quartiles

<sup>g</sup>High/Low Reference for Odds Ratio is 30/15 representing third and first quartiles

<sup>h</sup>High/Low Reference for Odds Ratio is 240/125 representing third and first quartiles

**Table 2**

Ratings of Overall Exam Quality by Veteran's Race

Rating of Exam Quality	African American			Non-Hispanic Caucasian			Other Race		
	N of race	n with rating	%	N of race	n with rating	%	N of race	n with rating	%
Fair/Good	97	24	25%	225	44	20%	50	10	20%
Very Good	97	40	41%	225	75	33%	50	24	48%
Excellent	97	33	34%	225	106	47%	50	16	32%

**Table 3**

## Factors Associated with Examiner Competence

Predictor	Estimate	Standard Error	p-value
<b>Veteran Factors</b>			
Age	.001	.002	.54
Gender	-.034	.149	.820
Married or Living with Partner	.006	.054	.90
African American Race	-.046	.043	.28
Neither African American nor Caucasian Race	-.019	.093	.84
Some Post-High School Education	-.021	.047	.65
PTSD Diagnosed by Examiner	.032	.098	.74
Substance Abuse Diagnosed by Examiner	.004	.058	.94
Global Assessment of Functioning Score	-.001	.003	.78
<b>Examiner Factors</b>			
Estimated Prevalence of Malingering	.000	.005	.92
Estimated Prevalence of Minimizing	.000	.004	.98
Number of Compensation Exam Trainings Participated In (out of 7 possible)	-.013	.037	.73
Gender	-.168	.139	.23
Examiner is a veteran	-.091	.181	.62
Years Conducting Compensation Exams	-.008	.007	.22
Minutes Spent Preparing for Compensation Exam	.000	.002	.932
<b>Examination Factors</b>			
Semi-structured Examination Group	-.102	.151	.50
Interaction of Semi-Structured Group * Diagnosis of PTSD	-.005	.121	.97
Face-to-face Exam (minutes)	-.001	.027	.98
Presence of Third Party at Exam	-.004	.073	.96

coefficients, standards errors, and p-values for regression model of competence; standard errors calculated via bootstrap procedure; fixed effects include medical center.

**Table 4**

Factors associated with Interpersonal Qualities

Predictor	Estimate	Standard Error	p-value
<b>Veteran Factors</b>			
Age	.002	.002	.36
Gender	-.21	.13	.11
Married or Living with Partner	.026	.052	.62
<b>African American Race</b>			
Neither African American nor Caucasian Race	-.11	.11	.29
Some Post-High School Education	.057	.049	.25
PTSD Diagnosed by Examiner	.088	.094	.35
Substance Abuse Diagnosed by Examiner	.053	.034	.12
Global Assessment of Functioning Score	.00	.003	.93
<b>Examiner Factors</b>			
Estimated Prevalence of Malingering	-.001	.005	.80
Estimated Prevalence of Minimizing	.002	.005	.73
Number of Compensation Exam Trainings Participated In (out of 7 possible)	.005	.049	.91
Gender	-.15	.17	.36
Examiner is a veteran	-.051	.20	.80
Years Conducting Compensation Exams	-.005	.01	.63
Minutes Spent Preparing for Compensation Exam	.001	.002	.72
<b>Examination Factors</b>			
Semi-structured Examination Group	-.055	.20	.78
Interaction of Semi-Structured Group * Diagnosis of PTSD	-.032	.11	.76
Face-to-face Exam (minutes)	-.001	.019	.95
Presence of Third Party at Exam	.051	.10	.62

coefficients, standards errors, and p-values for regression model of competence; standard errors calculated via bootstrap procedure; fixed effects include medical center.

# The Influence of Veteran Race and Psychometric Testing on Veterans Affairs Posttraumatic Stress Disorder (PTSD) Disability Exam Outcomes

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This study examined the influence of veterans' race and examiners' use of psychometric testing during a Department of Veterans Affairs posttraumatic stress disorder (PTSD) disability examination on diagnostic and service connection status outcomes. Participants were 764 veterans enrolled in a national longitudinal registry. Current and lifetime PTSD diagnostic status was determined with the Structured Clinical Interview for *DSM-IV* (SCID) and was compared with PTSD diagnosis conferred upon veterans by their compensation and pension (C&P) examiners as well as with ultimate Veterans Affairs (VA) PTSD service connected status. The concordance rate between independent SCID current PTSD diagnosis and PTSD disability examination diagnosis was 70.4%, and between SCID lifetime PTSD diagnosis and PTSD disability examination diagnosis was 77.7%. Among veterans with current SCID diagnosed PTSD, Black veterans were significantly less likely than White veterans to receive a PTSD diagnosis from their C&P examiner (odds ratio [OR] = .39,  $p = .003$ , confidence interval [CI] = .20–.73). Among veterans without current SCID diagnosed PTSD, White veterans were significantly more likely than Black veterans to receive a PTSD diagnosis from their C&P examiner ( $OR = 4.07$ ,  $p = .005$ ,  $CI = 1.51–10.92$ ). Splitting the sample by use of psychometric testing revealed that examinations that did not include psychometric testing demonstrated the same relation between veteran race and diagnostic concordance. However, for examinations in which psychometric testing was used, the racial disparity between SCID PTSD status and disability exam PTSD status was no longer significant. Results suggest that psychometric testing may reduce disparities in VA PTSD disability exam outcomes.

*Keywords:* veterans, PTSD, disability, disparities, service connection

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Over the past 15 years, the number of veterans who have applied for and received posttraumatic stress disorder (PTSD) related disability compensation from the U.S. Department of Veterans Affairs (VA) has risen dramatically. For example, between 2008 and 2013, the number of veterans receiving disability compensation for PTSD rose from 467,274 to 648,992 (U.S. Department of Veterans Affairs, 2013), a 72% increase. VA disability compensation is a tax-free monetary benefit paid to veterans for service connected (SC) disabilities (i.e., those which arose during, or were worsened by, military service). To receive benefits (e.g., free health care, financial compensation) for disability related to service conditions, veterans must submit a claim to the Veterans Benefits Administration (VBA), which then gathers evidence to determine whether the condition in question is present, associated with a disability, and started or got worse as a result of military service. One major component reviewed by the VBA to make these determinations is the compensation and pension (C&P) examination. For PTSD claims, this involves an in-person clinical interview conducted by a licensed psychologist or psychiatrist. Examiners are asked to determine whether the claimant's symptoms meet the diagnostic criteria for PTSD as defined by the *Diagnostic and Statistical Manual for Mental Disorders (DSM; American Psychiatric Association, 2000)* and must document related changes in quality of life and psychosocial functioning (VBA, 2014). However, there is no standard methodology required to conduct the examination. Following the C&P examination, a VBA adjudication board reviews all evidence (e.g., service records, Social Security disability records, C&P examination results) and either approves or denies the provision of financial and other benefits.

As the number of PTSD disability claims began to increase, the VA Office of the Inspector General (OIG; 2005) conducted an internal investigation to determine the causes of both this unprecedented increase in claims and the notable disparities in disability payments made to veterans living in different states. A key finding of this investigation was that the accuracy of the disability rating and amount of compensation benefits paid for military SC disabilities is highly dependent upon the methodology used in disability evaluations. The report also noted that, because of the reliance upon an individual's self-report during the examination, determinations about the diagnostic status of mental health conditions (e.g., PTSD) are open to examiner interpretation. This is especially concerning because many VA PTSD disability examiners do not use evidence-based assessment methods during their examinations, even though these methods result in more complete and accurate coverage of PTSD symptoms and associated functional impairment during PTSD disability examinations (Jackson et al., 2011; Speroff et al., 2012). Concerns voiced about the accuracy and quality of the PTSD disability examination were further substantiated by a recent study by Marx and colleagues (2016) showing that the association between a PTSD diagnosis as determined by an independent evaluator using evidence-based methods and PTSD SC status is often discordant. Specifically, Marx et al. found that a significant minority of veterans who are currently receiving VA benefits for SC PTSD do not actually meet criteria for the disorder. Similarly, the authors' results indicated that a substantial number of veterans with military service-related PTSD who are sufficiently disabled by the disorder were denied these same benefits. However, Marx et al. (2016) did not examine the concordance

between PTSD diagnosis determined by an independent assessor and the diagnosis made by the PTSD C&P examiner.

The VA OIG investigation also suggested that a number of other factors outside of the diagnostic criteria (e.g., veterans' age, branch of service) might impact VA disability rating outcomes. Notably, the influence of veteran racial status on these ratings was not examined. This exclusion is noteworthy, as research both prior to and since the VA OIG investigation has shown that Black veterans receive different VA care than White veterans for a wide range of conditions (Saha et al., 2008); receive less intensive treatment for PTSD specifically (Rosenheck, Fontana, & Cottrol, 1995); are less likely to receive a minimal trial of treatment in the 6 months following PTSD diagnosis (Spoont et al., 2015); are less satisfied with the quality of their PTSD disability examinations (Rosen et al., 2013); and are less likely to be service connected for PTSD, even after controlling for PTSD symptom severity and level of functional impairment (Murdoch, Hodges, Cowper, Fortier, & van Ryn, 2003). These findings suggest that veteran racial status may also influence the outcomes of VA PTSD disability examinations as well as the potential eligibility for disability compensation and other VA benefits. However, researchers have not yet examined whether veterans' race moderates the concordance between the C&P examiner's diagnosis and an independent assessor's diagnosis of PTSD, particularly in the absence of psychometric testing during the disability exam.

This study extends the previous work on this topic by examining the extent to which diagnoses rendered by PTSD C&P examiners were concordant with diagnoses determined by assessors who conducted an independent, semistructured diagnostic examination subsequent to the PTSD disability examination. In addition, we examined if veterans' race contributed to discordance between these diagnostic outcomes, and whether the use of psychometric testing by the C&P examiner moderated any association between veteran race and the degree of concordance between PTSD diagnoses rendered by C&P examiners and PTSD diagnoses rendered by independent evaluators. We hypothesized that (a) among veterans diagnosed with PTSD by an independent evaluator, Black veterans would be more likely than White veterans to be denied a PTSD diagnosis by their C&P examiner; (b) among veterans who did not meet criteria for PTSD based on an independent evaluation, White veterans would be more likely than Black veterans to be granted a PTSD diagnosis by their C&P examiner; (c) the use of psychometric testing during disability exams would moderate the association between race and concordance, such that the use of psychometric testing would reduce the racial disparity between the independent PTSD diagnosis and the C&P examiner diagnosis; (d) the C&P examiner diagnosis would be associated with SC status; and (e) race would also affect concordance between PTSD diagnosis determined by an independent evaluator and SC status.

## Method

### Participants

Participants were a subsample of U.S. Army or Marine veterans enrolled between 2009 and 2012 in the baseline assessment of the Veterans After-Discharge Longitudinal Registry (Project VALOR), a registry of VA mental health care users with and without PTSD who deployed in support of Operation Enduring

Freedom, Operation Iraqi Freedom, or Operation New Dawn (OEF/OIF/OND). To be included in the cohort, veterans must have undergone a mental health evaluation at a VA facility. Veterans with probable PTSD according to VA medical records (i.e., at least two instances of a PTSD diagnosis by a mental health professional associated with two separate visits) were oversampled at a 3:1 ratio. Female veterans were oversampled at a rate of 1:1 (female:male). Potential Project VALOR participants ( $n = 4,331$ ) were contacted by phone; of these, 2,712 (62.6%) consented to participate in the Project VALOR registry. Of consented participants, 2,169 (80.0%) completed the questionnaires and 1,649 (60.8%) completed both the questionnaires and the diagnostic interview, which comprised the final Project VALOR sample.

In this study, we included participants from Project VALOR who reported a military-related trauma as their index event for the Structured Clinical Interview for *DSM-IV* (SCID), were assessed for current and lifetime PTSD diagnostic status, had documentation of a PTSD disability exam in their electronic medical records (EMRs), and reported being either Black or White. Participants reporting a different racial status were excluded from our analyses because of small cell sizes, which would have limited statistical power. Seven hundred ninety-seven participants were excluded because they did not have a documented PTSD disability exam, 15 participants were excluded because they were not assessed for current PTSD, and 73 participants were excluded because they reported being a race other than Black or White. Our final sample ( $n = 764$ ) ranged in age from 22 to 67 years ( $M = 38.2$ ;  $SD = 9.9$ ) and the majority of the sample (83.9%) had completed at least some college. Fifty-five percent ( $n = 422$ ) of participants were men. Eighty-four percent ( $n = 645$ ) were White veterans, whereas the remaining 16% ( $n = 119$ ) were Black veterans. Ninety-two percent ( $n = 703$ ) served in the Army and 8% ( $n = 61$ ) served in the Marines. Respondents who did not meet the inclusion criteria were younger ( $M = 36.6$ ,  $SD = 9.5$  for the excluded participants),  $t(1644) = 3.34$ ,  $p < .001$ , and less likely to be male (45.4% of the excluded participants;  $\chi^2 = 15.79$ ,  $p < .001$ ).

## Procedure

Participants provided informed consent verbally over the telephone in accordance with the research protocol approved by all local Institutional Review Boards and the Human Research Protection Office of the U.S. Army Medical Research and Materiel Command. After receiving verbal consent, study staff scheduled the telephone interview and reminded the participant to complete the self-administered questionnaires online. Participants were compensated \$50 for their participation in the study.

## Measures

**Independent evaluation of PTSD diagnostic status.** Trained, doctoral-level diagnosticians assessed current (past month) and lifetime PTSD via telephone using the PTSD Module of the Structured Clinical Interview for *DSM-IV* (SCID; First, Spitzer, Gibbon, & Williams, 2002). The SCID is a semistructured interview that assesses diagnoses associated with *DSM-IV*. Data collected with the PTSD SCID module has demonstrated good psychometric properties in veteran samples (Kulka et al., 1988).

Interviewers were blind to PTSD disability exam outcomes, PTSD SC status, and participant race. Throughout the study, we

held regular meetings with assessment personnel during which cases were discussed to ensure diagnostic reliability and to prevent rater drift. Interrater reliability for SCID interview data, computed based on a randomly selected subsample ( $n = 54$ ), was excellent ( $\kappa = .91$ ). SCID PTSD diagnostic status was the independent standard to which both C&P examiner PTSD diagnosis and PTSD SC status were compared.

**PTSD disability exams and SC status.** Trained research assistants collected C&P examiner-determined diagnoses and information on the use of psychometric testing by accessing the C&P section, the progress notes section, and the health summaries section of participants' EMRs. When multiple PTSD C&P exams were found in the EMR, we compared the C&P exams that were most proximal to our PTSD assessment, regardless of whether or not they were initial or review C&P exams, to minimize the possibility that any discrepancies would be due to change in diagnostic status over time. The mean time between disability exams and the Project VALOR assessment was 22.11 months ( $SD = 18.35$ ). Research assistants also collected PTSD SC status information by accessing the disabilities section of participants' EMRs. These data were abstracted concurrently with the collection of Project VALOR self-report questionnaire and interview data.

**Demographics.** Participants completed a self-report questionnaire that gathered information about participant age, race, gender, education, and income.

**Deployment Risk and Resilience Inventory.** The Deployment Risk and Resilience Inventory (DRRI; King, King, Vogt, Knight, & Samper, 2006) is a collection of scales that assess combat-related factors associated with mental health conditions noted in veteran populations. DRRI scores have shown good internal consistency and satisfactory reliability among samples of Gulf War and Operation Iraqi Freedom veterans (Vogt, Proctor, King, King, & Vasterling, 2008). To assess combat exposure, the Combat Experiences subscale of the DRRI was included in the self-administered questionnaire.

## Data Analysis Plan

We conducted three sets of analyses to examine the association between C&P examiner PTSD diagnosis and SCID PTSD diagnosis. First, we calculated  $2 \times 2$  contingency tables to examine both the overall concordance between C&P examiner PTSD diagnosis and SCID PTSD diagnosis and the directionality of concordance/discordance. Participants were classified into four possible outcomes in these concordance analyses as (a) true positives (C&P examiner PTSD diagnosis is Yes and SCID PTSD diagnosis is Yes), (b) false negatives (C&P examiner PTSD diagnosis is No and SCID PTSD diagnosis is Yes), (c) false positives (C&P examiner PTSD diagnosis is Yes and SCID PTSD diagnosis is No), and (d) true negatives (C&P examiner PTSD diagnosis is No and SCID PTSD diagnosis is No). Overall concordance was calculated by summing the true positives and true negatives and discordance was calculated by summing the false positives and false negatives. In these initial analyses, we examined both current and lifetime diagnostic SCID PTSD status compared with C&P examiner PTSD status. Given that current PTSD symptoms, distress, and functional impairment are the typical focus of VA PTSD disability examinations and PTSD service connection decisions, we focused our primary analyses on comparing disability exami-



nation and service connection outcomes with current SCID PTSD diagnostic status. However, in an attempt to account for any discrepancies in diagnostic outcomes that might be unrelated to any of our variables of interest, we reran all analyses using lifetime SCID PTSD diagnostic status, instead of current SCID PTSD diagnostic status.

Next, we examined the effect of race on three different aspects of concordance/discordance. First, we examined whether Black veterans demonstrated significantly different patterns of overall concordance/discordance than White veterans. This was conducted as an omnibus test to see if differences appeared prior to examining the components of concordance. Second, we examined if race affected whether veterans who met criteria for a SCID PTSD diagnosis were classified as having PTSD by their C&P examiner (i.e., true positive) or not (i.e., false negative). If race does not affect concordance, we would expect rates at which veterans with a SCID PTSD diagnosis to be classified as true positives versus false negatives to be equivalent for White and Black veterans. Third, we examined if race affected whether veterans who did not meet criteria for a SCID PTSD diagnosis were classified as having PTSD by their C&P examiner (i.e., false positive) or not (i.e., true negative). If race does not affect concordance, we would expect rates at which veterans without a SCID PTSD diagnosis to be classified as true negatives versus false positives to be equivalent for White and Black veterans. For each of these questions, we conducted logistic regressions to see if race affected these different aspects of concordance after controlling for demographic variables that could potentially influence PTSD status (i.e., age, gender, education and income), as well as combat exposure, as assessed by the DRRI, and the amount of time between the Project VALOR assessment and the PTSD disability exam.

Finally, we examined whether the use of psychometric testing during a PTSD disability exam affected concordance between the C&P exam and the SCID. To do so, we first split the sample by whether psychometric testing was used during the disability exam. For each group, we then reran the logistic regressions examining the effect of race on overall concordance, categorization of SCID PTSD positive participants into true positive versus false negative, and categorization of SCID PTSD negative participants into true negative versus false positive. If psychometric testing had no effect, we would expect the outcomes of two sets of analyses to match each other as well as those for the full sample.

Because the PTSD disability examination is only one (albeit important) aspect of determining SC status, we were also interested in how the C&P examiner diagnosis related to SC status among participants in our sample. Therefore, we conducted a Pearson correlation to determine the association between C&P examiner PTSD diagnosis and SC status. Further, we were interested in examining whether our findings regarding race for C&P examiner PTSD also held for SC status. Therefore, we classified participants into true positives, true negatives, false positives, and false negatives based on SCID PTSD status and SC status (rather than C&P examiner PTSD diagnosis), and reran the three logistic regressions described previously.

**Results**

**Diagnostic Concordance Between C&P Examiner PTSD Diagnosis and SCID PTSD Diagnosis**

Concordance between both current and lifetime SCID PTSD diagnosis and C&P examiner PTSD diagnosis is reported in Table 1. The overall concordance rate was 70.4% for current PTSD and 77.7% for lifetime PTSD. Individuals who received a PTSD diagnosis from their C&P examiners were more than three times as likely as those who did not to also receive a current SCID PTSD diagnosis (odds ratio [OR] = 3.39, 95% confidence interval [CI] = 2.25–5.15,  $p < .001$ ). The most frequent outcome using current SCID PTSD was true positive (62.9%) and the least frequent outcome was true negative (7.4%). There were slightly more false positives than false negatives (16.4% vs. 13.1%).

**Race and Diagnostic Concordance**

The average number of PTSD symptoms reported during the current SCID interview did not significantly differ between White ( $M = 11.45$ ,  $SD = 3.59$ ) and Black veterans ( $M = 11.76$ ,  $SD = 3.43$ );  $t(747) = -.87$ ,  $p = .39$ . Logistic analyses revealed that race did not significantly affect the overall concordance between current SCID PTSD diagnosis and C&P examiner PTSD diagnosis (74.8% concordance for White veterans vs. 74.4% concordance for Black veterans;  $OR = .97$ ,  $p = .90$ ;  $CI = .60-1.57$ ; see Table 2). However, race did significantly affect several important aspects of concordance. Specifically, compared with Black veterans who did not receive a current PTSD diagnosis on the SCID, the odds were four times as great that White veterans who did not receive a current PTSD diagnosis on the SCID would receive a PTSD diagnosis from their C&P examiner (i.e., White veterans were more likely to be false positives than Black veterans; 26.5% vs. 54.5%, respectively;  $OR = 4.07$ ,  $p < .001$ ;  $CI = 1.51-10.92$ ; see Table 2).

Among veterans who received a current SCID PTSD diagnosis, Black veterans were again less likely to receive a PTSD diagnosis from the C&P examiner than White veterans (78.9% vs. 90.8%, respectively). Specifically, Black veterans who received a current

Table 1  
*Contingency Tables for C&P Examiner PTSD Diagnosis and SCID PTSD Diagnosis*

Diagnosis	C&P PTSD diagnosis	
	No	Yes
Current SCID PTSD diagnosis		
No	57 (7.4%) <sup>a</sup>	100 (13.1%) <sup>b</sup>
Yes	126 (16.4%) <sup>c</sup>	481(62.9%) <sup>d</sup>
Lifetime SCID PTSD diagnosis		
No	31 (4.1%) <sup>a</sup>	125 (16.4%) <sup>b</sup>
Yes	45 (5.9%) <sup>c</sup>	560 (73.5%) <sup>d</sup>

*Note.* C&P = compensation and pension; SCID = Structured Clinical Interview for DSM-IV; PTSD = posttraumatic stress disorder; <sup>a</sup> TN = true negatives; <sup>b</sup> FP = false positives; <sup>c</sup> FN = false negatives; <sup>d</sup> TP = true positives. Overall concordance for C&P Diagnosis and Current SCID Diagnosis (TP + TN) = 70.4% ( $n = 538$ ). Overall concordance for C&P Diagnosis and Lifetime SCID Diagnosis (TP + TN) = 77.7% ( $n = 591$ ).

Table 2

*Race as a Predictor of Concordance Between Current SCID PTSD Status and C&P PTSD Status*

Variable	Concordance vs. discordance		False positive vs. true negative		False negative vs. true positive	
	OR	CI	OR	CI	OR	CI
White vs. Black	.97	.60–1.57	4.07**	1.51–10.92	.39**	.20–.73
Combat exposure	.97**	.96–.99	.98	.94–1.01	1.04**	1.02–1.07
Education	1.02	.90–1.16	1.05	.82–1.36	1.01	.83–1.23
Gender	1.30	.89–1.92	1.47	.67–3.25	.65	.35–1.22
Income	.94	.83–1.06	.98	.76–1.27	1.06	.88–1.29
Age	.99	.97–1.01	1.01	.97–1.04	1.01	.98–1.04
Months between Project VALOR assessment and C&P examination	1.01	1.00–1.02	1.02*	1.00–1.04	.99	.98–1.01

Note. C&P = compensation and pension; OR = odds ratio; CI = confidence interval; VALOR = Veterans After-Discharge Longitudinal Registry. \*  $p < .05$ . \*\*  $p < .01$ .

SCID PTSD diagnosis had less than half the odds of White veterans of receiving a PTSD diagnosis from their C&P examiners (i.e., Black veterans were more likely to be false negatives than White veterans;  $OR = .39$ ,  $p < .001$ ,  $CI = .20-.73$ , see Table 2).

When we reran these analyses using lifetime SCID PTSD diagnostic status, overall concordance was significantly different as a product of race, such that White veterans had higher rates of concordance than Black veterans (84.1% vs. 74.4%;  $OR = 1.70$ ,  $p = .04$ ,  $CI = 1.03-2.81$ ). This effect was due likely to the fact that although White veterans were still more likely to be false positives than Black veterans, this effect was no longer significant (61.5% vs. 40.0%;  $OR = 3.32$ ,  $p = .14$ ,  $CI = .68-16.26$ ). Consistent with our findings for current SCID PTSD, when examining lifetime SCID PTSD, Black veterans were again significantly more likely to be false negatives than White veterans (24.3% vs. 10.6%;  $OR = .37$ ,  $p < .001$ ,  $CI = .21-.65$ ).

### Psychometric Testing, Race, and Diagnostic Concordance

Most disability exams (75.8% of exams overall; 80.3% of exams for Black veterans; 75.0% of exams for White veterans) did not include any psychometric testing. Of those that did, the most commonly used instruments, in order, were the PTSD Checklist (Weathers, Litz, Herman, Huska, & Keane, 1993; 15.4%), the

Minnesota Multiphasic Personality Inventory (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989; 11.8%), the Mississippi Scale for Combat-Related PTSD (Keane, Caddell, & Taylor, 1988; 10.6%), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; 9.4%), and the Clinician-Administered PTSD Scale (Blake et al., 1995; 7.1%).

To examine whether the use of testing during PTSD disability exams moderated the association between race and diagnostic concordance, the sample was split based on whether psychometric testing was used during the disability exam conducted most proximally to the Project VALOR SCID interview. In the subgroup of veterans that was administered a psychometric test during their disability exam, race did not significantly affect the overall concordance between current SCID PTSD diagnosis and C&P examiner PTSD diagnosis ( $OR = .92$ ,  $p = .88$ ;  $CI = .32-2.66$ ; see Table 3). Interestingly, in this subgroup, White veterans were no more likely than Black veterans to be false positives (63.9% vs. 75.0%, respectively;  $OR = .43$ ,  $p = .56$ ,  $CI = .03-7.28$ ), and Black veterans were no more likely than White veterans to be false negatives (15.8% vs. 15.5%;  $OR = 1.45$ ,  $p = .62$ ,  $CI = .34-6.24$ , see Table 3). In the subgroup that was not administered a psychometric test during their disability exam, overall concordance was again not significantly affected by race ( $OR = .89$ ,  $p = .69$ ;  $CI =$

Table 3

*Race as a Predictor of Concordance Between Current SCID PTSD Status and C&P PTSD Status for Cases in Which Psychometric Testing was Used*

Variable	Concordance vs. discordance		False positive vs. true negative		False negative vs. true positive	
	OR	CI	OR	CI	OR	CI
White vs. Black	.92	.32–2.66	.43	.03–7.28	1.45	.34–6.24
Combat exposure	.97	.94–1.01	.89*	.80–1.00	1.05	1.00–1.10
Education	.85	.64–1.12	1.73	.89–3.35	1.17	.77–1.78
Gender	1.38	.63–3.06	5.12	.67–39.30	.48	.15–1.60
Income	1.04	.81–1.35	.74	.43–1.27	1.28	.86–1.91
Age	1.00	.96–1.04	.97	.89–1.06	1.00	.92–1.04
Months between Project VALOR assessment and C&P examination	1.00	.98–1.02	1.02	.97–1.07	1.01	.98–1.04

Note. C&P = compensation and pension; OR = odds ratio; CI = confidence interval; VALOR = Veterans After-Discharge Longitudinal Registry. \*  $p < .05$ .

.52–1.56; see Table 4). However, unlike the subgroup that was administered a psychometric test during their disability exam, for this group, the previously described relationships remained significant. Specifically, White veterans were significantly more likely to be false positives than Black veterans (76.1% vs. 38.9%;  $OR = 7.00, p < .001, CI = 2.21–22.14$ ), and Black veterans were significantly more likely to be false negatives than White veterans (21.3% vs. 7.2%;  $OR = .29, p < .001, CI = .14-.61$ ; see Table 4).

Results of analyses with lifetime SCID PTSD diagnosis followed the same general pattern of results. For the subgroup that did not receive psychometric testing, White veterans demonstrated significantly more overall concordance than Black veterans (85.5% vs. 73.1%;  $OR = 1.80, p = .04, CI = 1.02–3.17$ ). In addition, more White veterans (64.0%) than Black veterans (37.5%) were false positives and this effect was marginally significant ( $OR = 8.35, p = .06, CI = .92–75.71$ ). Similar to both the overall lifetime SCID PTSD findings and the findings for current SCID PTSD, Black veterans were significantly more likely to be false negatives than White veterans (25.9% vs. 8.5%;  $OR = .28, p < .001, CI = .15–.53$ ). However, for the subgroup that received psychometric testing, these effects disappeared. There was no longer a significant effect of race on overall concordance (79.3% of White veterans vs. 82.6% of Black veterans;  $OR = .94, p = .93, CI = .28–3.25$ ), rate of false positives (50% of White veterans vs. 50% of Black veterans;  $OR = 3.16, p = .67, CI = .02–656.64$ ), or rate of false negatives (14.3% of White veterans vs. 17.6% of Black veterans;  $OR = 1.40, p = .64, CI = .35–5.62$ ).

**SC Status**

As expected, a Pearson correlation revealed a significant positive relationship between C&P PTSD status and the respondent’s SC status,  $r = .73, p < .001$ . Among respondents who were diagnosed with PTSD during their C&P exam, 91.9% were service connected for PTSD. Among respondents who were denied a PTSD diagnosis during the C&P exam, 86.6% were not service connected for PTSD. Further, when we examined the association between race and concordance between SCID PTSD status and SC status, the pattern of results was identical to those of race and concordance between SCID PTSD status and C&P PTSD status. Specifically, similar to the results reported earlier, there was no

significant relation between race and overall concordance ( $OR = .90, p = .65, CI = .57–1.43$ ). However, race did significantly affect several important aspects of concordance, such that White veterans who did not meet SCID PTSD criteria were less likely than Black veterans who did not meet SCID PTSD criteria to be denied PTSD service connection (26.9% vs. 60.9%, respectively;  $OR = 4.50, p < .001, CI = 1.71–11.82$ ), and Black veterans who met PTSD SCID criteria were less likely to receive PTSD service connection compared with White veterans who met PTSD SCID criteria (74.0% vs. 84.5%, respectively;  $OR = .54, p = .03, CI = .31-.94$ ; see Table 5).

Results of the analyses examining concordance between SC status and lifetime SCID PTSD diagnostic status demonstrated a pattern of results nearly identical to those for C&P examiner PTSD diagnostic status and lifetime SCID PTSD diagnostic status. Specifically, overall concordance was again significantly different by race, such that White veterans demonstrated significantly higher levels of overall concordance than Black veterans (79.3% vs. 68.9%;  $OR = 1.61, p = .04, CI = 1.01–2.57$ ). Although nonsignificant, White veterans had higher rates of false positives than Black veterans (62.1% vs. 40%;  $OR = 3.34, p = .13, CI = .69–16.13$ ). Further, Black veterans were significantly more likely to be false negatives than White veterans (30.3% vs. 16.0%;  $OR = .45, p < .001, CI = .27–.75$ ).

**Discussion**

We found that C&P PTSD diagnoses were concordant with current SCID PTSD status in 70.4% of cases and with lifetime SCID PTSD status in 77.7% of cases. These finding builds upon previous work by Marx et al. (2016), which demonstrated a similar concordance rate between SCID PTSD status and SC status using the same dataset. Although these results suggest that, in most cases, PTSD diagnoses rendered by C&P examiners are likely accurate, the number of false positives and false negatives does support prior concerns that PTSD disability exam outcomes may be incorrect for a significant minority of veterans. Our findings support concerns raised by others about the possible failings of the VA PTSD disability examination process (e.g., Frueh, Grubaugh, Elhai, & Buckley, 2007; Jackson et al., 2011; McNally & Frueh, 2013; OIG, 2005; Speroff et al., 2012; Worthen & Moering, 2011)

Table 4  
*Race as a Predictor of Concordance Between Current SCID PTSD Status and C&P PTSD Status for Cases in Which Psychometric Testing Was Not Used*

Variable	Concordance vs. discordance		False positive vs. true negative		False negative vs. true positive	
	OR	CI	OR	CI	OR	CI
White vs. Black	.89	.52–1.56	7.00**	2.21–22.14	.29**	.14–.61
Combat exposure	.98**	.96–.99	.99	.95–1.02	1.05**	1.01–1.08
Education	1.08	.94–1.25	.88	.65–1.19	.99	.78–1.25
Gender	1.17	.75–1.85	1.01	.40–2.65	.74	.34–1.61
Income	.89	.77–1.03	1.10	.80–1.51	1.04	.82–1.32
Age	.99	.97–1.02	1.01	.97–1.05	1.01	.97–1.05
Months between Project VALOR assessment and C&P examination	1.01	1.00–1.02	1.02	1.00–1.04	.99	.97–1.00

Note. C&P = compensation and pension; OR = odds ratio; CI = confidence interval; VALOR = Veterans After-Discharge Longitudinal Registry.  
\*\*  $p < .01$ .

Table 5  
Race as a Predictor of Concordance Between Current SCID PTSD Status and SC Status

Variable	Concordance vs. discordance		False positive vs. true negative		False negative vs. true positive	
	OR	CI	OR	CI	OR	CI
White vs. Black	.90	.57–1.43	4.50**	1.71–11.82	.54*	.31–.94
Combat exposure	.97**	.95–.98	.98	.95–1.01	1.05**	1.03–1.08
Education	1.10	.97–1.23	.92	.72–1.18	.91	.77–1.08
Gender	1.32	.92–1.90	1.05	.50–2.22	.72	.43–1.21
Income	.98	.88–1.10	.84	.65–1.08	1.06	.91–1.25
Age	.99	.98–1.01	1.00	.97–1.03	1.01	.99–1.04
Months between Project VALOR assessment and C&P examination	1.01	1.00–1.01	1.01	1.00–1.03	.99	.98–1.01

Note. C&P = compensation and pension; OR = odds ratio; CI = confidence interval; VALOR = Veterans After-Discharge Longitudinal Registry.  
\*\*  $p < .01$ .

and indicate that we should be concerned about both the number of veterans who may have PTSD who are not given the diagnosis by a C&P examiner (and are, therefore, also most likely denied the associated benefits including recognition that their disorder is military service related, access to free health care, and potential monetary compensation) and the number of veterans who are diagnosed with PTSD by a C&P examiner and receiving associated benefits when they may not be entitled to do so. Although questions and concerns about the latter have been discussed at great length, much less attention has been paid to the former even though research has shown that veterans receiving PTSD disability benefits report greater reductions in PTSD symptoms as well as less poverty and less homelessness than those who are denied these benefits (Murdoch et al., 2011).

Importantly, our study cannot provide a definitive explanation for discrepancies between C&P examiner PTSD diagnoses and SCID PTSD diagnoses. Possible explanations include insufficient knowledge or inadequate disability examination practices among C&P examiners, patient or institutional pressures, atypical symptom presentation, examiner biases, and inaccurate symptom reporting by veterans during either the disability exam or the SCID interview. In addition, because in many cases the SCID assessment occurred many months after the disability exam, it is entirely possible that some discrepancies may be the result of natural symptom fluctuations over time and remission or reduction of symptoms as function of treatment or other factors (though time from the disability exam to the SCID assessment was controlled for in our analyses and we also used the lifetime SCID PTSD diagnosis in subsequent analyses and those results generally supported those using the current SCID PTSD diagnosis).

Perhaps even more concerning than the discovery of these diagnostic discrepancies per se is the finding that, among veterans diagnosed with PTSD by an independent evaluator, Black veterans were significantly less likely than White veterans to receive both a C&P PTSD diagnosis and to be given PTSD service connection status. Further, among veterans not meeting diagnostic criteria for SCID PTSD, Black veterans tended to be more likely than White veterans to be denied both C&P PTSD status and PTSD service connection status. These results are consistent with our hypotheses as well as with findings from other studies that have documented racial disparities in VA care (Rosenheck et al., 1995), the amount of compensation given for service connected PTSD (Murdoch et

al., 2003), and satisfaction with VA PTSD disability exams (Rosen et al., 2013).

Although our results provide evidence of racial disparities in the PTSD disability exam and PTSD service connection rating process, the source of such disparities remains unclear. One possibility could be implicit racial biases (i.e., beliefs that occur without conscious awareness which are frequently contrary to an individual's explicit beliefs; Devine, 1989) among C&P examiners. Research has demonstrated that the existence of implicit bias from the automatic activation of race and other stereotypes can influence judgment of, and behavior toward, individuals from a stereotyped group (Devine & Plant, 2012). Medical professionals, who work under conditions of uncertainty and time pressure, may be more likely to rely on stereotypes in decision-making (Chapman, Kaatz, & Carnes, 2013); this may make them vulnerable to their implicit bias. Indeed, a number of studies have documented the presence of implicit racial biases among medical professionals, despite the absence of explicit bias (Cooper et al., 2012; Green et al., 2007; Sabin & Greenwald, 2012; Sabin, Nosek, Greenwald, & Rivara, 2009). Further, research has suggested that these implicit racial biases can result in health care disparities (Chapman et al., 2013; Cooper et al., 2012).

Implicit biases, in turn, may influence how Black patients perceive their providers and interactions with them. Specifically, research indicates that stereotype threat (i.e., a situation in which one is "at risk of confirming, as self-characteristic, a negative stereotype about one's group;" Steele & Aronson, 1995, p. 797), may occur in health care environments. As such, if Black patients perceive cues that suggest implicit biases in their providers, these cues may threaten clinical interactions and patient adherence (Aronson, Burgess, Phelan, & Juarez, 2013). For instance, Black patients tend to perceive physicians with greater implicit racial bias, even when they have positive explicit racial attitudes, as less warm and friendly (Penner et al., 2013) and have less trust and confidence in them (Blair et al., 2013; Cooper et al., 2012). Importantly, patients with these perceptions may be less likely to cooperate with their doctors (Penner et al., 2013) or follow through on their recommendations (e.g., Bogart, Wagner, Galvan, & Banks, 2010; Dovidio et al., 2008). In the context of a VA PTSD disability examination, these interpersonal dynamics are important to be mindful of, as veterans who are suspicious, uncooperative, and/or unwilling to answer certain questions about their legal

histories or other sensitive topics may be perceived by their examiners as devious or dishonest about their reported PTSD symptoms and their association with military service for secondary gain purposes.

Health care systems and institutional factors may also contribute to disparities; for instance, studies have found that Black and White patients tend to seek care in different settings (because of factors such as geography and socioeconomic status), and that Black patients are more likely to receive care in settings with fewer resources or in which providers are not as well trained (Bach, Pham, Schrag, Tate, & Hargraves, 2004). These sources are especially important to consider in light of the OIG investigation (OIG, 2005), which indicated that the state where disability exams are given influenced results. Previous research shows that the average rate of PTSD SC granted varies widely by region (Murdoch, Hodges, Cowper, & Sayer, 2005); therefore, it is also possible that the racial differences found in this study are consequences of regional differences in the C&P disability exam process. The relatively small proportion of Black participants in our sample prevented us from conducting follow-up analyses on the impact of geographic region on racial disparities found in concordance rates. Future research should study the provider, institution, and regional level characteristics that may contribute to the diagnostic accuracy of C&P examinations for PTSD.

We also found that the use of psychometric testing during a disability exam influenced the association between race and diagnostic concordance. For the disability exams in which psychometric testing was not used, discrepancies continued to emerge which favored White veterans over Black veterans. In contrast, in the disability exams in which psychometric testing was used, there was no significant relationship between race and diagnostic concordance. These findings were consistent with our hypothesis that, especially in the absence of psychometric testing, there is a discrepancy in PTSD-related outcomes between Black and White veterans in the VA disability process.

Our findings suggest that more widespread use of psychometric testing in VA PTSD disability exams may help to reduce the racial differences found in both C&P examiner and SC concordance. It may be that the use of psychometric measures of PTSD reduces the possibility that the examiner will be influenced by factors other than those pertinent to the diagnostic process (e.g., implicit racial bias). Consistent with this possibility, research has suggested that the effect of implicit bias can be reduced through individuating (i.e., applying conscious effort to focus on specific information about an individual; Chapman et al., 2013). One method for individuating is providing specific diagnostic information about an individual patient (e.g., test results); this practice has been shown to reduce implicit bias in diagnostic decisions specifically (Chapman, Tashkin, & Pye, 2001). The standardized use of empirically supported psychometric tests in VA PTSD disability exams is also consistent with prior recommendations to reduce health disparities by improving the quality of medical care (McGuire & Miranda, 2008). Unfortunately, the use of such tests in VA PTSD disability exams is the exception, not the rule. We found that only 24.2% of C&P exams used a psychometric test of some form, consistent with previous survey results in which the majority of C&P examiners reported “rarely” or “never” using testing (Jackson et al., 2011).

The findings of racial differences in concordance are particularly important to address due to the high correlation between the outcome of the disability exam and SC status. This suggests that a failure to use psychometric tests in PTSD disability exams may be directly responsible for fewer Black veterans receiving the disability benefits owed to them, and a greater number of White veterans without PTSD erroneously receiving benefits. Given that SC status has been associated with reduced rates of impoverishment (Murdoch et al., 2005) and homelessness (Edens, Kaspro, Tsai, & Rosenheck, 2011), such a pattern is highly detrimental to Black veterans and their families.

There are several limitations to this study. First, the current sample is not representative of all VA patients. Only veterans of OEF/OIF/OND were included in the present analyses, all participants had previously undergone a mental health assessment at a VA facility, and veterans with probable PTSD were oversampled at a ratio of 3:1. In addition, it is possible that the relationship between race and diagnostic concordance found here is better explained by a third variable that was not examined, such as the region in which the exam was conducted. Furthermore, because respondents were not randomly assigned to the psychometric testing group, it is possible that the psychometric testing variable is actually capturing some other feature of the exam process, such as the training of the C&P examiner, the number of evaluations a veteran has completed, or the amount of time allowed for an examination. Future research is needed to explore these possibilities.

Our results indicate that racial disparities may account for the 30% discordance observed between the VA PTSD disability exam diagnosis and an independently administered semistructured PTSD diagnostic interview. Psychometric testing during PTSD disability exams shows promise as a means of reducing these racial differences. Future research should continue to examine the impact of psychometric testing on the VA PTSD disability process. Because the C&P exam results are a key component in determining whether a veteran receives PTSD SC, findings of racial disparities in concordance involving C&P exams may also translate into racial differences in rates of PTSD SC. Such a disparity would have important financial implications for veterans seeking disability benefits through the C&P exam process. Therefore, implementation of psychometric testing and other clinical practices that can improve the validity of disability exam outcomes and eliminate racial differences in the VA disability exam process is necessary.

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