STIGMA-IN-ARMS: AN EMPIRICAL STUDY OF VETERANS' DISABILITY CLAIMS FOR THE PSYCHOLOGICAL IMPACT OF DISCRIMINATION

By

Evan R. Seamone, LL.M., J.D., M.P.P., M.S., B.A.

A doctoral thesis

Presented to the Graduate Faculty of the Doctor of Law and Policy Program

at Northeastern University

In partial fulfillment of the requirements for the degree of

Doctor of Law and Policy

Under the supervision of

Professor Carlos Cuevas, Advising Chair, Ph.D.

Professor Libby Adler, Advisor, LL.M., J.D.

Graduate School of Education

Northeastern University

Boston, Massachusetts

August 20, 2020

DEDICATION

This thesis is dedicated all who served in the military to defend their nation against a foreign enemy and found themselves fighting a second battle against the domestic enemies of prejudice, racism, homophobia, and hate. May this research contribute to the recognition of your extraordinary sacrifices and implement your heroic stories to dispel ignorance and teach future generations of the necessity for tolerance, respect, and inclusion.

ACKNOWLEDGEMENTS

Although the scope and objective of this project is quite daunting for an accelerated doctoral program, this research was possible through the tremendous generosity of a team of truly interdisciplinary scholars and experts. First, I would like to acknowledge my faculty advisors, Professor Carlos Cuevas and Professor Libby Adler for their willingness to take on supervisory responsibility and their unrelenting dedication, especially in the face of challenges posed by the COVID Pandemic. Your collective expertise in the psychology of discrimination, gender and sexuality studies, and administrative law and procedure enabled me to meaningfully engage a very difficult subject. Second, my unending appreciation goes out to the faculty of the DLP program who helped me translate a fanciful vision into a methodologically sound reality: Professor Alireza Raisi, Professor Golnoosh Hakimdavar, Professor Megan Kennedy, and Professor Almira Kolaneci.

Before I came to the DLP program, I had the great opportunity to help develop and implement an "ideas in action" brainstorming summit at Harvard Law School concerning methods to meet the unique needs of Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) veterans. I thank Vice Dean Dan Nagin, Betsy Gwin, and Dana Montalto for their enthusiasm and support in addressing these pressing issues as well as the diverse participants in the Summit. I also extend my sincere appreciation to the pioneers at the forefront of textual and computer assisted evaluation of VA decision-making, including Professor Vern Walker of Hofstra Law School's Research Laboratory for Law, Logic, and Technology, Bill Palin of Harvard Law School, and David Ames and James Ridgway of the of the law firm of Bergmann & Moore, LLC.

I also acknowledge the tremendous insights provided by current and former VA clinicians who allowed me to understand the intricacies of the VA disability system as applied to this most challenging dilemma, including Dr. Jim McGuire, Dr. Joel Rosenthal, Dr. Jeff Garbelman, and Donna Horn. My heartfelt thanks also extend to the researchers who have begun to shed light on the consequences of military discrimination under the various gay bans throughout the years, including Heliana M. Ramirez, Katharine Bloeser, and Bobbi Van Gilder. Special thanks to Dr. Nicholas A. Livingston and his colleagues for providing the example of the data dictionary for their groundbreaking research on LGBTQ veterans and traumatic military experiences.

I am forever grateful and indebted to the interdisciplinary team of statisticians, computer scientists, and coders who assisted me in obtaining 123,011 electronic Board of Veterans Appeals Cases and developing the code that enabled me to analyze this corpus by implementing theories of machine learning and statistical analysis: Siva Venkadesh, Rachel Connor, Melissa Whiley, Nathan Wailes, Raedy Ping, Max Ceilx, Keke Bravo, Jacob Webb, Adam Mlodzinski, and Drin Krasniqi.

ABSTRACT

This study uses machine learning and regression analysis to identify characteristics of Veterans Affairs (VA) appellate cases to understand the type of supporting evidence that is most helpful for proving that military discrimination based on race or sexual orientation resulted in a mental health disability. Based on the lack of guidance from the VA or prior collection of data relating to the presentation and evaluation of discrimination claims, this study identified 653 mental health appeals based on military discrimination out of a total of 123,011 mental health appeals decided by the Board of Veterans Appeals between 1993 and 2019. From the corpus of cases, slightly over one-third (231 or 36%) prevailed in establishing that a mental health disorder illness was caused by discrimination while in the military. Multilevel logistic regression revealed that the characteristics most associated with case outcomes for discrimination included whether the veteran was represented on appeal, pre-service trauma, claimed Posttraumatic Stress Disorder, and number of mental health conditions claimed. The results of this study should help veterans' advocates evaluate the potential success of discrimination claims, should assist mental health examiners in understanding factors to evaluate in disability assessments, and should contribute important data for researchers to study the psychological impact of discrimination.

Keywords

Military, Veterans, Minority, Machine Learning, Discrimination and Prejudice, Mental Illness, Disability Compensation

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ACRONYMS

Acronym	Definition
AI	Artificial Intelligence
AIC	Akaike Information Criterion
APA	American Psychiatric Association
BIC	Bayesian Information Criterion
BoW	Bag-of-Words
BVA	Board of Veterans Appeals
CAVC	Court of Appeals for Veterans Claims
CI	Confidence Interval
DADT	Don't Ask, Don't Tell, Don't Harass, Don't Pursue
DC	Disability Compensation
DEOMI	Defense Equal Opportunity Management Institute
DHHS	Department of Health and Human Services
DM	Data Mining
DoD	Department of Defense
DSM	*Diagnostic and Statistical Manual of Mental Disorders*
FOIA	Freedom of Information Act
ICC	Intraclass Correlation
JSRRC	U.S. Army & Joint Records Research Center
KKK	Ku Klux Klan
LGBT	Lesbian, Gay, Bisexual, Transgender
LR	Logistic Regression
MD	Major Depression
ML	Machine Learning
MS	Minority Stress
MST	Military Sexual Trauma
NLP	Natural Language Processing
NLTK	Natural Language Toolkit
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
PTSD	Post-traumatic Stress Disorder
RBTS	Race-Based Traumatic Stress
REGEX	Regular Expression
NB	Naïve Bayes
SE	Standard Error
SLDN	Servicemembers Legal Defense Network
SVM	Support Vector Machine
TF-IDF	Term Frequency-Inverse Document Frequency
VA	Department of Veterans Affairs
VACOLS	Veterans Appeals Control and Locator System

Chapter 1: Introduction to the Study

The number of military veterans applying for disability benefits generally remained constant for the five decades between 1950 to 2001 (Holder, 2016). However, the attacks of September 11, 2001 (9-11), which led the U.S. into a multi-front war on terror, marked a substantial increase of veterans applying for disability compensation from the Department of Veterans Affairs (VA) to the point where Vietnam veteran disability compensation "approximately tripled" between 1999 and 2010 (Autor et al., 2011, p. 339). Overall, "[t]otal VA disability benefits in constant 2014 dollars rose from 21.1 billion to 54.2 billion between 2001 and 2014 (Autor et al., 2016, p. 37). A substantial contributing factor for this explosion of claims was large groups of Vietnam Era and recent war veterans (Operation Enduring Freedom (OIF) and Operation Iraqi Freedom (OEF)) applying for mental health disability benefits related to Post-traumatic Stress Disorder (PTSD) (Holder, 2016; Autor et al., 2011). As depicted in Table 1, below, by 2013, PTSD was the third leading basis for all VA disability compensation awards (Veterans Benefits Administration, 2013, p. 84).

Table 1

*Number of Most Prevalent Service-Connected Disabilities of All Veterans: FY 2013**

Tinnitus	1,121,709
Hearing loss	854,855
Post-traumatic stress disorder	648,992
Scars, general	574,191
Limitation of flexion, knee	453,704
Lumbosacral or cervical strain	440,795
Diabetes mellitus	398,480
Paralysis of the sciatic nerve	346,572
Limitation of motion of the ankle	343,834
Degenerative arthritis of the spine	335,692
Total number of most prevalent disabilities:	**5,518,824**
Total number of disabilities	**16,105,400**

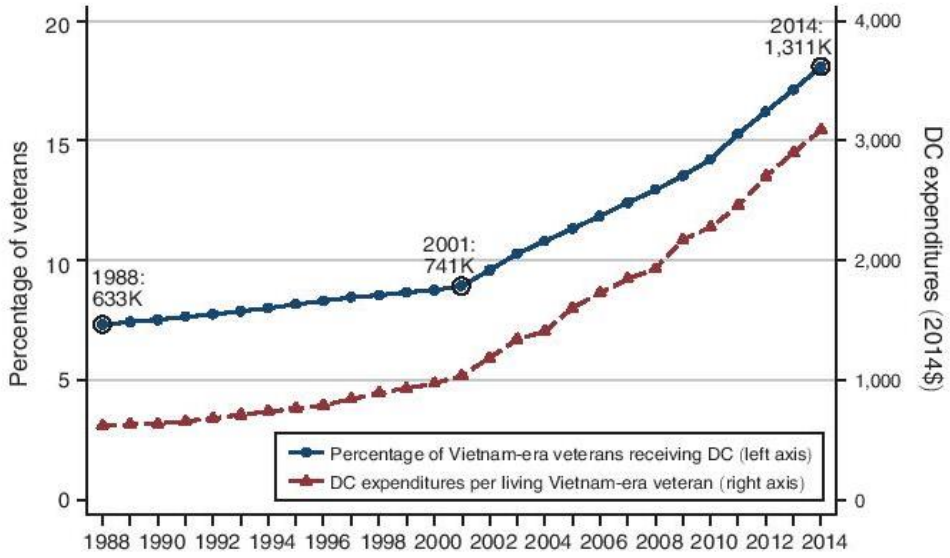
* Government work in the public domain.

Consistently since the 80s, PTSD had been the leading mental health condition for veterans receiving disability compensation (Sayer et al., 2004, p. 2133).

Figure 1 below, depicts the meteoric rise in Vietnam veterans' disability claims filed prior to and following 2001 (Autor et al., 2016, p. 33, Figure 1):

Figure 1

*Number and Percentage of Veterans Enrolled in Disability Compensation**



* Copyright American Economic Association; reproduced with permission of the American Economic Journal: Applied Economics

In the case of Vietnam veterans, some of whom neglected to request diagnosis and treatment until decades after their service, scholars have suggested that their renewed and expanded efforts to obtain compensation may be attributable to the VA's implementation of a change in eligibility criteria which created a presumption favoring veterans who served in a combat zone and claimed they sustained PTSD as a result of the fear of death or harm from terrorist or hostile military forces (Holden, 2016; Contreary et al., 2017). The law eliminated the requirement to prove the nature of the traumatizing event alleged to have occurred in the combat zone (Holden, 2016; Contreary et al., 2017). The prior obstacle was removed based on the

difficulty of obtaining tangible corroborating evidence so many years after the fact from a location where the exigencies of combat often prevented collection of probative evidence (Holden, 2016; Contreary et al., 2017).

From a policy standpoint, relaxing of the rules led to great expenditures in disability benefits as well as the recognition that additional veterans would be evaluated in order to receive the benefits of compensation for their newly diagnosed disabilities (Singleton, 2009). Economists have argued that the increase in disability claims produced a social benefit by connecting veterans to the VA for further treatment that could ostensibly add years to their lives (Singleton, 2009; Black et al., 2018). On this theory, despite tremendous expenditures, the benefits of relaxing evidentiary rules exceeded the costs. In addition, many justify increased disability awards based on the intrinsic value and "symbolic" nature of the determination in validating the veterans' sacrifices (Sayer et al., 2004, p. 2133). Akin to veterans' preferences in employment, where some studies have shown that the government sector often obtains much less qualified veteran hires, the justification is the intrinsic value of "improv[ing] self-worth and a sense of purpose" (Winters, 2018, p. 1015).

Recently, the Congressional Budget Office proposed dramatic changes in VA compensation to manage the exploding costs of disability compensation (2018). One proposal involves covering fewer types of injuries such as adding a new limitation that injuries will be compensated only when sustained during military operations and excluding disabilities that arose "at home or on leave" or disabilities that emerged "independently of a service member's military duties" (Congressional Budget Office, 2018). These recent and drastic proposals demonstrate that "VA disability compensation is a controversial benefit" (Tsai, & Rosenheck, 2016, p. 972). These proposals also raise the question of the types of disabilities that the VA will compensate

and whether the VA will continue to relax the standards for claims that are harder to prove. In the area of mental health disability compensation, the VA has responded similarly to claims that trauma was unrelated to combat. Some suggest an unfair double-standard for relaxing evidentiary rules in the case of combat-related trauma, but not in the case of trauma from non-combat sources, such as Military Sexual Trauma (MST) (Seamone & Traskey, 2014). This study explores the phenomenon of psychological trauma from racial discrimination and sexual-orientation discrimination, which represents an extremely complex disability benefit puzzle under the current regime. While it may be unrealistic to anticipate any presumptions in favor of these claimants, the examination of trends in compensation decisions provides important insights to overcome the hurdles of proving and winning these claims.

Background and Context

Although the military primarily exists to defend the nation, military service has functioned as a type of equalizer in society, enabling historically disadvantaged minority groups and limited income citizens to generate opportunities for upward mobility (Rackin, 2017). Studies of minority veterans, in fact, show tremendous benefits in self-confidence and earnings potential (Rackin, 2017). However, in the militarized subset of society dominated by young, aggressive White males (Van Gilder, 2017), discriminatory behavior has plagued the Armed Forces. During the 1960s and 1970s, the Vietnam War heightened awareness of the struggles of Black veterans who had endured oppressive treatment in the South at the same time they were supposed to be representing freedom and democracy abroad (Dickerson, 2014). Many felt as though they were continuing to oppress the Vietnamese in the way they had been oppressed at home (Parson, 1984; Lucks, 2017). After the assassination of Dr. King, race riots broke out throughout the military, sometimes featuring cross-burnings, confederate flag demonstrations, and other volatile

acts (Nalty, 1986). Some White officers sent Black troops to the front lines with hope of avoiding further turmoil, inevitably causing even more resentment and divide (Nalty, 1986). Such tension extended to the seas as well, where minority representation was lower than in the land forces (Farham, 2017). As the military transitioned from conscripted service to an All-Volunteer Force in 1973, emphasis changed to make the military more appetizing as a profession (Rackin, 2017). Yet, the legacies of military discrimination continued (Sheehan et al., 2015). Racial minorities remained disproportionately represented among those who were punished, subjected to court-martial, and administratively discharged from the military in a stigmatizing manner (Burk & Espinoza, 2012). Many veterans who experienced the trauma of racism have borne psychological wounds, including PTSD (Kabat et al., 2018; Sheehan et al., 2015).

Perhaps the most stigmatized groups in the history of America have been lesbian, gay, bisexual, and transgender (LGBT) service members (Holroyd, 1992; Lehring, 2003). Since the 1940s, laws have targeted service members who were in or desired to have same-sex sexual relationships (Shilts, 1993). These policies, which found homosexuality to be incompatible with military service based on hypothesized negative effects on morale and cohesion in the ranks (Department of Defense, 1982, pt. 1 § H(1)(a)), encouraged open hostility toward sexual minorities (Castro & Goldbach, 2018; Lehring, 2003; Benecke et al., 1999). Ultimately, "the [Don't Ask, Don't Tell, Don't Harass, Don't Pursue (DADT)] law itself branded [sexual minority] Americans as 'lesser' and encouraged less than equal treatment" (Benecke, 2011, p. 74). These heterosexist norms have been enforced since initial entry into service (Bowling et al., 2005).

Although racial and sexual minorities faced different types of stress and trauma related to discrimination in the Armed Services, common features of the military environment have

compounded and exacerbated the effects of all of these discriminatory injuries: as the stigmatized "other," victims of discrimination were excluded from the tight-knit organizations upon which the warrior depended for survival in combat (Moradi, 2009). The resulting isolation, self-doubt, and fear of sabotage deepened the wounds. After many years of dealing with the scars of discrimination, these wounded veterans sometimes turn to the VA for their care, as the VA is charged with the responsibility to treat veterans for injuries related to their service. Yet, veterans are not automatically eligible for care. All must apply for benefits at a Regional Office, where they will be asked to indicate the nature of their injuries on a standard form and present supporting evidence to show that their current health condition was caused by military service (38 U.S.C. § 101(16)). Veterans can elect to represent themselves, to obtain free services from trained veterans service officers, such as the Disabled American Veterans, or with the assistance of an attorney. In all cases, various federal laws have strictly curtailed the charging of fees for assistance with initial claims and receipt of advice from persons unaccredited by the VA (38 U.S.C. §§§ 5901, 5902, 5903, 5904). If a veteran can demonstrate the required "service-connection," the next step is to obtain disability rating through a medical examination that will result in a percentage of disability rating from 0-100%. In Fiscal Year (FY) 2020, a 100% disabled single veteran with no dependents was paid at a rate of $3,106.04 per month (MilitaryBenefits.Info, 2020). Claims for acquired psychiatric illness attributed to discrimination during service may be deemed service-connected for mental health conditions including depression, schizophrenia, PTSD, and other disorders within the existing VA disability framework. However, to date, there have been no studies of the characteristics of the claims, claimants, or adjudicatory treatment of discrimination-based claims.

This study is the first to examine "Stigma-in-Arms" military discrimination claims with the aim of understanding the circumstances under which veterans have succeeded in obtaining service-connected disability benefits for mental health conditions arising from traumatic discrimination.

Law and Policy Review

This research project explores the issue of disability compensation for veterans who experienced discrimination during their service based upon their race or sexual orientation. This study turns to written opinions by the Board of Veterans Appeals (BVA) to examine the factors contributing to whether the court ruled that a mental condition arose "coincident with service in the Armed Forces" (38 C.F.R. § 3.03(*a*)).

The goal of a VA compensation claim is to obtain service-connection for one's injuries. Congress defines "service-connection" as "disability resulting from personal injury suffered or disease contracted in the line of duty . . . , in the active military, naval, or air service" (38 U.S.C. § 1110; 38 U.S.C. § 101(16)). Congress has not provided full detail for how the VA should apply this law. Pursuant to 38 U.S.C. § 501(a), Congress authorized the VA to promulgate "rules and regulations which are necessary or appropriate to carry out the laws administered by the Department and are consistent with those laws." The Secretary has broad power to develop "regulations with respect to the nature and extent of proof and the method of taking and furnishing them in in order to establish the right to benefits under such laws" (38 U.S.C. § 501(a)(1)), and may develop evidentiary rules as long as they do not "alter or amend the law" (*Sawyer v. United States,* 1926, p. 420). In addition to regulations, the VA developed an internal guide called the M21-1, *Adjudication Procedures Manual,* which the Court of Appeals for Veterans Claims (CAVC) found to have the effect of a regulation when the provision had a

determinant effect on the claim (*Patton v. West*, 1999). Under Section 501(a), the VA has developed regulatory standards for evaluating mental health conditions.

Prior to 1990, the VA modified its evidentiary standards based on advances in medicine and political concerns (Mayes, 2014). In 1990, CAVC ruled that regulations that had an impact upon the rights of veterans to compensation, such as evidentiary standards, were required to be vetted through the notice and comment requirements of the Administrative Procedure Act (*Fugere v. Derwinski*, 1990; 5 U.S.C. § 553). The VA's evidentiary standard for service-connection of a mental health disorder is "that the facts, shown by evidence, establish that a particular injury or disease resulting in disability was incurred coincident with service in the Armed Forces" (38 C.F.R.§ 3.303(*a*)). The standard amounts to three requirements by the reviewing courts: "(1) the existence of a present disability; (2) in-service incurrence or aggravation of a disease or injury; and (3) a causal relationship between the present disability and the disease or injury incurred or aggravated by during service" (Mayes, 2014, p. 128). This rule incorporates the *Schedule of Ratings*, which specifies dozens of mental disorders for which a veteran can receive compensation (38 C.F.R. § 4.130), and which acts as "a catch-all for all service connection claims not specifically governed by another regulation" (Mayes, 2014, p. 128). Yet, PTSD is governed by a different regulatory provision that addresses the nature and quality of a specific traumatic event that caused the disorder, whether it was sustained in combat, in garrison, or during non-duty hours.

In the wake of Vietnam, veterans returned from combat operations with mental health conditions. Rather than diagnosing post-Vietnam Syndrome, as many providers had been doing, in 1980, the *Diagnostic and Statistical Manual of Mental Disorders* (*DSM*)'s third edition codified a standard for PTSD. Two salient diagnostic criteria for PTSD are the existence of an

identifiable stressor event which caused the PTSD, and the description of Criterion A1 events that are of sufficient magnitude for a stressor, including events that resulted in "actual or threatened death or serious injury or other threat to one's physical integrity" (American Psychiatric Association, 1980). The VA responded to this diagnosis by incorporating the stressor requirement in its rules for service-connected PTSD. By 1993, the VA established a distinct rule, which was fundamentally different from the evidentiary standard for non-PTSD mental health diagnoses. The PTSD rule imposed a duty on the claimant to present "credible supporting evidence" of the claimed stressor (Department of Veterans Affairs, 1993, p. 29,110; 38 C.F.R. § 3.304(*f*)). The rule also favored combat veterans by alleviating the need to present evidence of a sufficient stressor if they could prove their combat involvement with evidence such as combat citations or awards for injury from the enemy. Despite the higher evidentiary burden on non-combat veterans, the courts found the different standards to be permissible (*Moran v. Principi*, 2002; *National Organization of Veterans Advocates v. Secretary of Veterans Affairs*, 2003).

Since the initial version of 38 C.F.R. 3.304(*f*) in 1993, this rule has been "amended many times" to alleviate the burden of relying solely on medical records for evidence of a stressor (Doan & Martin, 2010, pp. 254-255). Most notably, in 2002, the VA formally codified an M21-1 provision into Section 3.304(*f*), which specified standards for evaluating PTSD claims based on non-combat personal assault in order to "lower[ ] the evidentiary burden" for corroborating the in-service stressor with evidence outside of medical records and evidence of changes in behavior (*Molitor v. Shulkin*, 2017, pp. 402-403; Department of Veterans Affairs, 2000). VA courts routinely apply the M21-1MR provisions (Veterans Benefits Administration, 2011, Pt. III,

Subpt. iv, ch. 4, § H-30(a)) in addressing personal assault, which indicates "harassment" as an example of a personal assault stressor.

A non-exhaustive list of personal trauma markers that may be used to evaluate personal assault claims appears in Table 2, below.

Table 2

Markers for Corroborating Stressor Events in Personal Assault Claims

Markers Identified in 38 C.F.R. § 3.304(f)(4)	Markers identified in The VA Manual M21-1MR, Part IV, Subpart ii, 1.D.17.g (2020)
● Records from law enforcement authorities, rape crisis centers, mental health counseling centers, hospitals, or physicians; ● Pregnancy tests or tests for sexually transmitted diseases; and ● Statements from family members, roommates, fellow service members, or clergy.	● Private medical records, ● civilian police reports, ● reports from crisis intervention centers, ● testimonial statements from confidants such as family members, roommates, fellow servicemembers, or clergy, and ● personal diaries or journals.
Because these standards have been revised over the years, the 2020 versions of both sources have been referenced in this table.	

These alternative sources of evidence are not based upon scientific studies by mental health researchers and there is still debate within the VA regarding the way the markers are applied by VA adjudicators. For instance, some might require that all markers be present before applying them to a given claim while others might apply the markers individually (Seamone & Traskey, 2014). No markers have been specified for evaluating race or sexual-orientation discrimination, specifically.

In 2010, the VA created a new provision in response to studies indicating that veterans deployed to combat zones could acquire PTSD even if they did not participate in direct combat. The new provision eliminated the need for evidence of a stressor when a veteran who had been

deployed to a combat zone offered lay testimony that he or she experienced "fear of hostile military or terrorist activity," thus terminating the corroborating evidence requirement (Department of Veterans Affairs, 2009; Department of Veterans Affairs, 2010a; Department of Veterans Affairs, 2010b). Critics of the rule argued that the standard unfairly increased the evidentiary burden on claimants who did not serve in combat. The Federal Circuit Court of Appeals denied relief on the basis that the new rule was a reasonable exercise of the Secretary's discretion (*Service Women's Action Network v. Secretary of Veterans Affairs*, 2016).

Claims based upon traumatic discrimination may rightfully fall under the direct service-connection standards of 3.303(*a*), 3.304(*f*), or both, based upon the way the veteran states the claim. The complexity of evaluating service-connection has further been complicated by two factors. In 2000, the Federal Circuit Court of Appeals evaluated 38 C.F.R. § 3.103(*a*)'s mandate for the VA to approve "every benefit that can be supported in law," and determined that veterans claiming a specific mental health disorder should not be expected to have the medical knowledge and the sophistication to diagnose their precise injury. So long as the evidence "reasonably" supports more than one mental health condition, it is the adjudicator's responsibility to consider all mental health conditions raised (*Schroeder v. West*, 2000, p. 1271). When a claimant indicates that discrimination resulted in PTSD, the adjudicator must evaluate the evidence under Section 3.304(*f*). However, to the degree that symptoms overlap with depression (as is often the case), the adjudicator may be required to analyze the same evidence under Section 3.303(*a*). One court specifically raised the concern that the PTSD standards could be read in a way to subordinate the 3.303(*a*) standards making the claim inherently more stringent in the evidentiary standard (*Arzio v. Shinseki*, 2010, pp. 1346-1347).

A second factor that adds complexity to the evaluation of traumatic discrimination claims is the *DSM-5*'s revision of PTSD diagnostic criteria (American Psychiatric Association, 2013). The new standards recognize a greater number of PTSD symptoms clusters, with an estimated 636,120 qualifying symptoms configurations (Galatzer-Levy & Bryant, 2013). Yet the *DSM-5* has significantly limited the definition of a traumatic stressor by including only "exposure to actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association, 2013, p. 271, Criterion A). The consequence of this revision is that some events that may have qualified as sufficiently traumatic under prior versions of the *DSM* will not presently qualify, regardless of the presence of qualifying PTSD symptoms (Pai et al., 2017). Many scholars who have researched the psychological impact of discrimination have raised concerns that curtailment of Criterion A's trauma standard in the *DSM-5* has limited the ability to diagnose PTSD for racial discrimination (Carter & Scheuermann, 2020; Carter et al., 2020; Sibrava et al., 2019). A related consideration has been the removal of Criterion A2, which specified that the traumatic event had to be of a nature to invoke "intense fear, helplessness, or horror" (American Psychiatric Association, 2000, p. 428). Research suggested that this emotional component of Criterion A2 similarly provided a broader base upon which to diagnose PTSD under the *DSM-IV* (Kubany et al., 2010).

These concerns extend to the evaluation and consideration of VA disability claims for PTSD. Although the VA adopted the *DSM-5* for purposes of clinical treatment on November 1, 2013, it was not until nine months later on August 4, 2014 when the VA issued an interim final rule mandating *DSM-5* PTSD criteria for evaluation of service-connection claims (Department of Veterans Affairs, 2014, p. 45,093). The VA's justification for requiring *DSM-5* standards in disability compensation evaluations was that the changes reflect the current understanding of

disorders as developed within the profession, and it would be unethical to use outdated standards. While the implementing rule recognized "concern that a change in the diagnostic criteria for PTSD in the *DSM-5* would result in fewer diagnoses" due to the "revised stressor criterion" with "more explicit definitions for stressors" and removal of Criterion A2 considerations, the VA suggested that veterans would still benefit from relaxed rules for personal assault which would remain the same (Department of Veterans Affairs, 2014, p. 45,097).

To escape the "paradox" of PTSD claims in which the subjective nature of one's self-report is likely to draw suspicion as to the veracity of a PTSD claim (Mayes, 2014), some experts suggest that claimants should raise both PTSD and major depression to trigger the separate evidentiary standards of both 3.303(*a*) and 3.304(*f*) (Coleman et al., 2017, §9.07[1]). Others call for the repeal of section 3.304(*f*) (Mayes, 2014). The consequence of the PTSD paradox on this study is the need for careful attention to context when evaluating the relationship of evidence to case outcome. It was paramount to consider the interplay between regulatory provisions and types of evidence, such as the evidence most commonly linked to the finding of a PTSD stressor in cases involving traumatic discrimination in the context of Section 3.304 or the evidence most commonly linked to the finding of an in-service disease or disorder in the case of section 3.303(*a*). The complexity of section 3.304(*f*) suggests that the PTSD provisions may not be the ideal place to incorporate reforms based on traumatic discrimination, and that this study should consider the additional proposals of revisions to Section 3.304 or an entirely new provision.

Purpose of the Study

Recent studies reveal that people sustain chronic mental health disorders based on acts of discrimination by others. Chronic PTSD can result from acts of race discrimination (Carter, 2007), as well as acts of discrimination based on sexual orientation (Meyer, 1995). VA disability

compensation standards require the government to provide benefits for any mental health disorder sustained or aggravated during military duty. Because VA standards are designed to evaluate harm from combat, there are few objective standards for evaluating trauma arising from discriminatory events, which leads to inconsistent and erroneous decisions.

Research Questions and Hypotheses

In recognition of scientific studies that have increasingly linked racial discrimination and sexual-orientation discrimination to adverse mental health outcomes in military veterans, this quantitative study seeks to determine whether particular characteristics of race and sexual-orientation discrimination claims are associated with success or failure of the claims. This study will test the following specific hypotheses:

Traumatic Discrimination Generally

H_1: Veterans who claimed multiple discriminatory events during military service are more likely to succeed in appeals given the presence of compounded effects rather than a one-time incident.

H_2: In race and sexual-orientation discrimination cases, the fear of lack of fellow service members supporting the veteran in combat will be associated with higher likelihood of severity of symptoms hence approval of appeals.

H_3: In cases where the veteran suffered race or sexual-orientation discrimination, discriminatory acts occurring on a military base will be associated with higher levels of mental health symptoms hence greater likelihood of success on appeal.

H_4: Veterans who claim race or sexual-orientation discrimination and who have pre-service traumatic events will be less likely to succeed in their appeals given the difficulty of disaggregating cumulative trauma.

H_5: Veterans who claim PTSD resulting from race or sexual-orientation discrimination in the time period after the VA adopted the *DSM-5* PTSD criteria are less likely to succeed in PTSD service-connection claims than those who submitted claim prior to the implementation of *DSM-5* given the changes to Criterion A in the *DSM-5*.

H_6: Veterans who claim PTSD resulting from race or sexual-orientation discrimination involving a physical assault, will be more likely to succeed in appeals than veterans who suffered verbal or non-physical discrimination.

Race Discrimination

H_7: White veterans claiming racial discrimination during military service are more likely to succeed in appeals than their minority counterparts.

H_8: Racial minority veterans who claim racial discrimination from a perpetrator of the same race are more likely to have more severe mental health consequences by virtue of the interaction, hence are more likely to succeed in their appeals.

H_9: Veterans who claimed race discrimination related to a period during or immediately following segregation of the Armed Forces will be more likely to succeed in their appeals due to recognition of the discriminatory nature of the military's segregation policy and its negative impact on the self-worth of segregated minorities.

Sexual-Orientation Discrimination

H_{10}: Self-proclaimed heterosexual veterans claiming sexual-orientation discrimination during military service are more likely to succeed in appeals.

H_{11}: Adverse experiences with an investigation into sexual orientation, regardless of outcome of the investigation, will result in greater likelihood of approval of the claim.

H_{12}: Among veterans discharged from the military based on sexual orientation, they will have greater likelihood of approval of the appeal.

H_{13}: Veterans who claimed sexual-orientation discrimination with claims decided after the repeal of "Don't Ask, Don't Tell" in 2011, will be more likely to succeed in their appeals due to greater consensus that anti-LGBT policies were discriminatory in nature.

H_{14}: Veterans who claimed Military Sexual Trauma (MST) a form of discrimination against sexual orientation will experience have a greater likelihood of succeeding on appeal.

H_{15}: Veterans who lied or created a double life as a form of identity concealment because of sexual-orientation discrimination, will have higher levels of success on appeal.

It was further hypothesized that outcomes of sexual orientation discrimination appeals will be markedly different from those of race discrimination cases given the unique considerations surrounding these statuses (Van Glider, 2017; Carter et al., 2013).

Study Variables

This study analyzed the following variables, summarized in Table 3, below.

Table 3

Study Variables

Variable	Form	Description	Relevant Hypothesis	Included in Regressions?
Case Outcome	Denied,* Approved		All	Yes
Discrimination Type	Race,* Sexual-Orientation	Type of discrimination in claim. Second category includes combined race and sexual orientation claims	-	Yes
Veteran & Case Characteristics				
Sexual Orientation	Heterosexual*, LGBT	Appellant's sexual orientation, derived from opinion context	H_{10}	Yes
Gender	Male, Female, Other	Appellant's gender	-	Yes
Race	White, Black, Asian, Hispanic, Native American, Native Hawaiian/Pacific Islander, Other, Unknown	Appellant's race, derived from opinion context	-	No
Service Era	WWII, Korean War, Vietnam, Gulf War, Multiple, Peacetime	Appellant's military service era	-	No
Branch of Service	Army, Navy, Marines, Air Force, Coast Guard, Unreported	Appellant's branch of service at time of discrimination	-	No
Years of Service	Mean: 3.81 Range: 0-32	Number of years appellant served in the military	-	Yes
Region	Midwest, Northeast, South, West, Unknown	Location of originating regional office	-	No
Representation	Represented,* Pro se, Unknown	Legal counsel of appellate	-	Yes
Year of Decision	Range: 1993 – 2019 Average of 27 cases a year		-	Yes
Deciding Judge	163 Judges with an average of 4 cases		-	Yes
Mental Health Related				
Mental Health Condition	Acquired Psychiatric, Anxiety, Bipolar & Related, Depressive, Schizophrenia & Psychotic, Trauma & Stressor-Related, Other	Category of Axis I mental health conditions claimed	-	No

PTSD Claim	No, Yes*	Whether or not there is a claim for PTSD	H_5	Yes
Number of Conditions	Mean: 1.32, centered Range: 1-4	Total number of Axis I mental health conditions claimed	-	Yes
Policy-Related				
Don't Ask, Don't Tell	Before Repeal,* After Repeal	Decision date <= Sept. 20, 2011 Decision date > Sept. 20, 2011	H_{13}	Yes
Draft Era	Draft Era,* Post-Draft Era	Year entered service <= 1973 Year entered service > 1973	-	Yes
Civil Rights Act	Before Act Passed,* After Act Passed	Year entered service < 1965 Year entered service >= 1965	-	Yes, race cases only
DSM Version	III or IV,* V	Decision date < March 12, 2015 Decision date >= March 12, 2015	H_5	Yes
Trauma-Related				
Number of Trauma Types	Mean: 1.91, centered Range: 1-6	Sum of trauma types (administrative discrimination, interrogation, harassment, physical assault, sexual assault, combat, and preservice trauma)	H_1	Yes
Administrative Discrimination	No*, Yes	Discrimination in areas such as discharge, promotion, rank, work conditions, treatment by superiors	-	Yes
Homosexuality-Based Discharge	No*, Yes	Subset of administrative discrimination cases in which discharges are based on homosexuality	H_{12}	Yes
Interrogation Trauma	No*, Yes	Formal interrogation/investigation of one's sexual orientation	H_{11}	Yes
Harassment	No, Yes	Veteran reports being harassed (including name-calling, demeaning behavior, intimidation, and threats)	-	No
Physical Assault	No*, Yes	Veteran reports being physically assaulted	H_6	Yes
Combat Trauma	No*, Yes	Evidence of combat trauma/exposure	-	Yes
Pre-Service Trauma	No*, Yes	Opinion contains information about pre-service traumatic events, including childhood physical or sexual abuse	H_4	Yes
Sexual Assault	No, Yes	Veteran reports being sexually assaulted (including attempted) or harassed	-	No
Military Sexual Trauma	No*, Yes	Subset of sexual assault cases in which MST is explicitly claimed	H_{14}	Yes

* Reference category. All indicated variables are 0/1 dummy coded.

Definitions

The following definitions serve to assist the reader in better understanding specific terms used throughout this study.

***Machine Learning*.** Supervised Machine learning (ML) is a form of Artificial Intelligence (AI) in which humans manually classify texts to use as a training data set for predicting class labels within a testing data set of unclassified texts (Fagan, 2016). The learning aspect comes from the algorithms' ability to "chang[e] their behavior to enhance their performance on some task through experience" (Surden, 2004, p. 89). The precision and accuracy rates for classified texts assist in determining the strength and utility of a given classification model.

Traumatic Discrimination. Adverse discriminatory events motivated by the veteran's race or sexual orientation that reach a threshold of severity to result in traumatic symptoms (Carter & Forsyth, 2009).

Evidence of Traumatic Discrimination. When used in the context of legal proof to meet the standard for a service-connection disability claim, "evidence" refers to sufficient documentary, testimonial, or historical evidence to satisfy the threshold for independent corroborating evidence of a stressor event defined in 38 C.F.R. § 3.304(*f*)(5). When used in the context of the scientific PTSD diagnostic criteria, "evidence" means a stressor event sufficient to meet the threshold of severity for Criteria A and B of the diagnosis (American Psychiatric Association, 2013). There is a distinction between the two types of evidence as the VA could rely on legal evidence of a stressor event to provide service-connection for any number of mental health disorders, while evidence in the scientific context of PTSD is far more precise.

Race. Race is "a social construction in which people in the United States are identified by their skin color, language, and physical features and are grouped and ranked into distinct sociopolitical groups with different degrees of [social] access and opportunity" (Carter & Scheuermann, 2020, p. 1).

Racism. Racism constitutes "[b]oth attitudinal and behavioral manifestations of the belief in the inherent inferiority of individuals of certain ethnicities" (McNeilly et al., 1996, p. 155). It is further characterized as "the exercise of power against a racial group defined by individuals and institutions with the intentional and unintentional support of the entire (race or culture)" (Jones & Carter, 1996, p. 3).

Gender Identity. Gender Identity is "an individual's personal sense of identification as male, female, transgender or gender nonconforming . . ., or some other description—regardless of the sex they were assigned at birth" (Nadal, 2018, p. 101).

Gook-Identification. Gook-identification is a term for "the conscious and unconscious emotional identification with the devalued, maligned, abused, and helpless aspects of the Vietnamese people, by the (minority) soldier" (Parson, 1984, p. 15).

Homophobia. Homophobia is "[a]n irrational fear, hatred, and intolerance of homosexuality" (Szymanski & Chung, 2001, p. 37).

Internalized Homophobia/Homonegativity. These terms define a "lesbian and gay men's internalization of . . . negative attitudes and assumptions regarding homosexuality" (Szymanski & Chung, 2001, p. 38).

Sexual Orientation. Sexual orientation is "a person's sense of personal and social identity and is typically based on three components: (a) who a person is sexually attracted to, (b)

the behaviors through which a person expresses or acts upon those sexual attractions, and (c) the sense of belonging to groups or communities who share those identities" (Nadal, 2018, p. 71).

Stigma. Stigma refers to "[a]n attribute that is deeply discrediting and can be enacted (actual occurrences of discrimination), perceived (felt or imagined devaluations from individuals and institutions), or internalized (self-shaming/blaming narratives that are adopted by stigmatized individuals)" (Pala et al., 2017, p. 452).

Workplace Bullying. This term refers to "[r]epeated inappropriate behavior, direct or indirect, written or verbal, physical or otherwise, conducted by one or more persons against another or others, at the place of work and/or in the course of employment, which could reasonably be regarded as undermining the individual's right to dignity at work" (Duncan, 2011, p. 2333).

Assumptions

The major assumption underlying this investigation is that judicial decisions provide valuable insights for evaluating phenomenon despite their inherent variance and the reality that they often omit information that was relevant to the decisional outcome. Judicial decisions represent only a small portion of claims filed with the VA. In fact, the subset of cases under consideration are those which a lay adjudicator at a VA Regional Office has already determined was insufficient as a matter of law, regulation, and fact to attribute a mental health condition to discriminatory events during military service. It is unknown how many veterans' discrimination claims have been approved at the initial level because these data are not tracked or reported by the VA Regional Offices.

Despite the small population of discrimination cases at issue in this investigation, this study assumes that appellate decisions have some probative value in describing VA practices and

further that these decisions help to guide Regional Office adjudicators. In addition, this study assumes that successful evidence in these appellate cases has value for potential claimants and represents agency practice due to the extremely high level of detail of evidence presented in appellate cases. By going through the process of evaluating the facts and law during judicial review, it is assumed that more care is taken to delineate how evidence supports the challenged denial of benefits, which would otherwise be absent in initial Regional Office claims determinations.

From the perspective of positionality of the researcher, in conducting this research, I relied on my time in the military justice system as both a prosecutor and defense attorney. These duties gave me deep insight into the causes and manifestations of discrimination in the military setting. Prior to the repeal of DADT, I represented the government in seeking the separation of LGBT service members, and I defended these very service members in court proceedings. I also gained unique knowledge from practicing veterans' benefits law in different capacities. In 2015, when I left active duty, I filed for VA disability benefits and personally experienced the initial claims adjudication process. While I have assisted veterans in their appeals, I did not have to use the appellate system for my own case.

In approaching the sensitive issue of compensating disabled veterans, I adopted the foundational assumption that judicial decisions provide valuable insights for evaluating phenomenon despite their inherent variance and the reality that they often omit information that was relevant to the decisional outcome (Walker et al., 2017). Specific to disability benefits, although scholars have raised many concerns about veterans who file false claims (e.g., Sayer, et al., 2004, p. 2141 (discussing the large scholarship on symptom exaggeration)), my assumption is that the portion of intentional malingerers who would feign a mental health condition for

secondary gain is minimal and that those who do engage in malingering may be detected through psychological testing, etc. Accordingly, I adopted the recommendations of Sayer and colleagues (2004) and assume that the vast majority of those who would make claims for mental health conditions from traumatic discrimination should not automatically be disregarded or second-guessed unless there are clear indications that claims are false.

I believe all veterans are entitled to benefits to address service-related mental health conditions, regardless of the reason why they left the service. I did not adopt the view that veterans who entered the military knowing that they were not eligible due to sexual orientation should be barred from receiving benefits because their knowing entry into the Armed Forces was wrongful. I rejected this view because sexual orientation has no connection to quality of military service and that the gay ban arose for political reasons based on assumptions proven to be false, speculative, and discriminatory. The involvement of additional researchers in coding BVA cases, as well as the reliance on algorithms to categorize cases involving traumatic discrimination claims related to race and sexual-orientation discrimination, helped to ensure that my personal views did not interfere with interpretations of the instant study.

Scope

The scope of this study was limited to a data set containing categories that had already been coded by VA analysts upon initially processing BVA appeals. This limited data set assisted in the identification of 123,011 decisions related to claims for service-connected disability benefits based upon psychological harm that resulted in mental health conditions. Working within the parameters of the VA's general coding conventions eliminated the need to search for and code all appellate cases from approximately one million electronically stored decisions. The existence of the categorized data set mitigated the risk of inclusion of inconsistent decisions.

Beyond this, the ability to have identified cases for service-connected disability benefits eliminated the need to create a new scheme for distinguishing types of claims for service-connected mental health disorders.

Summary

This chapter has shown that the VA faces a quagmire: although the need for benefits for psychological conditions is greater than ever, funds are increasingly drying up. This conflict has created a policy dilemma in which the VA, on the one hand will assist more veterans by liberalizing evidentiary standards for disability compensation, yet, on the other hand is urged to consider methods for reducing the number of disability awards. These opposed forces have met at precisely the time when the mental health profession has acknowledged that discrimination can cause severe psychological trauma, which is often exacerbated in the military setting. This study's identification of whether certain types of evidence are correlated with successful outcomes in BVA decisions sheds light on the manner in which VA judges are applying existing standards and will help to demonstrate how potential claimants might navigate one of the most complex and controversial areas of VA benefit adjudication. To this end, the next section identifies the law, policy, and psychological research on the identification, measurement, and assessment of cases in which veterans have claimed mental health conditions related to the trauma of race or sexual-orientation discrimination.

Chapter 2: Literature Review

The notion of compensating victims for the effects of discrimination is neither new nor novel, as evidenced by current debates on the appropriateness of the U.S. government paying reparations to the descendants of American slaves (e.g., Gibson, 2019). Basic definitions of discrimination refer to hurtful or harmful behavior directed at a person based on a characteristic, such as the person's race, gender, or sexual orientation, with the distinction that some discrimination occurs at a systemic level (e.g., segregation in Southern U.S. states prior to the 1950s), and other forms of discrimination are perpetrated beyond the conscious attention of the perpetrator (Blank et al., 2004; Pager & Shepherd, 2008). Despite consensus that discriminatory wrongs should be righted, the practical requirements involved in compensating discrimination pose often insurmountable challenges, causing some governments to settle for reconciliation commissions (e.g., Androff, 2018; Gasparelli et al., 2016), national monuments and other remembrances (e.g. Bruyneel, 2014), public apologies (Blatz et al., 2009), or no action whatsoever.

Across domains, the two major obstacles facing victims of discrimination in establishing the cause of their injuries are: (1) measurement of the harm suffered; and (2) establishment of a causal connection between that harm and particular discriminatory acts (Carter & Forsyth, 2009). Thompson-Miller attempted to measure "Segregation Stress Syndrome," the impact of living in the South during times of oppressive Jim Crow laws including segregation (2011). While she noted statistics establishing that African-Americans who lived in that era suffered greater health consequences than Caucasians, she was unable to demonstrate that any particular act of discrimination, such as sitting in the back of a bus or drinking from a "colored only" water

fountain caused hypertension or PTSD in a given case (2011). Meyer's (1995, 2003) concept of minority stress posits that members of minority groups suffer additional stresses based upon their membership in such groups. His work with gay men identified methods of coping with the stigma of being in the gay minority group including outward displays of prejudice against gays and methods of concealing one's identity as gay (Meyer 1995; Meyer 2003). Researchers have applied minority stress theory to all groups of minorities in recognition that discriminatory treatment affects minority groups in some similar ways and other unique ways that are linked to distinct characteristics of each (e.g., Smedley et al., 1993).

Discriminatory trauma can be defined as the psychic, physiological, and psychological harm resulting from discriminatory behavior (Blank et al., 2004). In this context, *discrimination* defines adverse treatment based upon a person's membership in a group with distinct characteristics, such as one's race, gender, or sexual orientation (Blank et al., 2004). Any definition of discriminatory trauma raises fundamental questions about the inherent subjectivity of these terms. For instance, what is the minimum threshold for confirming that an event is traumatic? How frequent must the discriminatory event be to qualify? Does the target's perception have to be reasonable, and, if so, how much and according to what standard of reasonableness? Must the characteristic that forms the basis of the discrimination be officially recognized as a protected class? Nadal (2018) defines the term "traumatic discrimination" in a manner to invoke diagnostic criteria in the following way:

> When people face discrimination in their lives that is
>
> (a) Intense,
>
> (b) Extensive and enduring,
>
> (c) Threatening to one's sense of safety, and
>
> (d) Causal of symptoms that are aligned with PTSD (e.g., avoidance, dissociation) (p. 13).

He further observes that the condition "can manifest through blatant instances of victimization, which fit the current *DSM-5* criteria for trauma (e.g., racial hate crimes, sexual assault) but which may also occur through nonviolent overt discrimination (e.g., bullying, sexual harassment)" (Nadal, 2018, p. 13). However, many would argue with this definition for following diagnostic criteria too closely. Several of the key inquiries underlying the concept of traumatic discrimination remain unanswered and highly debated. While there is little argument that a discriminatory event can cause trauma, and a psychological reaction—in other words, the fact that "words can hurt," there is no consensus beyond this point (Jay, 2009).

Variance in Human Reactions to Trauma

The most pervasive forms of discrimination largely go uncompensated because of the wide variance in human experience. For instance, when a disaster strikes, people who suffer the same devastating events in the same locations do not always experience the same physiological and psychological responses or symptoms. It is estimated that roughly 7 to 8 percent of the American population suffers from PTSD even though approximately 50 to 60 percent have been involved in traumatic events (National Center for PTSD, 2019). In response to devastating natural disasters in the Asian continent, research concluded that most victims did not experience chronic mental health disorders (Udomrath, 2008). Even in the wake of the holocaust, while some survivors suffered PTSD, others experienced a contrary display of traumatic growth upon release from concentration camps (Frankel, 1946). Among veterans who served in OEF and OIF, between 11 and 20 percent of veterans sustained PTSD (National Center for PTSD, 2018), despite the fact that many more have experienced traumatic, combat-related events, such as mortar attacks (e.g., 28% of women and 49% of men deployed to OIF/OEF) (Afari et al., 2015).

Smoller (2016) explains that differences in personal tolerance to traumatic events depend in great part on genetic influences in a model of "diathesis stress" (2016). Beyond this, there is divergence in the scholarship regarding so-called "complex" or "cumulative" trauma in which an individual has suffered numerous events over the life course (Cloitre et al., 2009). While Keinan and colleagues (2012) acknowledge research suggesting that traumatic events accumulate in a dose-response fashion, with greater harm caused by more severe incidences, their studies have revealed a leveling-off in attenuation of psychological harm after approximately three traumatic events. Campbell-Sills and colleagues (2006) have developed a divergent theory of resilience in which early trauma is believed to be an "inoculant" against future trauma making victims more resistant as exposure to trauma increases. Although varied, all theories reflect the inescapable conclusion that trauma survivors react differently to the same traumatic events, and the specific event that traumatizes one person will not necessarily traumatize another.

Requisite Levels of Traumatic Harm

While subjective levels of trauma do depend upon perceptions of the survivor, the mental health profession still has the task of defining the criteria for mental disorders and uses the *Diagnostic and Statistical Manual of Mental Disorders* to codify objective standards for the full range of diseases. As early as the first edition of the *DSM*, the American Psychiatric Association (1952) has accounted for disorders that may arise from stressful experiences, first defining "gross stress reaction" as one in which the patient experiences "an exceptional physical or mental stress" (Andreasen, 2010, p. 68). Although a full survey of the development of the PTSD diagnosis is outside the scope of this review, a key criterion that remained a staple of the PTSD diagnosis for decades is the appraisal of a "stressor" event of sufficient magnitude. Under the rubric of Criterion A1, the *DSM-III* defined a qualifying stressor as "an event that is outside the

range of usual human experience and that would be markedly distressing to almost anyone" (American Psychological Association, 1980). Pointing to salient issues like the removal of homosexuality as a disorder, Cotton and Ridings (2011) caution that *DSM* represents the result of political activism because diagnoses are determined through a deliberative process that can be influenced by special interests. In this light, many scholars agree that the Criterion A1 stressor requirement is the product of concerns that patients would abuse the PTSD diagnosis for purposes of secondary gain and that requirements for events relating to perceived death might be more objectively verifiable than other incidents (Mayes, 2014).

Discrimination-Based Traumatic Stress

Criterion A1 was subjected to criticism by many mental health providers, who set out to prove that various forms of "subthreshold" events were sufficient to cause PTSD. Beginning in 1999, Utsey developed a measure called the "Index of Race-Related Stress" to measure the impact of being subjected to racial discrimination. Over time, other researchers measured the effects of additional discriminatory behaviors (e.g., Waelde et al., 2010), and reactions across different racial (e.g., Liang et al., 2004) and other minority groups (Logie & Earnshaw, 2015 (sexual minority veterans)). The results of these studies indicated substantially greater incidence of various mental health disorders for those who had been subjected to discriminatory events. Moreover, in many cases the targets of discriminatory events perceived those events to have more harmful impact than other traumatic types of events. Yet, the research methodology, which focused on retrospective evaluations of events over one's life course, was not capable of identifying the impact of a given discriminatory event as distinct from others (Carter & Sant-Barket, 2015; Carter et al., 2013; Carter, 2007). The research was helpful in demonstrating that a category of trauma existed in which PTSD appeared to result from causes outside of Criterion

A1, leading Carter and others to conclude that even a single incidence of race-based discriminatory behavior could cause PTSD (e.g., Carter & Forsyth, 2009). Yet, utility of this observation remains limited as it was not possible to identify how often this outcome occurs or under what circumstances.

Legal Standards for Evaluating the Impact of Discriminatory Trauma

Within legal regimes, courts and administrative agencies have incorporated medical experts to address questions related to mental health conditions. VA disability evaluators, for example, are statutorily required to apply *DSM* criteria in their evaluations of traumatic stress (Mayes, 2014). Even in those fora where judges have not explicitly required the *DSM* to evaluate mental conditions, the *DSM* is incorporated by all professionals who rely on it. Accordingly, in the several contexts where discrimination arises in claims for compensation based upon mental anguish and acquired mental health conditions, plaintiffs usually lose their lawsuits based on race discrimination due to ideas and frameworks espoused by Criterion A1 (Yamada, 2004). For example, even in those cases where the plaintiff can demonstrate that the discriminatory event occurred, civil suits under common law for intentional infliction of emotional distress often fail because the plaintiff cannot meet the threshold of showing that the discrimination is of a nature where it is "outrageous and intolerable in that it offends against the generally accepted standards of decency and morality" (Yamada, 2004, p. 485). In federal lawsuits under Title VII of the Civil Rights Act, plaintiffs suffer tremendous hurdles in demonstrating that conduct was sufficiently "abusive," including frequency and severity of the behavior as well as the unreasonableness of interference with one's ability to work (Yamada, 2010, p. 257). The Supreme Court's standard articulated in *Harris v. Forklift Systems Inc*. (1993), established that the behavior must be objectively abusive to rise above a "mere offensive

utterance" (p. 23). Interestingly, it has been found that victims of racial discrimination are far less likely to prevail in cases than victims of sexual harassment discrimination, even when the conduct is similar (Carter & Scheuermann, 2020). The legal standards have incorporated a similar rationale as Criterion A1, best represented in the second *Restatement of Torts*' recognition that:

> Complete emotional tranquility is seldom attainable in this world, and some degree of transient and trivial emotional distress is a part of the price of living among people. The law intervenes only where the distress inflicted is so severe that no reasonable man could be expected to endure it.
> (American Law Institute, 1965, § 46, cmt. j).

Recognizing inadequate protections for workers who suffer discrimination in the workplace, scholars including Yamada (2010) proposed workplace anti-bullying statutes to prohibit and provide compensation for workplace behaviors that failed to meet the severity requirements of traditional workplace discrimination laws. Simultaneous with this growing anti-bullying movement, traumatologists promoted the concept of "microaggressions" as forms of trauma that may develop over the course of repetition for significant periods of time (Nadal, 2018, p. 13). The benefit of this conceptualization, they argue, is that events that might not normally lead to PTSD based on a single exposure, could, over time, result in greater levels of harm. After over a decade of calls for legislation, only a handful of jurisdictions have enacted such a law (Utah, Tennessee, California, and the Board of Commissioners for Fulton County, Georgia), and there is widespread recognition that the movement has met significant resistance, ironically reinforcing Criterion A1's ideology of suspicion (Richardson et al., 2016).

2013 *DSM-5* Revisions

In 2013, the American Psychiatric Association published its fifth edition of the *DSM*, which "substantially modified" the PTSD diagnosis (Pai et al., 2017, p. 5). Aside from moving

the disorder to a new category, away from "Anxiety Disorders" to its own new "Trauma and Stressor-related Disorders" category (American Psychiatric Association, 2013), this revision also altered the diagnostic criteria. In substance, the new criteria have expanded from three components to four. The new criteria have further narrowed and clarified the nature of the required traumatic event in Criterion A. The new standard is that the event must involve "actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association, 2013, p. 271). This standard clarifies that "stressful events not involving an immediate threat to life or physical injury, such as psychosocial stressors (e.g., divorce, or job loss) are not considered trauma" (Pai et al., 2017, p. 2). The new definition does not explicitly rule out Race-Based Traumatic Stress or Minority Stress as causes of PTSD, but the criteria would seem to exclude such causal events as sufficient traumatic stressors as merely psychosocial in nature. To Pai and colleagues (2017), this change is significant because it removes from eligibility entire categories of trauma that met the prior criteria.

Despite limitations to "death, serious injury, or sexual violence" as qualifying stressors, the *DSM-5* more liberally construed the means by which the condition is acquired, not only allowing for "repeated or extreme exposure to adverse details of a traumatic event," aside from direct exposure to the threat, but also eliminating former requirements that the threat be one "to physical integrity" or that it must result in "intense fear, horror, or hopelessness" (American Psychiatric Association, 2013). The extent to which these changes will change the diagnosis of discriminatory trauma is unknown. While some mental health providers estimate that the new standards will "increase the potential for better recognition of race-based trauma" (Williams & Leins, 2016, p. 35), others suggest that Criterion A has predisposed professionals to be even more skeptical of PTSD claims (Pai et al., 2017).

Impact of Military Discrimination

Military veterans occupy a special place in the spectrum of psychological risk assessment because they are exposed to several stressors that citizens do not experience (Carney et al., 2003). For example, they are subject to geographic relocations every few years, time away from family members on maneuvers and deployments, strict military laws that punish noncompliance, and face the prospect of death and serious bodily harm from the enemy as well as dangerous physical activities (Seamone, 2014). Carney and colleagues (2003) comprehensively identified dozens of different forms of stress experienced by soldiers deployed to the Middle East. One conclusion that results from the confluence of occupational hazards is a greater risk for acquiring PTSD and other mental health conditions (Osborne et al., 2012). Within the military environment, studies have demonstrated a substantial incidence of harassing behavior in the work environment aside from sexual harassment (Webb & Hermann, 2002). Despite enforcement of rules and standards for eradicating military discrimination, and occasional courts-martial (e.g., racially based murders by Soldiers of the 82nd Airborne Division stationed at Fort Bragg, North Carolina), incidents of discrimination continue with some increased attention to hate groups emerging within the ranks (Shane, 2020; McCausland, 2019).

Race discrimination is not seen as simply another stressor in the military. Foynes and colleagues (2013) posit that the harsh military environment amplifies the effects of race and other discrimination experienced during military service. A special body of scholarship has explored the experiences of veterans who experienced discrimination during combat (Kabat et al. 2018; Loo et al., 2007; Loo & Kang, 2003; Loo et al., 2001; Loo, 1998). In studies relating to Vietnam veterans, Loo and colleagues demonstrated that discrimination raised fears of death from the enemy based on the expectation that prejudiced peers will not to come to the target's

aid (2007). Loo and Kang (2003) further showed that many Asian-American veterans were traumatized by their own behaviors resulting from discrimination where they believed they had to prove their loyalty to soldiers of other races by treating Vietnamese with extra disdain (p. 20). They observed in large segments of the veteran population that many suffered PTSD because of regularly being compared by peers to the VietCong based upon their facial and bodily features (Loo & Kang, 2003).

Throughout recent history, the military itself promoted and practiced two prominent forms of discrimination. The first was segregating African American soldiers from Caucasian soldiers until the desegregation of the military by Franklin Delano Roosevelt in 1940s (Kauth & Landis, 1996). The second was enacting a range of anti-gay policies that prohibited same-sex affiliation, sexual acts, and in many cases, tendencies or associations with others known to be homosexual or bisexual (Shilts, 1993). Despite the desegregation of the military, the 1960s and 1970s marked a time of significant social and racial strife that translated to bases in the U.S. and abroad (Cortright, 2005; Sherwood, 2007; Westheider, 2008). Many major military installations and ships experienced conflicts that have been described as race wars, which increased in number of military members involved and number of individuals harmed over time (Freeman, 2009). It was not uncommon to see Confederate flags flying over barracks, burning crosses, Ku Klux Klan (KKK) slogans, and other open demonstrations of racial hostility (Parson, 1984). Tens of thousands of service members learned of race riots and feared them even if they did not personally experience such events. While Carter and his colleagues have established variable reactions to traumatic events, many of these experiences likely meet forensic criteria for Race-Based Traumatic Stress (Carter & Scheuermann, 2020; Carter & Pieterse, 2020; Carter & Forsyth, 2009).

From 1945 to 2011, approximately 114,000 veterans were eliminated from the military in disgrace based upon allegations or proof that they were gay, lesbian, or bisexual (Ramirez & Sterzing, 2017). Researchers agree that this group represents only a small number of the actual population of up to 1,000,000 (LGB) veterans who served (Ramirez et al., 2013).[1] New research indicates that those veterans who endured the prospect of being identified but concealed their identities suffered significant mental health consequences as a result of the stigma and stress (Livingston et al., 2019; Van Gilder, 2017; Ramirez et al., 2013). Communication theorist Bobbi J. Van Gilder examined the way sexual minority veterans altered their communication strategies and behaviors while serving under the expansive cloud of DADT and other policies (2017). She identified three overarching "identity management strategies" developed to cope with the additional minority stresses imposed by anti-gay policies, which often registered a psychic toll (Van Gilder, 2017, p. 158).

From among the various measures, Van Gilder noted some of the most taxing and health threatening ones as "withdrawing," "performing heterosexuality," and "fabricating truths" (2017, p. 162). Van Gilder's research with sexual minority veterans revealed "several participants [who] indicated that they hit a breaking point where they could no longer engage in hiding" (2017, p. 163). The specific "adverse effects" of these common identity management practices included "feelings of self-reproach, isolation, and stress" (Van Gilder, 2017, p. 164). Not only did playing the role of heterosexual to conceal one's sexual orientation require constant self-censoring and elaborate ploys, it often required sexual minority veterans to participate in anti-gay

[1] Gates (2003) estimated that 683,000 veterans were gay men and 350,000 veterans were lesbian. The estimate was based upon the 2000 U.S. Census, which recorded 27.5 million veterans, the National Health and Social Life Survey, the General Social Survey, and Voter News Service polls. Specifically, these sources suggested that 4 percent of U.S. adults were gay or lesbian and 17 percent of gay men and 8 percent of lesbians had served in the military (Gates, 2003).

behavior. This often meant making the gay slurs, encouraging those who harassed and tormented suspected sexual minority servicemen and women, and personally inflicting such harm, not unlike Asian-American soldiers who felt pressured to abuse the Vietnamese as a sign of loyalty (Halley, 1999). Unsurprisingly, those veterans who have experienced the stigmas of DADT and heterosexism have developed mental health conditions including PTSD (Livingston et al., 2019).

VA Compensation

The military is unique from other employers because it owes a statutory obligation to compensate and treat all injuries that are caused or aggravated during military service, either through a medical retirement from active service if one is warranted, or through the apparatus of the Department of Veterans Affairs if the service member is no longer in the military. In principle, the scope of disability coverage is simple: If a disease was not noted at the time of entry into the military, the veteran enjoys the benefit of a presumption that he or she had sound health (38 U.S.C. § 1110; 38 U.S.C. § 101(6)). If the veteran later sustains an injury in the line of duty (e.g., not acquired through the course of committing willful misconduct), and that injury causes or aggravates a health condition, the veteran will be eligible for treatment and compensation according to his or her rating (38 U.S.C. § 1110; 38 C.F.R. § 3.1(d)). There is no limitation on the cause of the harm. A military member who is struck by a car while walking to work is covered, even if the car was not operated by a government driver. This theory of injuries in the line of duty further extends to injuries suffered because of criminal conduct by a perpetrator, such as a sexual assault, or discrimination.

When a veteran claims PTSD based on a cause unrelated to combat, such as harassment by another service member, the VA evaluates the claim pursuant to 38 C.F.R. 3.304(*f*), which

describes the applicable evidentiary threshold as sufficient corroborating evidence to support the claimed stressor. Mayes (2014) suggests that this regulation pays deference to the *DSM*'s Criterion A standard. The necessity to demonstrate a "stressor" by credible independent corroborating evidence, makes it much harder on veterans to establish the causal elements of their claims. As Mayes (2014) further explains, veterans may be more successful in obtaining compensation for their mental health conditions if they claim disorders besides PTSD which do not have such a stringent requirement. The extent to which the VA has compensated claims for discriminatory trauma is unknown, likely because cases are not tracked by the VA in this degree of specificity. However, cursory review of VA appellate cases indicates several claims raised based on discriminatory trauma, either standing alone or in combination with injuries attributed to other nondiscriminatory causes. While one can expect the VA to respond more favorably to such claims given changes to the *DSM-5*, Mayes (2014) doubts VA raters' willingness to expand their diagnostic practices. Recently, four years after the new criteria emerged, the VA Inspector General concluded that adjudicators were erroneously denying claims for Military Sexual Trauma, which resulted from misapplication of VA's stressor rule (VA Department of Inspector General, 2017).

Conclusion

This empirical review of the literature demonstrated the inherent complexity and suspicion surrounding the diagnosis of a mental health disorder related to trauma. Over time, the diagnostic criteria of the *DSM* have grown less lenient in defining the nature of a traumatic stressor that would result in a PTSD diagnosis to the point where a distressing event will be considered as a mere psychosocial stressor unless there is a threat of death, injury, or sexual assault. Beyond the already unforgiving PTSD diagnostic criteria in the *DSM-IV*, the

codification of additional limitations in 2013 dealt a blow to those hoping to link PTSD to discriminatory events by this limitation in the magnitude of the event. But the *DSM-5* curiously provided additional help by recognizing numerous pathways for being traumatized if the event meets the sufficient threshold. Although it is unlikely that racial slurs will meet the threshold for sufficient trauma, the military context raises the prospect of different threats of harm. Those in combat may fear death from the enemy based on peer's refusal to come to their aid because of discrimination. Gay and lesbian service members may have anticipated that corrective rape would be perpetrated on them if they would be discovered due to the DADT policy. Because no accounts have been made of the current factors considered in the VA disability compensation for traumatic discrimination cases, the instant review is necessary to determine the extent to which the military environment may uniquely contribute to the acquisition of PTSD and other mental health disorders.

This part established that the VA system exists as a method by which veterans can obtain medical treatment and compensation for the impact of discrimination during their military service. Unique features of the military, including ready access to weapons and pressures to conform to group expectations, often act as an incubator for psychological harm from discrimination, most particularly when the service member must worry about the lack of peer assistance during enemy engagements or other life-threatening duties. While these unique psychological wounds can be deep and persistent, they have not been the subject of careful or systematic review by the VA. In fact, the lack of knowledge or interest is likely based upon the VA system's suspicion of PTSD claims and mental health injuries that do not arise from combat. If the experience of MST survivors is instructive, where these claims have suffered repeated and erroneous denial, survivors of discrimination that does not involve sexual trauma may represent

the claimants subjected to the greatest degree of institutional ignorance and error in decision-making.

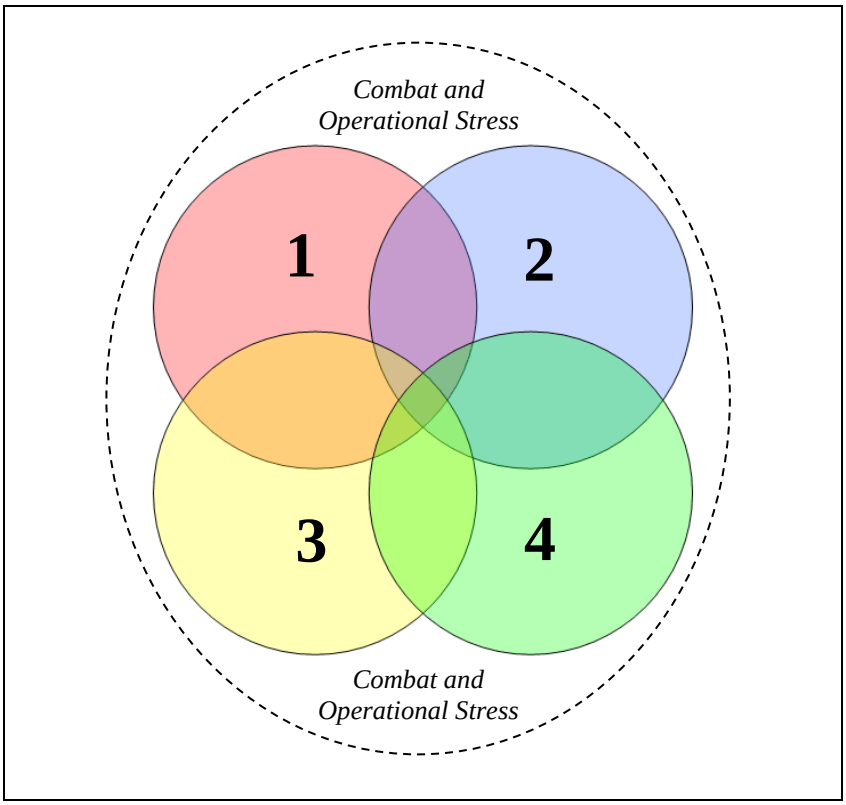
Even if veterans learn that they can apply for VA benefits based on the consequences of race or sexual-orientation discrimination, there is little guidance for how to prove one of these complex claims. Identification of trends in VA disability cases is a first step toward understanding how the VA resolves these claims and the types of evidence the VA deems most valuable in meeting the standards for service-connection. A second step is to apply current theoretical frameworks for Race-Based Traumatic Stress (Carter, 2007) and Minority Stress (Meyer, 1995) to determine whether the VA cases are consistent with the research on discriminatory events that are capable of generating lasting psychological harm.

Visual Description of the Theoretical Framework Underpinning This Study

Livingston and colleagues (2019) adopted a theoretical framework for evaluating the "intersecting and clinically significant experiences affecting trauma-exposed LGBT veterans" (p. 698, Figure 1). The theory holds that, although many forms of discrimination may not normally be considered traumatic under Criterion A, certain circumstances created a unique overlap in levels of severity and placed some "extreme acts" in an "ambiguous space between non-Criterion A stressors and Criterion A trauma" (2019, p. 698). This study adopts the framework identified by Livingston and colleagues, which is visually depicted on the following page in Figure 2.

Figure 2

Overlapping Discriminatory Influences on Sexual and Racial Minority Veterans Identified by Livingston et al. (2019).



Note. Italicized text and dashed lines represent additions to the model

In the figure above, the upper left circle (item 1) represents Criterion A trauma, the upper right circle (Item 2) represents discrimination, the bottom left circle (Item 3) represents microaggressions, and the bottom right circle (Item 4) represents minority stress. Livingston and colleagues associate the upper left Criterion A Trauma circle (Item 1) with "sexual assault," "exposure to death and threatened death," and "serious physical assault" (2019). They associate the upper right discrimination circle (Item 2) with "denied equal employment and healthcare," "verbal abuse," and "military investigations and legal proceedings (DADT)." The authors link the bottom left microaggression circle (Item 3) with "negative slights and insults," "inaccurate

pronoun usage," "assumed heterosexuality," "assuming pathology," and "sexual objectification." Lastly, they define the bottom right minority stress circle (Item 4) with "social isolation," "shame," "vigilance," "concealment," and "expectations of rejection" (2019).

Consistent with the theories explored above, certain modifications would be suitable to extend the visual to account for overlap in the area of racial minority stress. Although not appearing in the visual depiction, consideration of similar overlapping effects in the context of racial discrimination would support the addition of display of symbols related to the KKK, swastikas, nooses, cross-burning, and hate groups as well as the separate fact of less-than-honorable discharge in Item 2's discrimination circle. Augmented to account for discrimination of both sexual and racial minority veterans, it would also be appropriate to add the act of participating in berating one's own minority group to qualify as a distinct form of minority stress in the bottom right minority stress circle (Item 4). The final modification, as represented by the larger circle with the dashed line, is the overlapping impact of combat and military operational stress as a key accelerant of any of the four discriminatory effects or combinations thereof.

While the visual covers many forms of discrimination, such as that recognized by the Department of Defense Inspector General (2000; Estrada et al., 2011), it further reflects the compounded effect of overlapping forms of discrimination. As reflected above, the intersection of different discriminatory behaviors can amplify the effects of acts that would, alone, be psychologically less harmful. For instance, microaggressions represent the accumulation of a series of minor discriminatory incidents over time (Nadal, 2018). Normally, these events would not be considered to have sufficient magnitude to qualify for trauma (Nadal, 2018). Yet, microaggressions occurring in a combat zone where enemy attack is likely may cause a veteran

to fear greater harm from the enemy based on the perception of stigma, thus increasing the magnitude of the micro-aggressive experience.

The second component of this study's conceptual and theoretical framework emphasizes the combat and operational stressors that are unique to the military profession, represented in Figure 2 by the large dotted line encircling all discriminatory impacts. Group cohesion is paramount to the survival of military units, and targets of discrimination may come to believe that they are at greater risk of harm in combat or dangerous training exercises based on their poor treatment. In a combat zone, targets of discrimination may also come to empathize with members of the host nation believing their situation to be akin to a similar form of oppression. Accordingly, this study incorporates Loo and colleagues' (2007) identification of veterans' concerns that they will not be helped by discriminatory peers in combat and Parson's (1984) concept of "gook-identification syndrome" as military factors that enhance the traumatic effect of discriminatory acts specifically in the military context.

This component of the conceptual and theoretical framework recognizes that discriminatory events that have an impact on the veteran's discharge characterization or separation from the military will substantially increase the likelihood of traumatic effects (i.e., onset of chronic psychological disabilities). This realization comes from the recent research of Brignone and her colleagues (2017), who have relied on large cohorts of veterans to demonstrate that involuntary separation from the military prior to one's contractually specified date and less-than-fully-honorable discharge characterizations make veterans several times more likely than peers without such stigmatizing records to experience adverse mental health outcomes. This effect is particularly relevant to sexual minority veterans because a finding of substantiated homosexuality by the military mandated involuntary separation. Beyond this, research

demonstrates that Black and racial minority veterans were subjected to significantly greater disciplinary actions, including involuntary separations, than their White peers (U.S. Government Accountability Office, 2019; Christensen & Tsilker, 2017). This study incorporates this new knowledge to better understand the etiology of traumatic discrimination.

The third component of this study's conceptual and theoretical framework clarifies racial minority from sexual minority discrimination and identifies unique characteristics of the impact of discrimination on both groups. Race differs substantially from sexual orientation because race may be objectively observed by the perpetrators of discrimination, while sexual orientation requires subjective interpretations of the perpetrator. This theoretical framework builds on the work of Carter (2007) and Meyer (1995) in recognizing that these reasons for discrimination result in separate impacts and coping mechanisms unique to race or sexual orientation. In the adoption of this distinction, this framework rejects holistic theories that all minority groups undergo the same types of stigma from discrimination without respect to their sexual identity or racial group.

This distinction also requires consideration of coping mechanisms that may be impacted by the targeted service member's level of identity formation with the group being discriminated against. Van Gilder (2017) and Parson (1984) both recognize the vital role of coping strategy employed by veterans in alleviating or attenuating psychological harm. Gay veterans who manufactured separate lives in public to conceal their private identities often experienced problems in forming a personal identity, which resulted in feelings of isolation (Van Gilder, 2017). In many instances, Black veterans became more suspicious of White people in general based on military discrimination, which increased opportunities for conflict and isolation

(Parson, 1984). These perspectives differ from studies suggesting that the nature of the discrimination, alone, determines psychological impact.

Overcoming Prior Methodological Limitations in the Body of Research

The use of appellate decisions for statistical analysis raises numerous concerns about the nature of judicial decision-making. Specifically, judges often omit discussion of facts deemed unimportant and may be writing for different audiences, which can change their emphasis and even the meaning of a decision (Cohen, 2015; Baum, 2006). While BVA decisions can suffer from the same pressures, there are some safeguards of BVA decisions that make them more suitable for analysis than other types of appellate decisions.

Because service-connection for a disability requires proof of an injury during military service in addition to current symptoms of that illness, BVA judges' written opinions must necessarily discuss the health condition of a veteran, prior to entry into the military, during military service, and following military service. Military medical and other official records are carefully explored in these decisions, as are all mental health diagnoses obtained at each stage under consideration. The law governing BVA decisions requires judges to state the reasons and bases for their decisions (*Gilbert v. Derwinski*, 1990, pp. 56-58 (citing *Securities Exchange Commission v. Chenery* (1947)). In 38 U.S.C. § 7104, Congress mandates:

> Each decision of the Board Shall include-
>
> (1) A written statement of the Board's findings and conclusions, and the reasons or bases for those findings and conclusions, on all material issues of fact and law presented on the record;
>
> (2) [An explanation of evidence not considered under certain circumstances with guidance on where to present such evidence]; and

(3) an order granting appropriate relief or denying relief.

(See also 38 C.F.R. § 19.7 (further codifying these requirements)). This requirement to provide the rationale for a decision is a common staple of the entire U.S. legal system and is the very basis for the assumption that the contents of judicial opinions gave rise to the judges' decision rather than some external factor that cannot be accounted for: "Implicit in [the] system of written opinions is the following premise: That the judge actually reached the outcome that she did for the reasons stated in the opinion" (Surden, 2014, p. 108).

Even though BVA decisions follow a structured format, this does not end the concern with use of ML on appellate cases. Critics, such as Pasquale and Cashwell (2018), have addressed the differences between legal decisions and other types of texts and have questioned the sophistication of ML to classify and predict judicial outcomes. Despite these criticisms, a growing number of scholars have experimented with different types of appellate cases ranging from Thai (Gao et al., 2019) and Indian (Kowrihawat et al, 2018) appellate decisions to decisions of the European Court of Human Rights (Aletras et al., 2006). Even though computer algorithms cannot substitute for experienced attorneys' ability to perceive nuances in meaning (Pasquale & Cashwell, 2018), the legal scholars suggest that ML still "may provide a helpful guide in providing professional advice" rather than the standard of legal professionals relying on "professional intuition" and limited exposure to cases in the courtroom (Surden, 2014, p. 104).

Surden (2014) has identified how ML is well suited to identify relationships in racial discrimination cases: "For example . . . we could envision an algorithm learning that in workplace discrimination cases in which there is a racial epithet expressed in writing in an e-mail, there is an early defendant settlement probability of 98 percent versus a 60 percent baseline" (p. 104). Building on this, Surden offers another example in which the algorithm can

identify the difference between outcomes in cases where multiple harassing e-mails were sent over a week versus over a year. In this instance, "such a nuance in time frame may be hard for an attorney to casually detect across cases but can be easily revealed through data pattern analysis" (Surden, 2014, p. 104).

Drawing on precedents from ML classification of accident narratives in the field of occupational health, this study employed specific tools within Python to classify the content of cases in a manner that has proven to detect hidden patterns within a large corpus of documents. The models tested combinations of classification algorithms including Bag-of-Words (BoW), Term Frequency-Inverse Document Frequency (TF-IDF), Naïve Bayes (NB), Support Vector Machine (SVM), and Logistic Regression (LR) (Salton & Buckley, 1998; Suykens & Vandewalle, 1999). The challenge was to assess which combinations provided the best classification results for discrimination cases.

One of the most significant limitations of prior ML research into appellate decisions has been exclusive reliance on ML. None of the legal scholars who has relied on ML has done further statistical analysis to evaluate relationships between specific variables and case outcomes. Drawbacks of relying solely on ML include the fact that algorithms can incorporate biases and errors that exist in the corpus of the cases that are used for training and testing (Cofone, 2019). This study uses ML solely to classify specific types of cases, but then adopts empirical methods, including logistic regression techniques, to explore various case characteristics with the aim of obtaining additional insights.

The use of ML overcomes the traditional limited reliance on commercially available legal databases like LexisNexis and Westlaw. Of the scholars who do use empirical methods to evaluate determinants of appellate decisions, most rely upon the rudimentary search functions of

these popular programs (see Hall & Wright, 2008, identifying various empirical legal studies). While these common programs use less sophisticated algorithms for word searches and classification, the software does not have the capability of Python or R, which are primary programs used for ML tasks. Walker and colleagues (2017; 2018) have described the limitations of LexisNexis and Westlaw for researching BVA decisions. Although these programs' search functions enable users to find certain key words, the search technology is still not capable of identifying the rationale for cases or certain nuances that would identify whether certain cases were decided on similar grounds (see generally Grady, 2019).

To date, no legal researcher has applied ML algorithms to classify BVA cases. The most advanced research on BVA decisions appears in Walker and colleagues' (2017; 2018) use of semantic text analysis and Natural Language Processing (NLP) to evaluate BVA decisions related to PTSD. Walker and colleagues have incorporated some methods of textual semantic analysis to identify key features in BVA opinion texts. Drawing on typology theory, they note types of sentences in BVA decisions that indicate application of judicial rationale to a given issue (Walker et al., 2018). This is distinguished, for example, from the type of sentence where a court might mention a concept in passing only for the purpose of demonstrating an idea. In total, Walker and colleagues have managed to study PTSD cases related to a total of 30 randomly selected BVA disability cases decided in the three-year period of 2013 to 2016 (Walker et al., 2018).

While Walker and colleagues have used some techniques of NLP to identify the structure of sentences and paragraphs within BVA PTSD opinions, the approach did not offer methods to distinguish specific types of claims, such as those based upon discrimination. Further, the researchers' methodology only addressed claims based on PTSD, certainly not other types of

mental health conditions. The research did not attempt to identify whether a given case characteristic had an impact on the outcome of a PTSD decision. Moreover, none of the PTSD cases examined by Walker appeared to involve claims of traumatic discrimination.

In sum, this study used ML and empirical research techniques to evaluate whether specific types of case characteristics are related to decisional outcomes in discrimination appeals. Archival research is possible at this level because the VA publishes its BVA appellate decisions on a freely accessible electronic database that is available through a public website. Careful examination of cases enabled identification of the factual evidence considered as well as corresponding decisions on service-connection. Logistic regression analysis further permitted assessment of relationships between types of evidence (the independent variables) and outcome (the dependent variable).

Chapter 3: Research Methodology

This study sought to identify determinants of success for VA disability appeals based on race and sexual-orientation discrimination. This chapter describes a quantitative research methodology that involved multiple steps to unearth discrimination-related cases within a massive corpus of all BVA decisions. The chapter first explores how AI, particularly, ML, was deployed as a novel but highly effective means for automatically classifying discrimination-related cases from 123,011 mental health decisions. Specifically, 4229 cases from this initial overall pool were identified as potential discrimination cases through an iterative search process. ML techniques were then used to develop two separate classifiers for racial and sexual-orientation discrimination based on human-annotated training data, which were applied to the narrowed pool of cases. After using ML to classify and filter discrimination-based mental health appeals, the next step was to conduct statistical analysis of the resulting 653 discrimination cases. The chapter further explains how multilevel logistic regression analysis was then used to identify associations and relationships between case characteristics and judicial outcomes.

Methodology

Population Sample

Experts in the field of law and technology have recognized that, "[t]o mine legal data, you must first define the data you seek" (Grady, 2019, p. 21). The first step in this study was to classify decision types from a large database of cases. This study used archival research of an electronic database of written appeals by administrative judges of the U.S. Board of Veterans Appeals. These decisions are made available to the public in a redacted form on a website called the BVA Decision Search Database (U.S. Department of Veterans Affairs, 2020). The BVA

regularly updates the database, which archives cases issued by BVA judges from March 1990 to roughly three months prior to the present date. A search of BVA cases on LexisNexis Advance within the "Board of Veterans Appeals" source repository revealed a total of 1,059,258 individual BVA decisions as of February 12, 2019. All cases resolved veterans appeals of decisions for compensation and pension determinations, GI Bill payments, and many other VA benefits. After identifying the database, it was necessary to identify cases of potential value, which addressed veterans' claims that they were entitled to disability benefits for a mental health condition that they sustained during military service.

Obtaining the BVA's Classification of Mental Health Appeals

Filtering of cases was accomplished by use of an existing list of case docket numbers classified by the BVA from a quality control program called the Veterans Appeals Control and Locator System (VACOLS). VACOLS data from the late 1990s through 2019 were obtained from a Freedom of Information Act request filed by the law firm of Bergmann and Moore (Ames, 2018; Peak, 2018). Docket numbers for mental health service-connection cases were extracted from a larger list and were matched with cases on the VA's Decision Search Database using the freely accessible web scraping tools Scrapyhub and Crawlera. It was necessary to use ML programs to classify decisions based on the rudimentary capabilities of the Decision Search Database site, which only permits a visitor to search for "an exact word or phrase," "any of these words," or "none of these words" (Department of Veterans Affairs, 2020). The code used to identify and extract the opinions by docket number appears in Appendix A.

The retrieved electronic case documents were checked for duplicates, corrupted files, and incomplete files. This process resulted in a total of 123,011 cases containing at least one claim of service-connection for mental health conditions. Each written decision represented a veteran

who made a claim for benefits that was denied by a VA Regional Office and appealed to the Board of Veterans Appeals. In some cases, the BVA was hearing the same case after a remand from a higher court or after the Regional Office had considered new information and denied the case once again.

While, unquestionably, the subset of 123,011 cases would contain discrimination claims, the BVA did not further categorize case types beyond service-connection claims for mental health disorders. It was necessary to evaluate case content within this massive corpus based on the structure of BVA decisions, which follow a standardized template in addressing the specifics of a given claim, such as the procedural history of the case, positions of the parties, standards of review, findings of fact, and conclusions of law in this rough chronological order (Board of Veterans Appeals, 2018, p. 76; Frost & Bateman, 2010).

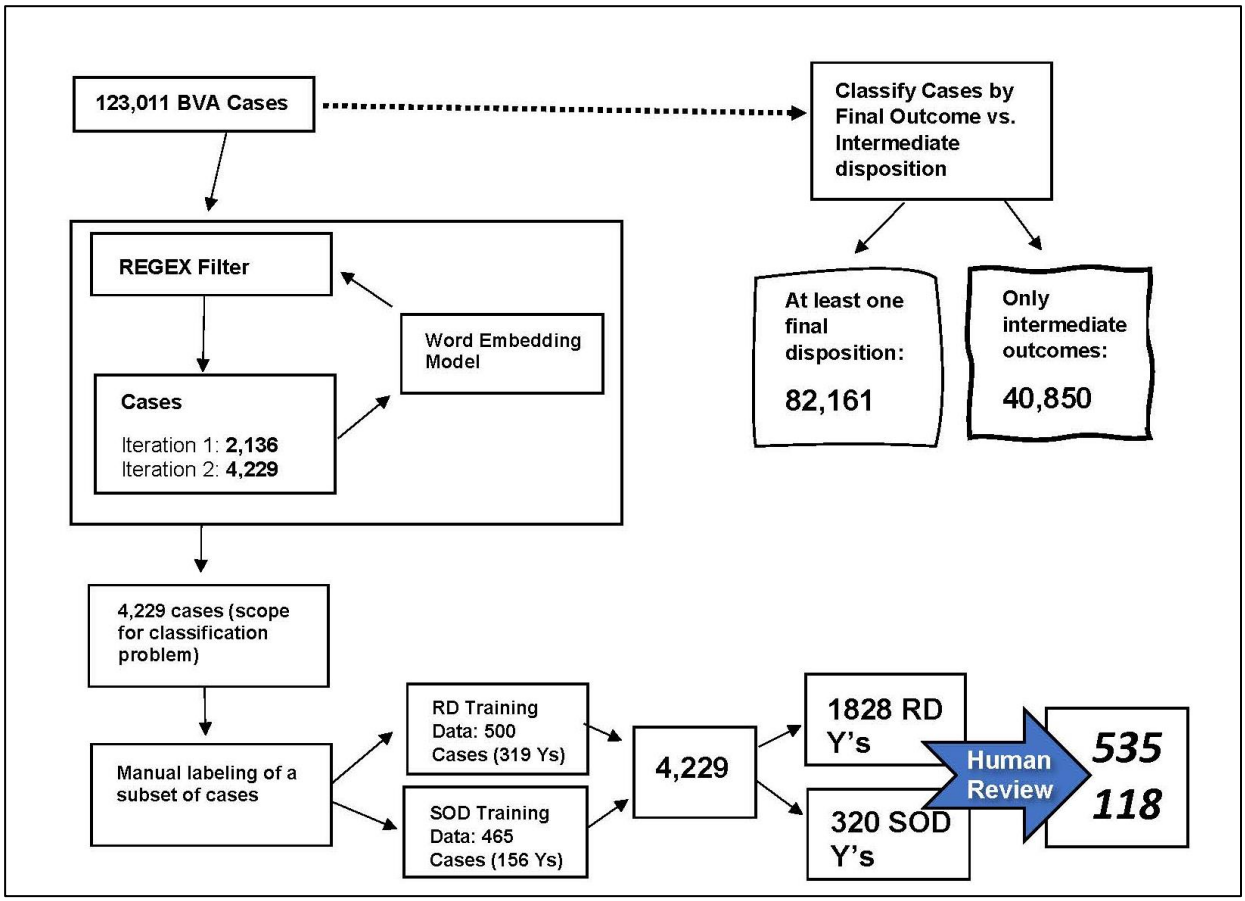
Within the BVA, opinions begin by stating the nature of the veteran's claim, such as service-connection for as specific mental health disorder. A veteran may make a claim for multiple mental health conditions simultaneously as long as the veteran has current health impairment at the time of application. In 2000, the VA's highest court, the CAVC, held that disability evaluators are required to consider all mental health conditions that may be related to a claimed disability, and not just the condition listed on the disability application (*Schroeder v. West*, 2000). Thus, if a veteran indicates PTSD as the disorder and medical evaluators do not find evidence of PTSD but do find evidence of an anxiety disorder, the evaluators must provide service-connection for anxiety disorder even though the veteran did not list it as the basis for compensation. These challenges required implementation of various tools of computational linguistics, data mining, and machine learning, described in detail below.

Identification of Training and Testing Data

Figure 3, below, depicts the various NLP and ML methods used to classify traumatic discrimination cases.

Figure 3

Diagram Depicting Stages of Algorithm Development



The figure summarizes the first step of using Regular Expression (REGEX) tools to identify 2,136 potential matches out of the 123,011 cases. Next, the word-embedding software Word2Vec was implemented to find alternative words based on the REGEX patterns by mapping the words in vector space. This step nearly doubled the number of candidate cases within the corpus of 123,011 cases to a total of 4,229. From here, the third step involved developing a

classification model for race discrimination cases and a separate model for sexual-orientation discrimination cases to apply to the 4,229 cases. For each model, 500 cases were coded by research assistants to determine whether the case fell into the category (e.g., Did a given case in the race discrimination model contain a claim of discrimination based upon race?). The data were partitioned into training and testing data after categorization and the models were tested using different combinations of algorithms to identify how well the models performed in the classification task. Finally, the best performing models for race and sexual orientation were unleashed on the population of 4,229 candidate cases.

Early on, experimentation with an outcome classifier, which appears in the right side of Figure 3, above, revealed the proportion of cases within the 123,011 that reached any sort of decisional finality. Only 82,161 of the decisions resulted in an outcome of approved or denied for the appeal. The other 40,850 decisions resulted in intermediate outcomes. The ML process adopted for the classification of cases relied upon research assistants to review the cases for accuracy in classification as well as removal of intermediate outcomes within the cases for each discrimination type. Ultimately, the best performing race discrimination model resulted in a validated set of 535 actual race discrimination cases out of 1,828 candidate cases. The best performing sexual-orientation discrimination model resulted in a validated set of 118 actual sexual-orientation discrimination cases out of 322 candidate cases identified by that model. The section below describes this methodology for identifying cases in further detail.

Using ML to Classify Discrimination Type

Regular Expression and Word Vectorization

The ML approach was multifaceted and iterative and began with an NLP technique to identify potential racial discrimination cases and potential sexual-orientation discrimination cases. Regular expression search patterns tentatively identified 2,136 out of 123,011 cases. These patterns consisted of the keywords formulated from the initial string searches (e.g., "racial," "discrimination," "gay," "sexual orientation," and "harassment"). The precise word combinations and text strings appear below in Table 4.

Table 4

Regular Expression (REGEX) Search Terms for Initial NLP Searches

Search Category	Search Terms	Cases Identified
IDENTITY_REGEX	r'racial|racism|race-based|homosexual|sexual orientation|\sgay[^A-Za-z]'	1,194
RACE_REGEX	r'racial(?:ly)?(?:-based)? (?:discriminat|%s|harass|slur)'	500
SEXUAL_ORIENTATION_REGEX	r'sexual.orientation(?:-based)? (?:discriminat|%s |harass|slur)'	442
Total Identified Cases of Potential Traumatic Discrimination		**2,136**

To develop the race-based classifier, it was determined that a minimum of 500 cases would be required for developing training and testing data. Research assistants manually reviewed the IDENTITY_REGEX and RACE_REGEX cases to confirm the existence of race-based discrimination cases. The results of the manual review required additional confirmed race discrimination cases. Akin to the process used by Mikolov and colleagues (2013), the ML approach continued by using this initial set of cases to train a word-embedding model, which represented the words that occur in the corpus in a semantic vector space.

This enhanced NLP approach used the Word2Vec word-embedding technique to identify additional words that occur in similar contexts within the corpus using cosine similarity. Word2Vec uses the contexts of words to associate their semantics. Embedding techniques measure the "distance" between words by calculating the angle between two vectors in the (multi-dimensional) vector space. Cosine similarity is more appropriate than simple Euclidean distance because it adjusts for the fact that some words appear more frequently than others (Sohangir & Wang, 2017). For example, words such as "mistreatment," "maltreatment," and "oppression" were found to occur in contexts similar to those of "discrimination." REGEX search patterns were then extended to include these additional words to identify more cases of possible interest. Various scholars in the field of computational linguistics have adopted similar embedding approaches to measure similarity in legal texts and to retrieve relevant prior cases (e.g., Gain et al., 2019; Kayalvizh et al., 2019; Renjit & Indicula, 2019). This overall process, as applied to the corpus of 123,011 mental health service-connection cases, resulted in an increase of the number of cases identified for analysis from 2,126 to 4,229 cases from which a portion of cases was used as training data to construct the racial discrimination and sexual orientation classification models. This working dataset provided the samples for model training and evaluation. Further development of the algorithms for automatic classification were based upon the 4,229 cases rather than the corpus of 123,011 in an effort to limit the amount of human coding necessary and because word embedding produced so many variants on the initial language identified by REGEX searches.

Dataset Preparation and Partitioning

Rather than developing a single algorithm to categorize all types of discrimination, theoretical research suggested that the phenomenon of racial trauma operates quite differently

from sexual-orientation trauma. Race discrimination involves unique aspects related to one's immutable physical characteristics (Carter & Pieterse, 2020), while sexual-orientation discrimination targets behaviors and speculation about one's identity, preference, or orientation. Thus, it was expected that the language patterns associated with each type of discrimination would be distinct. Accordingly, training data and testing data were harvested for two different ML classification models. A total of 500 cases from the 4,229 were identified as good candidates for training the race model and a different set of 500 cases were identified for training the sexual orientation model. The 500 race cases were then reviewed and manually labeled by research assistants as "Y" or "N" to indicate the occurrence or nonoccurrence of racial discrimination. A research assistant developed the code for a program to easily extract portions of cases that normally included factual background and judicial reasoning to aid in manual review (Appendix B). The manual review process identified 319 occurrences of racial discrimination and 155 cases where there was no trauma specifically resulting from racial discrimination. Twenty-six cases out of the 500 were too ambiguous to label. The ambiguous cases were ignored in the training of the model. To avoid the class imbalance problem (Chawla et al., 2004), which occurs when cases are much more likely to fall into one classification than another and can result in the under-prediction (lower sensitivity) of rare categories (Nanda, 2017), the final dataset was constrained to consist of an equal number of "Y" and "N" cases (155 cases each), which was the maximum possible since there were only 155 "N" cases. Finally, 75% of the selected 310 cases (232) were randomly selected for training the model and the remaining 25% (78) were used to test the model.

For the sexual orientation classification model, manual labeling identified a total of 309 "no" results and 156 "yes" results. The final train and test dataset for sexual-orientation

discrimination consisted of 312 cases total, an equal number of "yes" and "no" cases to avoid the problem of class imbalance. In this model, the dataset was again divided 75%/25%, resulting in 234 cases in the training set and 78 cases in the testing set.

Software Selection for Machine Learning

This study used the special tools in the Python software program, which enables the broad use of several types of algorithms for classifying text (Benafort et al., 2018; Pedregosa, 2011), including legal appellate cases (Aletras et al., 2006). Prior to training and testing algorithmic classification of texts, Python's preprocessing programs within the Natural Language Toolkit (NLTK) were applied to clean, tokenize, vectorize, and normalize the extracted case summaries. Case documents were converted into a standard format through NLTK by identifying and removing features that often confuse algorithms, such as misspellings, spacing variation, extraneous words, punctuation, and even "word inflections" (Ignatow & Mihalcea, 2018, pp. 99-100). For example, NLTK was used to remove stop words, such as the words included "disability" or "claim" because those words would appear in every BVA decision examined (Zhang et al., 2019). The NLTK tools further counted extracted "unique terms . . . across the corpus (i.e., the collection of narratives) and used to form the list of vocabulary for the corpus being studied" (Zhang et al., 2019). Vectorization occurred when "[t]he corpus of narratives [was] represented as a numerical matrix, with each row representing a vectorized narrative and each column denoting the term frequency in a narrative" (Zhang et al., 2019, pp. 7-8).

The final step in pre-processing was normalization, which involved applying the Term Frequency-Inverse Document Frequency (TF-IDF) equation to ensure that frequently appearing words are relevant to the text being analyzed.

IDF is calculated as follows.

$$IDF_{t,n} = \log\left(\frac{C+1}{c_t+1}\right) + 1$$

where *t* represents the term of interest, *n* represents the narrative under consideration, *C* represents the total count of narratives, and c_t represents the number of narratives containing the term. As a result, TF-IDF gives less weight to words that appear at a higher frequency in the corpus and more weight to less frequent words.

TF-IDF values in each vector are normalized using a Euclidean norm function with the following equation to reduce the impact of variable narrative length.

$$v'_{t,n} = \frac{v_{t,n}}{\sqrt{\sum (v_{t,n})^2}}$$

Where $v'_{t,n}$ is the normalized TF-IDF value of the *t*h term in narrative *n*, and $v_{t,n}$ is the regular TF-IDF value of the *t*th term in narrative *n* (Zhang et al., 2019, p. 8).

Word vectorization, model training, and model testing were accomplished using the Python module Scikit-learn (Pedregosa et al., 2011). A constant learning rate of 0.0001 was used with a tolerance level of 0.001 for 5 iterations as the stopping criterion. In other words, the model training was stopped when its accuracy (least square error) did not improve by more than 0.001 for 5 consecutive iterations.

Algorithm Selection

The Python software program was used to identify similarities and patterns in texts and classify documents according to different algorithm types. Every algorithmic approach is rooted in Harris's distributional hypothesis, which holds that "words in similar contexts have similar meanings" (Levy & Goldberg, 2014; Harris, 1954). Relatedly, "[d]ifferences of meaning

correlates with differences of distribution" (Carpuat, 2015, p. 5 (citing Harris)). Two outgrowths of distributional theory are particularly relevant to identifying documents that use words in a similar context. The Context Inclusion Hypothesis states, "If a word *a* tends to occur in a subset of contexts in which word *b* occur (*b* contextually includes *a*), then *a* (the narrower term) tends to entail *b* (the broader term)" (Carpuat, 2015, p. 32). The Context Combination Hypothesis further holds that "[t]he tenden[cy] of word *a* to entail word *b* is correlated with some learnable function of the contexts in which *a* occurs, and the context in which *b* occurs" (Carpuat, 2015, p. 34).

Researchers have demonstrated the reliability of ML algorithms. Some of these popular algorithms include random forest, neural networks, decision trees, LR, NB, fuzzy Bayes, and SVM (e.g., Zhang et al., 2019; Marucci-Wellman et al., 2017). Each model operates based on the same general principle, but invariably results in different levels of precision based upon unique features (e.g., Bertke et al., 2016, p. 119). The current consensus is that "SVM algorithms performed better than Naïve Bayes and several other learning algorithms" (Vallmuur et al., 2016, p. i37). However, further research has identified the way that Bayesian algorithms have the "particularly striking" ability to identify poor matches that should be reserved for human coding (Marucci-Wellman et al., 2015, p. 173). Continued research in this field, particularly in the categorization of occupational injuries in large databases, has led to the preference for combined methodologies where researchers deploy two or three different algorithms on the same documents and then look to the amount of agreement between the results to determine the overall quality of the categorization (Marucci-Wellman et al., 2017; Vallmuur et al., 2016). When substantial difference is detected, such as two programs classifying the same text into different categories, researchers use these metrics as "filters" which divert those

documents from machine coding to human coding (Marucci-Wellman et al., 2017; Marucci-Wellman et al., 2015).

Based on the leading contemporary research, this study adopted Vallmuur and colleagues' (2016) multi-algorithm agreement standard, supplemented by a filter that diverts documents for human coding upon sufficient disagreement between models in categorizing traumatic discrimination claims. The relative accuracy rates from different combinations of machine algorithms vary, with combinations of SVM, NB, and LR producing the best results in a three-model agreement format (Vallmuur et al., 2016, p. i40, Table 4; Marucci-Wellman et al., 2017, p. 359). SVM algorithms are unique in the mix because they "map input features onto high dimensional space so that separate classes are divided as widely as possible by hyperplane. After training, the new narrative vectors are classified by mapping them onto the same space and predicting which side of the hyperplane they fall into" (Zhang et al., 2019, p. 9).

Measuring Accuracy of Algorithmic Categorization

This study used different combinations of algorithms to identify the strongest performing model. It primarily relied upon a confusion matrix to visualize various aspects of model performance. This included the examination of accuracy, precision, recall, and F1 score, which are different metrics. The accuracy of a classifier in this study confirmed how well the algorithm "correctly identif[ies]" traumatic discrimination versus non-traumatic discrimination cases (Zhang et al., 2019, p. 10). Accuracy was calculated with the following equation:

$$Accuracy = \frac{True\ Negatives + True\ Positives}{Total\ Number\ of\ BVA\ Cases} \times 100$$

Precision measured the classifier's performance at "avoiding labeling" a non-traumatic discrimination case as traumatic discrimination (Zhang et al., 2019, p. 10). This metric was attained with the following equation:

$$Precision = \frac{True\ \ Positives}{True\ \ Positives + False\ \ Positives} \times 100$$

Recall measured the classifier's performance at identifying actual traumatic discrimination cases (Zhang et al., 2019, p. 10). Recall was achieved by the following equation:

$$Recall = \frac{True\ \ Positives}{True\ \ Positives + False\ \ Negatives} \times 100$$

"The F1 Score is a weighted average of precision and recall, which takes false positives and negatives into account. It represents an evaluation of a classifier's overall tendency to correctly classify" (Zhang et al., 2019, p. 10). The equation for F1 Score is:

$$F1 = \frac{Precision \times Recall}{Precision + Recall} \times 2$$

Generally speaking, F1 scores closer to 1.0 reflect the best performing model. In this regard, an F1 score of 0.648 has been found acceptable in text classification when it denotes the highest score among different models (Banjade et al., 2016).

Finally, "the confusion matrix provides an effective way to visualize the performance of a classification model by reporting the number of true negatives, false positives, false negatives, and true positives" (Zhang et al., 2019, p. 10). In their work, Nanda and colleagues (2016) recommended using a confusion matrix for ML categorization because "it could be used to assist human coders in identifying categories that often get misclassified by the machine learning algorithm and might require further attention" (p. 73).

Out of different combinations of algorithms including NB, BoW, TF-IDF, and LR, the best performing models involved a combination of SVM and TF-IDF, as reflected in the F1 scores on the following page in Table 5.

Table 5

Average F1 Scores of the Models Trained Using Different Approaches

Method	NB	SVM	LR
BoW	.67	.64	.66
TF-IDF	.66	**.72**	.66

Race Discrimination Classifier

The SVM + TF-IDF model was used to classify the original set of 4,229 potential racial discrimination cases into one of "Y" or "N." The confusion matrix for the best performing model appears immediately below in Table 6.

Table 6

Confusion Matrix for Best Racial Discrimination Model (SVM + TF-IDF)

		Actual				
		Y	*N*	Precision	Recall	F1
Predicted	*Y*	27	18	.62	.88	.72
	N	4	29	.87	.60	.71

Note. RD = Racial Discrimination

As reflected in the confusion matrix, the combination of SVM and TF-IDF algorithms revealed a tradeoff in precision and recall between RD= "Y" and RD= "N" classes, with a higher recall (.88) for "Y" and a higher precision (.87) for "N" classes.

When applied to the 4,229 candidate case population, this automated process identified a total of 1,828 tentative matches filtered for racial discrimination. The code for the race discrimination classifier appears in Appendix C. Because this corpus of potential race

discrimination cases included intermediate outcomes, research assistants reviewed every single case to ensure that only those race discrimination cases that resulted in approval or denial of a claim were retained for further statistical analysis.

Sexual-Orientation Discrimination Classifier

The combination of SVM and TF-IDF algorithms performed best for evaluating the sexual-orientation discrimination model as well. In training this classifier, manual labeling within the 500 cases identified a total of 309 "no" results and 156 "yes" results. The final train and test dataset for sexual-orientation discrimination consisted of 312 cases total, an equal number of "yes" and "no" cases to avoid the problem of class imbalance. The dataset was again divided 75%/25%, resulting in 234 cases in the training set and 78 cases in the testing set. Unlike the race-discrimination model, the sexual-orientation classification model resulted in lower levels of precision likely due to the greater amount of nuance in language relating to sexual orientation. The confusion matrix for the sexual-orientation discrimination classifier appears immediately below in Table 7.

Table 7

Confusion Matrix for Best Sexual Orientation Discrimination Model (SVM + TF-IDF)

		Actual				
		Y	*N*	Precision	Recall	F1
Predicted	*Y*	26	13	.74	.67	.70
	N	9	30	.70	.77	.73

Note. SOD = Sexual-orientation Discrimination

When applied to the 4,229 working data set of cases for model training and evaluation, the sexual-orientation discrimination model yielded 320 presumptive sexual-orientation discrimination cases. The code for the sexual-orientation discrimination classifier appears in Appendix D.

Excluding Intermediate and Irrelevant Cases

The 1,828 tentative race discrimination cases and 320 tentative sexual-orientation discrimination cases identified by the classification models required further review by research assistants for the purpose of excluding cases with intermediate outcomes and irrelevant cases. Careful attention was paid to veterans who filed multiple claims over time. Consistent with the recommendations of Hall and Wright (2008), who offer suggestions for resolving this dilemma in the analysis of appellate decisions, the most recent case in time was chosen for further analysis. Beyond multiple cases for the same veteran, another issue was closer inspection and manual review to ensure that cases were accurately classified. For instance, many cases referenced "discrimination," "prejudice," and "harassment" without specifying the type or used vague language that did not permit confirmation of the inference that the trauma was related to race or sexual-orientation discrimination.[2] Additional cases were removed from the target

[2] *See, e.g.*, Name Redacted, Citation No. 17-49374 (Nov. 1, 2017) (describing the veteran's claims of being "humiliated, depressed, and discriminated against" but omitting the basis for the discrimination); Name Redacted, Citation No. 17-46328 (Oct. 17, 2017) (describing the veteran's claims of "mistreatment and discrimination" as well as "flashbacks to discriminatory events" but omitting the basis for the discrimination); Name Redacted, Citation No. 17-14560 (May 3, 2017) (describing general terms of "harassment and discrimination"); Name Redacted, Citation No. 18-140972 (Oct. 9, 2018) (vaguely referencing "acts of discrimination" without describing their basis); Name Redacted, Citation No. 18-45015 (Oct. 25, 2018) (merely referencing the veteran's claims of "being discriminated against" but not why); Name Redacted, Citation No. 18-139703 (Oct. 1, 2018) (noting the veteran's claim of "discrimination that [he] was exposed [to] in Vietnam" but omitting the basis); Name Redacted, Citation No. 99-34024 (Dec. 6, 1999) (restating the veteran's claim that he "experienced discrimination in the Persian Gulf" but omitting the basis for it); Name Redacted, Citation No. 99-31336 (Nov. 3, 1999) (referencing claims of "harassment and discrimination" without further detail); Name Redacted, Citation No. 18-15571 (Mar. 15, 2018) (noting the veteran's claim that he "suffered discrimination during military service" but omitting the basis for that treatment); Name Redacted, Citation No. 18-10440 (Feb. 20, 2018) (noting the stressor of "discrimination" but not the type); Name Redacted, Citation No. 17-42228 (Sept. 25 2017) (noting the veteran's claims of "discrimination, bias, [and] prejudice" but omitting further information on the basis for such treatment); Name Redacted, Citation No. 16-43579 (Nov. 16, 2016) (noting the veteran's claims of "unfair and discriminatory treatment" but omitting the basis for such treatment); Name Redacted, Citation No. 16-33333 (Aug. 23, 2016) (noting the veteran's claim that "she

sample because, even though there were indications of racial or sexual-orientation events, it was still unclear whether the veteran was targeted by perpetrators of discrimination or rather merely witnessed or learned of discrimination against others without any indication of a personal impact on the veteran. For example, merely being present during the course of a race riot would not rise to the level of discrimination unless the veteran claimed that he or she had been targeted based on race during the riot or experienced concerns related to it.[3] In the context of sexual-orientation discrimination, cases that merely discussed having been examined by a psychiatrist for sexual deviance were not counted unless the veteran claimed that he or she had been traumatized by that experience or stigmatized based on his or her sexual orientation.[4]

---

felt discriminated against" but omitting mention of why); Name Redacted, Citation No. 15-34190 (Aug. 10, 2015) (mentioning in a cursory way that the veteran claimed "discrimination in service"); Name Redacted, Citation No. 15-34009 (Aug. 10, 2015) (relaying the veteran's claims of "various events during service involving discrimination" but omitting the underlying basis of the discrimination); Name Redacted, Citation No. 15-10195 (Mar. 11, 2015) (noting the veteran's claims of being "harassed by a platoon Sergeant" but omitting the reason why); Name Redacted, Citation No. 14-22490 (May 19, 2014) (noting the veteran's claims of "inability to adjust to the regimentation and discrimination" in the Navy, but omitting information on the nature of such discrimination); Name Redacted, Citation No. 13-37586 (Nov. 18, 2013) (noting the veteran's report of "discrimination and a hostile workplace" but not the basis for such treatment); Name Redacted, Citation No. 11-00138 (Jan. 3, 2011) (noting the veteran's claims of being "discriminated against and verbally abused" but omitting details on the reason why); Name Redacted, Citation No. 08-16568 (May 20, 2008) (noting the veteran's claims of "discrimination from his supervisors" as well as "being talked about and discriminated against" but not the reasons why); Name Redacted, Citation No. 05-10491 (Apr. 12, 2005) (relaying "discrimination and harassment while in service" without further detail); Name Redacted, Citation No. 05-08503 (Mar. 22, 2005) (noting the veteran's claims of "a number of incidents in service in which he felt isolated, discriminated against, and, in several instances, abused" but omitting the basis for the discrimination; Name Redacted, Citation No. 06-15202 (May 24, 2006) (vaguely referencing "prejudice and discriminatory treatment"); Name Redacted, Citation No. 05-29376 (Nov. 2, 2005) (vaguely referencing "discrimination" without more); Name Redacted, 03-26325 (Oct. 3, 2003) (explaining that the veteran "reported discrimination" but omitting why).

[3] As an example of an excluded case, the veteran claimed a stressor of knowing of race riots, even though he did not say he was in the riots or even witnessed any of them. Name Redacted, Citation No. 12-34700 (Oct. 5, 2012).

[4] For example, a case was included when the veteran received a diagnosis of being a "sexual deviate" with "overt (homosexuality and transvestitism) chronic" for wearing women's clothing and engaging in gay relationships because the evaluation led to harassment, humiliation, imprisonment, a finding that the

Out of the pool of machine classified cases, three independent raters evaluated each case to determine whether it qualified for inclusion. For all cases that were verified as discriminatory, the raters further grouped the sample by type of discrimination. With the removal of cases that reached only intermediate outcomes, human coders identified 535 verified racial trauma decisions and 103 verified sexual-orientation trauma decisions, and 15 that contained a combination of both of both types of discrimination. As described later in the chapter, the fifteen combined cases were merged with sexual-orientation discrimination due to sexual-orientation discrimination similarities, resulting in a total of 118 sexual-orientation discrimination cases. Human coding was necessary for identifying outcomes because in a number of complicated discrimination cases, the language could have likely resulted in false positives, such as the recurring case where an opinion found that a PTSD claim was approved only to the extent that the case was well grounded, but the case was still returned for further adjudication.[5]

Cohen's Kappa was used to measure interrater reliability. In the instance of racial discrimination, there was 100 percent agreement between three research assistants who conducted the coding. For sexual-orientation discrimination, there was 99.3% agreement, which translated to a Cohen's Kappa metric of .998. Three research assistants further coded the content of all 653 traumatic discrimination cases according to the conventions described in the data dictionary in Appendix E.

---

veteran was not effective in military duty performance, and a less-than-honorable discharge. Name Redacted, Citation No. 04-26800 (Sept. 27, 2004).

[5] *See, e.g.*, Name Redacted, Citation No. 0326220 (October 3, 2003) ("New and material evidence having been received, the claim for service connection for major depression with anxiety is reopened; to this extent only the appeal is granted.").

Data Analysis Plan

Power Analysis

The verified traumatic discrimination cases amounted to 653, which is an extremely small proportion of the mental health service-connection cases. This raises the question of whether a resulting statistical analysis would be adequately powered. Ensuring adequate sample size is paramount to quantitative inquiry (Cohen, 1988; Cohen, 1992). Preliminary power analyses were implemented using liberal and conservative estimates to identify a range of sample size acceptability needed for the logistic regression analyses. A power analysis based on a two-tailed alpha of .05, beta value of .80, a 60/40 ratio of binary outcomes—approve or deny, π of .25, and the assumption of moderate correlations among covariates (R-squared other x = .25) yielded a recommended sample size of 351 (Gpower: Faul et al., 2009). An outcome ratio of 80/20 yielded a much smaller sample threshold of 42. Assuming a stronger relationship between a focal predictor and all other covariates (e.g., R squared other x = .40) increased the recommended sample size (439), as did increasing the degree of imbalance in the levels of the focal predictor (π = .15; 518). Thus, it is likely that most hypothesis tests conducted in the overall sample of 653 were adequately powered. However, analyses conducted with the subset of sexual-orientation cases, of which there are only 118, were underpowered. For example, only in the second scenario (when the outcome ratio was 80/20) would these tests be adequately powered. In the first scenario, achieved power would be .36, in the third, .30, and in the fourth, .26. Based on this concern, the number of predictors was limited and a different random effects structure specified for this model, but analyses of sexual-orientation cases should be interpreted with some caution.

Descriptive Analyses

Upon identifying the 653 traumatic discrimination cases, the first step was to perform descriptive statistical analyses on the sample to obtain a better understanding of variable frequency and distribution and evaluate potential relationships between the independent and dependent variables. For numeric variables, measures of central tendency (mean, median) and dispersion (standard deviation, range) were computed and nonparametric tests (e.g. Wilcoxon rank sum test) used to assess relationships with case outcome. To determine measures of association for categorical variables, multiple pairwise chi-square tests of independence were conducted. In instances where one or more cells contained fewer than 5 cases, a Fisher's Exact Test replaced the chi-square test. In the case of a significant chi-square test, proportion *z*-tests were conducted to determine the factor levels at which the significant relationship occurred.

Inferential Statistical Analyses

Theory informed the inclusion or exclusion of each independent variable in the regression model. Testing for multicollinearity among independent variables is an essential step in regression modeling. Multicollinearity is a statistical phenomenon in which predictor variables are highly correlated, and its existence inflates the standard error and variance of predictors' coefficients, yielding inaccurate results about the relationship between the predictor and outcome variables. This study assessed for multicollinearity by examining bivariate correlations among predictors and variance inflation factor (VIF) values for each variable in the regression models; VIFs larger than 10 were considered evidence of multicollinearity (Vogt & Johnson, 2016).

In conducting regression analysis, it is vital for researchers to identify and control for confounding variables by using causal models that essentially close any open "back door pathways" that might lead to the observed outcome aside from the variable of primary interest

(Lederer et al., 2019, pp. 24-25). As applied to the current research, just as "smoking is a confounder of the causal association between exercise and lung cancer" (Lederer et al., 2019, p. 25), a noted history of pre-enlistment racial trauma may be a confounder of the association between a race-based physical assault and disapproval of mental health service-connection for traumatic discrimination. Control variables were: discrimination type (all cases), gender, years of service, representation, year of decision, deciding judge, number of mental health conditions claimed, Civil Rights Act (race cases only), administrative discrimination, and combat trauma.

Logistic Regression Approach

In approaching the empirical analysis of relationships, logistic regression was the most suitable form of statistical analysis based upon the binomial nature of the dependent variable (Creswell & Creswell, 2018). The dichotomous dependent variable was whether the court granted the appeal for service-connection based on discrimination (Approved = 1) or whether the court denied that appeal (Denied = 0). Binomial logistic regression permits the identification of significant relationships between a given characteristic on case outcome while controlling for other characteristics (Chew & Kelley, 2009). Logistic regression has been implemented by numerous researchers to assess the impact of case characteristics on case outcomes (e.g., Asay et al., 2020 (evaluating applications of the fair use defense in copyright); Greene et al., 2017 (examining the granting of Chapter 13 bankruptcy protection by appellate courts); Wolanek & Liu, 2017 (reviewing court decisions on the application of strict scrutiny); Chew & Kelley, 2012 (measuring the relationship between plaintiff's race and case outcome); Matheson, 2009a & b (assessing courts' decisions to pierce the corporate veil)).

For this study, theory informed the selection of variables in the logistic regression models. Variables related to the outcome, but about which there were no predictions, were

included in models as controls. Additional efforts were also undertaken to evaluate whether a multilevel regression model was needed to account for the clustered structure of the data, since cases were clustered within judges as well as within years. Generalized linear model approaches (including logistic regression) assume that observations are independent. However, cases decided by the same judge are likely to be more similar than cases decided by different judges, which would violate this assumption and necessitate the use of a statistical model that accounts for correlated observations within judges. Thus, a series of models with and without random intercept terms were compared to determine whether there was sufficient variability across judges to warrant the use of a generalized linear mixed model. Specifically, this process first involved fitting a null model to the data, which contained a random intercept for judge and no explanatory variables, to estimate the intraclass correlation (ICC; Hayes, 2006). The ICC, which ranges from 0 to 1, can be interpreted as the proportion of variance in the outcome that is explained by the clustering of observations, or as the correlation between two randomly drawn cases from the same group (or, in this case, the same judge; Cohen et al., 2003; Hox, 2010). The further the ICC is from 0, the greater the degree of clustering and the need for multilevel techniques. Following this step, models including explanatory variables with and without an additional random intercept for year were compared to evaluate whether this random effect should also be included. Specifically, because data are crossed (i.e., cases are clustered within year, but year is not clustered within judge) a cross-classified model with separate random effects was specified. If the addition of the second random term led to improved model fit, it was retained in the model. Model fit was assessed using Nakagawa and Schielseth's (2013) marginal and conditional R^2 for generalized linear mixed-effect models. The Akaike Information Criterion (AIC) and Bayesian Information Criteria (BIC) were further used to identify "goodness

of fit" between models by adjusting for the number of parameters and for complexity, respectively (Vogt & Burke Johnson, 2016, pp. 9, 30). This process was conducted for all cases, and then repeated separately for racial discrimination and sexual-orientation cases. Analyses were conducted using the lme4 R package (Bates et al., 2015).

Threats to Validity of Proposed Study

The legal profession has a great degree of skepticism against the use of ML or empirical methods to analyze legal opinions (Harris et al., 2008). According to Pasquale and colleagues (2018), ML is not advanced enough to interpret legal rationales and this inability inevitably incorporates biases inherent in the training data to be transferred to the outputs. They warn that reliance on any type of ML results in a distorting effect for these reasons (Pasquale et al., 2018). This study has considered these very valid warnings. In all ML studies, predictions "are only as good as the training data on which they depend" (Pasquale et al., 2018, p. 65). In this instance, there are "selection effects" (Adelman & Glicksman, 2018, p. 67) in the way the study excludes cases adjudicated a lower-level Regional Offices and those adjudicated at the higher level within the Court of Appeals for Veterans Claims. Despite these many challenges, it also remains true that "identifying variables that underlie the judicial decision-making process has social and public value" (Oren-Kolbinger, 2019, p. 581). Rather than overpromising, the study offers its findings to enhance veteran advocacy for those who would like a supplemental method to assess the likelihood of success for discrimination claims in the VA disability context. Even though the results will be admittedly "crude prox[ies]" (Aletras et al., 2006, p. 15) and merely highlight associations without demonstrating causation, the methodology offers additional ways to view this nuanced area of disability discrimination.

Ethical Procedures

This study provided the least invasive way to address a very controversial and stigmatizing aspect of VA disability compensation claims. With respect to the protection of human subjects, each of the 123,011 cases examined in this study was redacted by the VA pursuant to strict federal guidelines on privacy. BVA cases do not feature any names of the parties or personal identifiers such as Social Security Numbers. Cases are primarily identified by a BVA docket or case ID number. On November 12, 2019, Northeastern University's Institutional Review Board approved a request for exemption of this study pursuant to the Department of Health and Human Services (DHHS) Exemption Category # 4 codified in 45 C.F.R. § 46.104(d)(4)(ii) (Appendix F).

Summary

This study adopted a novel methodology for exploring a nuanced area of VA disability law for which there is currently no available guidance. Given the availability of ML to identify hidden patterns by reviewing trends in thousands of legal decisions (Surden, 2014), an ML approach to automatic case classification made it possible to extract discrimination related mental health claims for the purpose of further empirical research. From a corpus of 123,011 BVA decisions coded by the BVA, ML and other NLP features of Python classified potential traumatic discrimination cases. Further review by a team of three human coders validated sexual-orientation and race-discrimination cases as meeting the criteria for inclusion in the sample. Logistic regression analysis permitted the study to fully utilize the cases within the sample and to determine which independent case-related variables were statistically associated with judicial outcomes. While these results must be viewed considering inevitable challenges to any ML-based evaluation of a legal text, the results offer preliminary methods to evaluate the merits of a discrimination claim and a foundation of research on which to build.

Chapter 4: Results

The best performing ML algorithms for race and sexual-orientation discrimination identified 653 confirmed cases for statistical analysis. Table 8 provides descriptive statistics by variable. There were proportionately more race-related trauma cases than sexual-orientation discrimination cases. Similarly, heterosexuals were significantly dominant in the sample. The overwhelming majority of appellants in race and sexual-orientation discrimination appeals were represented by an attorney or Veterans Service Organization. Coast Guard and Marine Corps veterans were underrepresented. Most of the veterans in the recent benefits claim pipeline served during the Vietnam era, with the peace-time era constituting the second largest proportion. Although much of the data for veteran's race was missing in race discrimination cases, the data are a majority African American and less than a quarter White.

Table 8 further disaggregates the demographic and predictor variables by case outcome. A series of nonparametric analyses (chi-square analyses, Fisher's Exact test, Wilcoxon rank sum tests) examined whether success of appeal differed across a number of variables. The results of these tests are reported in the sections below.

Table 8

Characteristics of Approved and Denied Appeals

Variable	All Cases n (%)	Appeal Granted n (%)	Appeal Denied n (%)
Discrimination Type			
Racial	535 (82%)	188 (81%)	347 (82%)
Sexual Orientation	118 (18%)	43 (19%)	75 (18%)
Veteran & Case Characteristics			
Sexual Orientation			
Heterosexual	585 (90%)	208 (90%)	377 (89%)
LGBT	68 (10%)	23 (10%)	45 (11%)
Gender			
Male	586 (90%)	205 (89%)	381 (90%)
Female	63 (10%)	24 (10%)	39 (9%)

Other	4 (< 1%)	2 (1%)	2 (< 1%)
Race[a]			
African-American	108 (17%)	44 (19%)	64 (15%)
Asian	10 (1%)	6 (3%)	4 (1%)
Hispanic	17 (3%)	8 (3%)	9 (2%)
Native American	6 (< 1%)	1 (< 1%)	5 (1%)
Native Hawaiian/Pacific Islander	3 (< 1%)	1 (< 1%)	2 (< 1%)
Other Minority	8 (1%)	5 (2%)	3 (< 1%)
White	26 (4%)	2 (< 1%)	24 (6%)
Unknown	475 (73%)	164 (71%)	311 (74%)
Service Era			
Gulf War	51 (8%)	20 (9%)	31 (7%)
Korean Conflict	29 (4%)	10 (4%)	19 (4%)
Vietnam	434 (66%)	160 (69%)	274 (65%)
WWII	11 (2%)	4 (2%)	7 (2%)
Multiple	18 (3%)	6 (3%)	12 (3%)
Peacetime	110 (17%)	31 (13%)	79 (19%)
Branch of Service			
Air Force	74 (11%)	28 (12%)	46 (11%)
Army	201 (31%)	68 (29%)	133 (32%)
Coast Guard	7 (1%)	1 (< 1%)	6 (1%)
Marines	48 (7%)	14 (6%)	34 (8%)
Navy	152 (23%)	60 (26%)	92 (22%)
Unreported	171 (26%)	60 (26%)	111 (26%)
Region of Origination			
Midwest	117 (18%)	37 (16%)	80 (19%)
Northeast	87 (13%)	36 (16%)	51 (12%)
South	234 (36%)	82 (35%)	152 (36%)
West	175 (27%)	51 (22%)*	124 (29%)*
Unknown	490 (6%)	25 (11%)***	15 (4%)***
Representation			
Attorney or legal group	539 (83%)	184 (80%)	355 (84%)
Pro Se	57 (9%)	13 (6%)*	44 (10%)*
Unknown	57 (9%)	34 (15%)***	23 (6%)***
Trauma Related			
Administrative Discrimination			
Yes	160 (24%)	56 (24%)	104 (25%)
No	493 (76%)	175 (76%)	318 (75%)
Homosexuality-Based Discharge			
Yes	44 (7%)	13 (6%)	31 (7%)
No	609 (93%)	218 (94%)	391 (93%)
Interrogation			
Yes	60 (9%)	22 (10%)	38 (9%)
No	593 (91%)	209 (90%)	384 (91%)
Harassment			

Yes	586 (90%)	207 (90%)	379 (90%)
No	67 (10%)	24 (10%)	43 (10%)
Pre-Service Trauma			
Yes	101 (16%)	23 (10%)**	78 (18%)**
No	552 (84%)	208 (90%)**	344 (82%)**
Physical Assault			
Yes	212 (32%)	90 (39%)**	122 (29%)**
No	441 (68%)	141 (61%)**	300 (71%)**
Combat Trauma			
Yes	35 (5%)	18 (8%)*	17 (4%)*
No	618 (95%)	213 (92%)*	405 (96%)*
Sexual Assault			
Yes	105 (16%)	40 (17%)	65 (15%)
No	548 (84%)	191 (83%)	357 (85%)
Military Sexual Trauma			
Yes	66 (10%)	27 (12%)	39 (9%)
No	587 (90%)	204 (88%)	383 (91%)
Mental Health Related			
Mental Health Condition			
Acquired Psychiatric Disorder	53 (8%)	12 (5%)*	41 (10%)*
Anxiety Disorders	64 (10%)	36 (15%)***	28 (7%)***
Bipolar and Related Disorders	25 (4%)	7 (3%)	18 (4%)
Depressive Disorders	156 (24%)	84 (36%)***	72 (17%)***
Schizophrenia and Psychotic	40 (6%)	20 (9%)	20 (5%)
Trauma and Stress-Related	512 (78%)	172 (74%)	340 (81%)
PTSD Claim			
PTSD	503 (77%)	164 (71%)**	339 (80%)**
Other Diagnosis	150 (23%)	67 (29%)**	83 (20%)**
Number of MH Conditions			
1	498 (76%)	150 (65%)***	348 (82%)***
2	109 (17%)	59 (26%)***	50 (12%)***
3 or 4	46 (7%)	22 (9%)	24 (6%)
Policy-Related			
Don't Ask, Don't Tell			
Prior to Repeal	378 (58%)	105 (46%)***	273 (65%)***
After Repeal	275 (42%)	126 (54%)***	149 (35%)***
Draft Era			
Draft Era	448 (69%)	163 (71%)	285 (67%)
Post-Draft Era	205 (31%)	68 (29%)	137 (33%)
Civil Rights Act			
Pre-Civil Rights Act	147 (23%)	54 (23%)	93 (22%)
Post-Civil Rights Act	506 (77%)	177 (77%)	329 (78%)
DSM Version			
III or IV	476 (73%)	137 (59%)	339 (80%)
V	177 (27%)	94 (41%)	83 (20%)

Variable	All Cases Mean (sd)	Appeal Granted Mean (sd)	Appeal Denied Mean (sd)
Continuous Variables			
Number of Trauma Types	1.91 (.97)	1.97 (.93)	1.88 (.98)
Years of Service	3.81 (4.72)	4.11 (4.93)*	3.64 (4.6)*

Note. For categorical variables, comparisons were conducted via chi-square analyses. In the case of low cell counts, Fisher's Exact tests were conducted instead. Proportion *z*-tests compared approvals and denials for each mental health condition and in follow-up tests. For continuous variables, Wilcoxon rank sum tests were used.
[a] Variable excluded from comparisons due to large amount of missing data.
*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Veteran and Case Characteristics

Regarding race, while the veteran's race was not always mentioned in an opinion, and was not discernable in the majority of cases, the subset of cases that included race aligned with expected frequencies. In this subset, the greatest number of racial trauma claims were made by African-American veterans (62%), followed by Caucasian veterans (14%), Latinx veterans (9%), Asian-American veterans (6%), and the remaining categories made up approximately 9%. It is interesting to note that Whites exhibited a success rate of only 8% (2/26).

On the issue of gender, among discrimination cases, females are overrepresented in sexual-orientation related claims while males dominate racial discrimination cases (Figure 8). Sexual-orientation discrimination cases are disproportionately petitioned by female veterans. Females comprise nearly one-third of all sexual-orientation related claims though they only represent about 20% of the military workforce currently, and that figure decreases to 10% as of 1973, approximately the median time period of cases analyzed. Table 9, below, outlines the disposition of sexual-orientation related claims.

Table 9

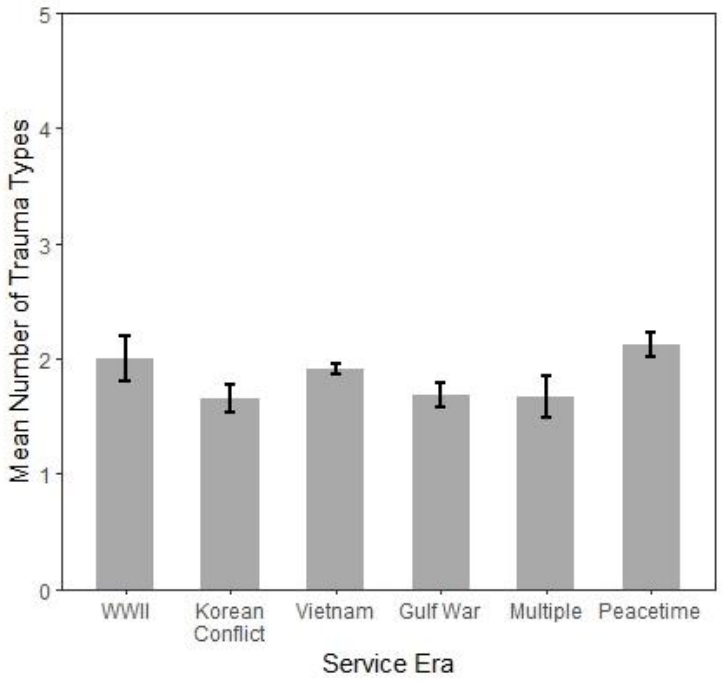
Case Outcome by Gender for Sexual-Orientation Discrimination

Gender	**Case Outcome**		
	Sexual-Orientation Discrimination		
	Approved	**Denied**	**Total**
Male	29	47	**76**
Female	12	26	**38**
Transgender/Transsexual	2	2	**4**
Total	**43**	**75**	**118**

Review was further given to the veteran's service era(s) as well as length of service. Recognizing that *de jure* discrimination existed in the military's segregation by race prior to successive desegregation orders spanning the 1950s and 1960s, and that the military's policy finding sexual orientation to be incompatible with military service until 2011, eras of service were considered along with success rates. With respect to veteran-reported trauma experienced by distinct service eras, the bar plot in Figure 4 presents some unique findings. Specifically, those serving throughout multiple war eras, the Korean Conflict, and the Gulf War exhibit the lowest mean number of trauma types while veterans who served during peace time eras and WWII report the highest mean number of traumas.

Figure 4

Average Number of Trauma Types by Service Era



Note. Error bars are +/- 1 SE.

In terms of years of service, the length of time spent in military service contribute to discrimination case outcomes. Veterans with successful claims have an average of 4.11 years of service while those whose claims are denied have an average of 3.64 years. While the difference appears small, it is significant (Wilcoxon rank sum test: $W = 44200$, $p < 0.05$).

Trauma Related

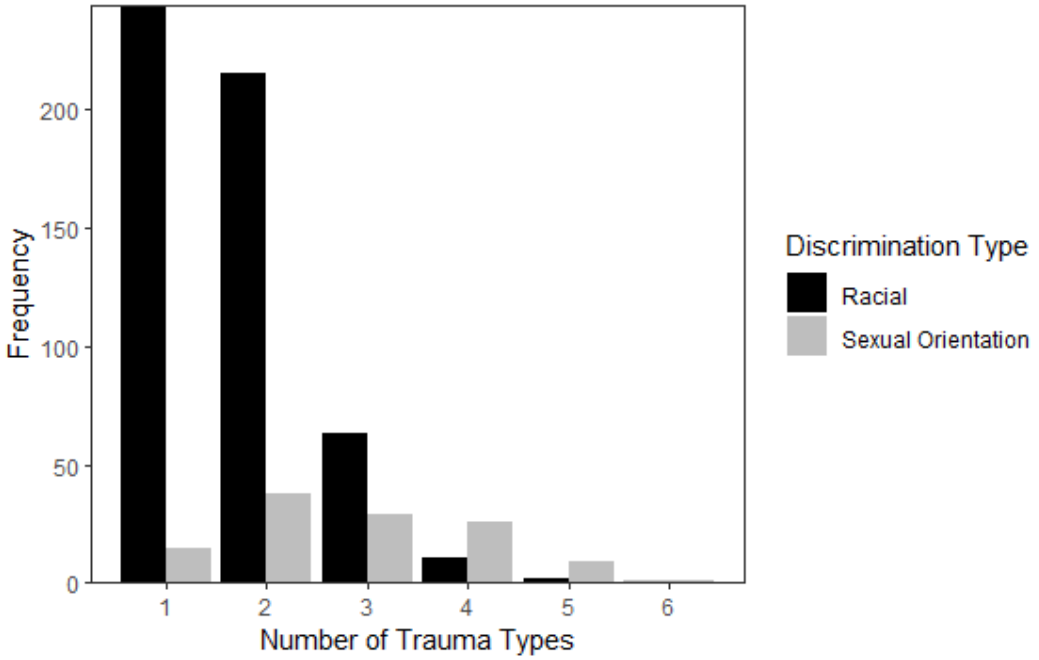
Types of pre-service and service trauma reported in each opinion were further disaggregated for the discrimination cases. A trauma coding schema was developed with the aims of aligning with previous research as well as providing study-specific flexibility (U.S. Department of Defense, 2000; Estrada et al., 2011). The categories of trauma associated with discrimination in this study included administrative discrimination (*e.g.*, being discharged, demoted, or punished), harassment (*e.g.*, name-calling, threats, gestures), interrogation or

investigation, physical assault, combat assault, sexual assault (to include attempts), and pre-service trauma, which has been shown to have some bearing on connecting diagnoses to service. It was posited that multiple traumatic events would increase the likelihood of a favorable outcome. As can be seen in Table 8, the number of trauma types claimed differed, albeit marginally, between successful versus unsuccessful appeals, $W = 44914$, $p = 0.08$. Further, the presence of pre-service trauma was negatively associated with appeal success, χ^2 (1, 563) = 8.30, $p < .01$, and physical assault was positively associated with appeal success, χ^2 (1, 563) = 6.88, $p < .01$. Of the remaining trauma types, only combat was significantly associated with appeal success, χ^2 (1, 563) = 4.17, $p < .05$, such that veterans who experienced combat trauma were more successful than those who did not.

The distribution of the sum total of traumatic events by each discrimination type illustrates that, on average, veterans claiming sexual-orientation discrimination are subject to more types of trauma than veterans claiming racial discrimination. Further, there appears to be more variability in sexual-orientation discrimination cases. Racial discrimination cases were concentrated on the lower end of number of traumatic events (around 1 and 2 events). The barplot in Figure 5, below, clearly illustrates the differences between sexual harassment, assault, and discrimination events. Veterans claiming sexual-orientation discrimination exhibit a higher number of unique trauma types, which serves as a hurdle to favorable opinions and this group is significantly different than veterans claiming racial discrimination, $W = 14430$, $p < 0.01$.

Figure 5

Counts of Type of Trauma Among Discrimination Cases



With respect to sexual-orientation discrimination, males and females, for the most part, experience trauma at similar rates (Table 10). Two exceptions are physical assault and pre-service trauma. Males were more likely to be the victim of physical assault while in the service. Conversely, females had a higher proportion of pre-service trauma (*e.g.*, childhood physical and sexual abuse, death of parents, neglect, etc.) than male and transgender veterans. Males and transgender veterans have a higher likelihood of combat trauma. However, it is important to note that the transgender sample is extremely small and its effects can be overestimated. A similar trend also holds true to interrogation about homosexuality, with transgender and female veterans experiencing interrogation about homosexuality at a significantly higher rate than males experienced interrogation about homosexuality.

Table 10

Gender Differences Among Sexual-Orientation Discrimination Cases

Sexual-Orientation Discrimination Cases				
Pre-Service & Service Trauma	**Gender**			
	Male	Female	Transgender	**Total**
Administrative Discrimination	40 (53%)	27 (71%)	4 (100%)	71
Harassment	57 (75%)	29 (76%)	4 (100%)	90
Interrogation	30 (40%)	23 (60%)	3 (75%)	56
Physical Assault	15 (20%)	0	1 (25%)	16
Sexual Assault	31 (41%)	24 (63%)	3 (75%)	58
Pre-Service Trauma	18 (24%)	21 (55%)	2 (50%)	41
Combat Trauma	6 (8%)	1 (3%)	3 (75%)	10

Across racial discrimination cases, the pattern was quite different. Transgender veterans are absent in the racial discrimination cases. Females were subject to administrative discrimination and pre-service trauma at a higher rate. Experiencing physical assault as a byproduct of discrimination is significantly higher among males than females while females were more likely to be a victim of a racially motivated sexual assault. Males and females alike are almost certain to be subject to harassment as the most common traumatic event among racial discrimination cases. Further gender differences among racial discrimination claims can be found in Table 11, below.

Table 11

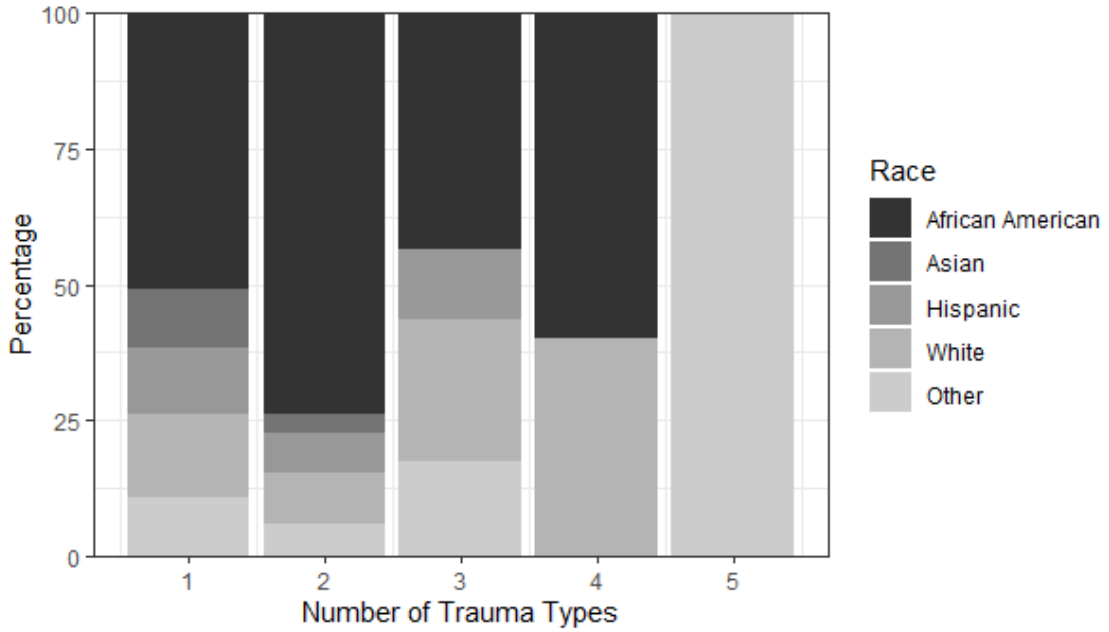
Gender Differences Among Racial Discrimination Cases

Racial Discrimination Cases				
Pre-Service & Service Trauma	**Gender**			
	Male	Female	Transgender	**Total**
Administrative Discrimination	81 (16%)	8 (32%)	0	89
Harassment	471 (92%)	25 (100%)	0	497
Interrogation	2 (.4%)	2 (8%)	0	4
Physical Assault	193 (38%)	3 (12%)	0	196
Sexual Assault	35 (7%)	12 (48%)	0	47
Pre-Service Trauma	53 (10%)	7 (28%)	0	60
Combat Trauma	24 (5%)	1 (4%)	0	25

Figure 6, below, illustrates the distribution of counts of trauma type by race. It is rare to find an opinion that explicitly lists race/ethnicity, despite the fact that the claim is founded significantly on reported racial discrimination. Because opinions are often silent for race, a great number of missing data exist. The descriptive analysis is what provides clarity on the inclusion for more complex modeling. The resulting race data is certainly not comprehensive or representative and its limitations are duly transparent. As such, it will be eliminated from consideration for the inferential analyses.

Figure 6

Distribution of Trauma Counts by Race

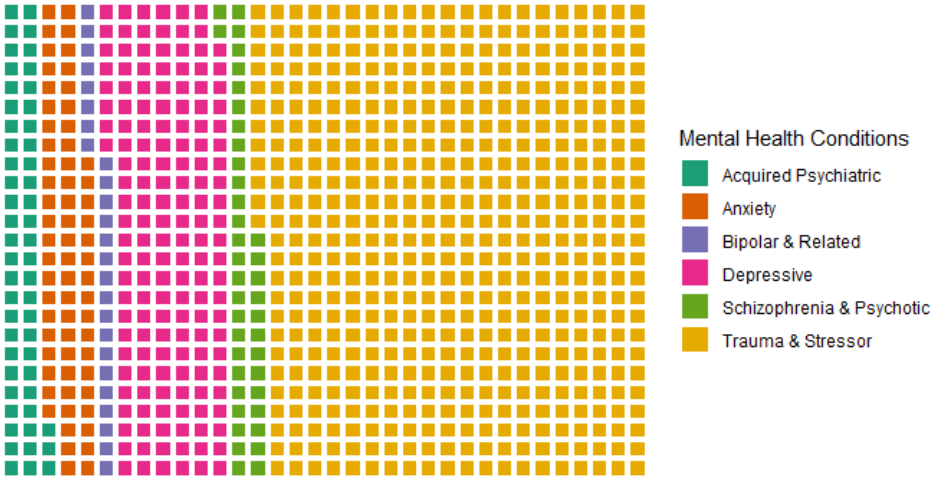


Mental Health Related

Similar to gender, race, and trauma, mental health conditions of veterans who suffer discrimination explain a portion of the variance in case outcomes. Both the condition as well as the number of conditions claimed in a particular case hold promise for understanding the differences between veterans who are granted service-connection and those who are denied. The relative frequency of claimed mental conditions, grouped by *DSM* category, for all discrimination cases is illustrated in Figure 7. Specifically, the waffle chart below demonstrates the proportion of mental health conditions within the total number of claims. PTSD constituted the highest number of claims, a proportion larger than the combination of all other conditions. The majority of claims included 1-2 conditions and very few had three or more, specifically 93% and 7%, respectively.

Figure 7

Frequency of Claimed Mental Health Conditions



Across both discrimination types, the greater the number of mental health conditions claimed in the same case, the greater the likelihood of prevailing on a claim of service-connection for traumatic discrimination (see Table 8). In fact, the positive association proved to be statistically significant, $\chi^2(2, 653) = 25.90$, $p < 0.001$. And there appears to be a "sweet spot" with respect to number of mental health conditions claimed. The proportion of denials was higher than the proportion of successes for a single mental health claim, but this relationship reversed for two claims. Denials and successes did not significantly differ for three or four claims. When considering the type of mental health disorder at issue in the decision, out of approved claims, trauma and stressor-related disorders made up the largest percent, while bipolar and related disorders made up the smallest percent (Figure 7). In Table 8, the proportion of approvals versus denials were compared for each mental health condition using *z*-tests. For Anxiety ($z = 3.68$, $p < .001$), Depressive Disorders ($z = 5.53$, $p < .001$), and Schizophrenia & Psychotic Disorders ($z = 2.00$, $p < .05$) approvals outpaced denials. Conversely, denials outpaced approvals for Acquired Psychiatric Disorder ($z = 2.02$, $p < .05$). However, caution must be

exercised and interpretations made loosely given the significantly smaller cell sizes among various subgroups.

Policy Related

As depicted in Table 8, the proportion of successes was higher after the repeal of the DADT Policy in 2011, relative to before, $\chi^2(1, 653) = 22.66$, $p < 0.001$. The statistic highlights that, not taking other variables into account, claimants in both race and sexual-orientation discrimination claims were substantially more likely to obtain approval of their traumatic discrimination when BVA cases were decided after the repeal of DADT. However, see the results of the logistic regression analysis in Table 15, below, which shows that this result no longer holds when controlling for other time-related variables. Regarding Draft Era, evident in Table 8, the control variable related to the Draft did not reveal as significant an impact on outcome in traumatic discrimination cases. As to *DSM* version, recognizing that the VA changed its criteria for assessing PTSD and moved from using the *DSM-IV-TR* to the *DSM-5* in all PTSD service-connection adjudications on August 4, 2014, Table 8, above, depicts the distribution of all discrimination case outcomes across the current and two previous versions of the *DSM*. There was a higher likelihood of success after the implementation of the *DSM-5*, relative to before, $\chi^2(1, 653) = 33.40$, $p < 0.001$. Further inspection of this relationship revealed that it was not specific to PTSD, however.

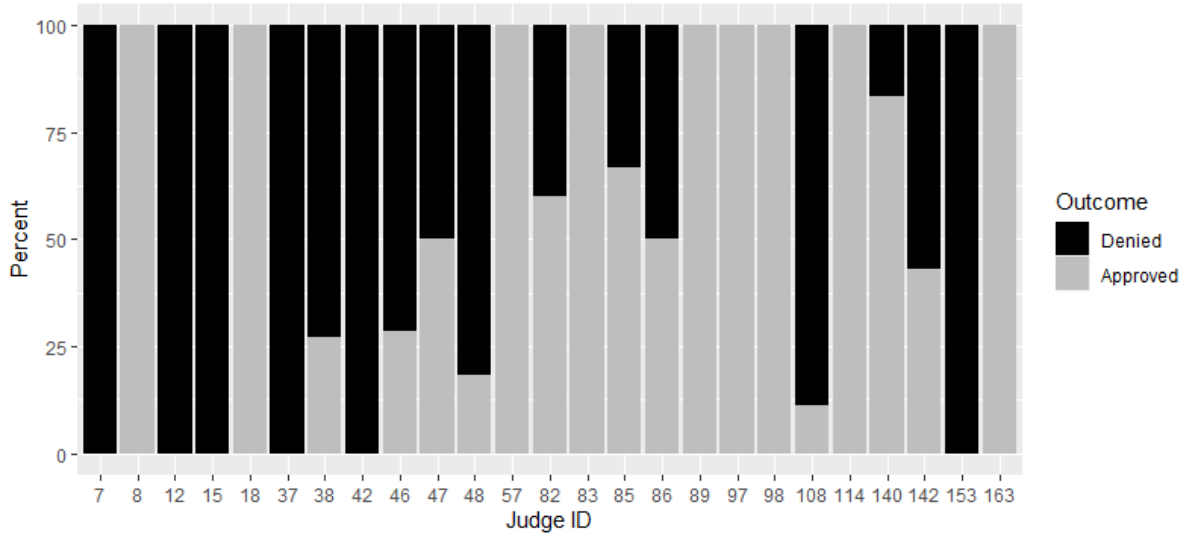
Modeling the Descriptive Findings with Multilevel Logistic Regression Analyses

Model Building: All Discrimination Cases

Figure 8 depicts an exploratory examination of the degree of variability in decisions across judges for a random sample of 25 judges with at least two decisions. As can be seen, judges varied considerably in proportions of granted versus denied cases.

Figure 8

"Snapshot" of variability in proportion of denials and approvals by judge for random sample of 25 judges.



The null model indicated that differences across judges accounted for 17% of the total variance in case outcomes (ICC: .17), suggesting a multilevel modeling approach is warranted. To evaluate whether a control should also be included for year, a full model including fixed effects for a list of variables (see Table 13) and a random intercept for judges was specified with and without a random intercept for year. The addition of a term for year significantly improved model fit (see Table 12), suggesting that it should be retained.

Table 12

Model Fit Comparison for All Cases

	Model 1	Model 2	χ^2	*P*
Parameters	20	21	6.81	.009
df	633	632		
AIC	785.46	780.65		
BIC	875.09	874.76		
Deviance	745.46	738.65		
Nakagawa's R^2				
Conditional	0.28	0.33		
Marginal	0.18	0.19		

Note. Model 1 includes a random intercept for judge; Model 2 includes random intercepts for both judge and year. The conditional R^2 accounts for both fixed and random effects, and the marginal R^2 accounts only for fixed effects. AIC = Akaike information criterion; BIC = Bayesian information criterion.

The results of the final model, including both judge and year, are depicted in Table 13. The ICCs for the random effects indicated that both judge and year contributed to variance in case outcome, but judge accounted for a greater proportion than year did (ICC for judge: .12; ICC for year: .05). Contrary to H_1, the number of trauma types did not significantly correlate with success. Consistent with H_4, pre-enlistment trauma history was negatively associated with success. Relative to veterans who did not report pre-service trauma, the odds of success for veterans who did were reduced by 63% (*OR* = .37, *p* = .016). Partially consistent with H_5, the *DSM-5* was marginally associated with an increased likelihood of success (*OR* = 2.98, *p* = .055). The non-significant interaction between PTSD and *DSM-5*, however, indicated that the implementation of the *DSM-5* was not uniquely beneficial for PTSD claims. Veterans who reported physical assault had a higher likelihood of success (*OR* = 1.78) than those who did not; however, inconsistent with H_6, this finding was not statistically significant (*p* = .068).

Several relationships that were not predicted also emerged from the data. The odds of success were reduced by 54% for veterans who represented themselves versus those who had representation (*OR* = .46, *p* = .046). A greater number of mental health claims were more

successful than a single claim. Relative to a single claim, two claims were associated with more than a threefold increase in the odds of success (*OR* = 3.20, $p < .001$) and three or four claims showed a statistically non-significant increase in the odds of success (*OR* = 2.01, $p = .06$). Finally, relative to claims for other diagnoses, PTSD claims were associated with a reduced likelihood of success (*OR* = .52, $p = .025$). Also of note, there was no significant difference in likelihood of success for race versus sexual orientation claims.

Table 13

LR Model Predicting the Likelihood of a Successful Discrimination Appeal – All Cases

Fixed Effects	*b*	*SE*	*OR*	*p*	95% CI
Sexual Orientation Discrim.	0.17	0.32	1.18	0.600	[-0.46, 0.79]
Veteran & Case					
Pro se	-0.77	0.38	0.46	0.046*	[-1.52, -0.01]
Representation Unknown	0.41	0.48	1.50	0.397	[-0.53, 1.34]
Female or Transgender	0.37	0.38	1.45	0.332	[-0.38, 1.12]
Years of Service	-0.00	0.02	1.00	0.971	[-0.04, 0.04]
Trauma-Related					
Preservice Trauma	-0.99	0.41	0.37	0.016*	[-1.79, -0.18]
Military Sexual Trauma	0.29	0.40	1.34	0.473	[-0.50, 1.08]
Administrative Discrim.	0.03	0.37	1.03	0.940	[-0.69, 0.74]
Physical Assault	0.58	0.31	1.78	0.068†	[-0.04, 1.19]
Combat	0.86	0.50	2.36	0.087†	[-0.12, 1.84]
Number of Trauma Types	0.23	0.25	1.26	0.359	[-0.26, 0.72]
Policy-Related					
DADT (Post-Repeal)	0.10	0.39	1.10	0.809	[-0.67, 0.86]
Draft Era (Post-Draft)	-0.29	0.22	0.75	0.188	[-0.73, .143]
DSM Version (V)	1.09	0.57	2.98	0.055†	[-0.02, 2.20]
Mental Health Related					
MH Claims (2)	1.16	0.27	3.20	0.000***	[0.64, 1.69]
MH Claims (3/4)	0.69	0.38	2.01	0.063†	[-0.04, 1.43]
PTSD	-0.66	0.30	0.51	0.025*	[-1.24, -0.08]
PTSD * DSM	-0.39	0.48	0.67	0.419	[-1.33, 0.55]
Random Effects	Variance	ICC			
Judge	0.49	0.12			
Year	0.21	0.05			

Note. CI = confidence intervals; SE = standard error; MH = Mental Health
† $p \leq 0.10$, *$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Racial Discrimination Cases Only

The same process was repeated for the subset of racial discrimination cases. The same model was specified, with the exception that Draft Era was replaced with an indicator for the Civil Rights Act of 1964, due to its clear relevance for this subset of cases.

The addition of a random effect for year did not significantly improve model fit (see Table 14); however, given that the ICC for year was non-trivial (.04), this term was retained.

Table 14

Model Fit Comparison for Racial Discrimination Cases Only

	Model 1	Model 2	χ^2	*p*
Parameters	19	20	2.32	.128
Df	516	515		
AIC	639.55	639.23		
BIC	720.91	724.87		
Deviance	601.55	599.23		
Nakagawa's R^2				
Conditional	0.32	0.36		
Marginal	0.20	0.21		

Note. Model 1 includes a random intercept for judge; Model 2 includes random intercepts for both judge and year. The conditional R^2 accounts for both fixed and random effects, and the marginal R^2 accounts only for fixed effects. AIC = Akaike information criterion; BIC = Bayesian information criterion.

The pattern of relationships observed in the final model for racial discrimination was similar to the pattern observed in the full sample in cases (see Table 15). For example, *pro se* representation (*OR* = .34, *p* = .017) and pre-service trauma (*OR* = .20, *p* = .003) remained negatively associated with success, and the number of mental health claims was positively associated with success (2 v. 1, *OR* = 2.95, *p* < .001; 3/4 v. 1, (*OR* = 2.25, *p* = .052). However, in this smaller subset, some relationships were no longer significant (namely, PTSD and *DSM*).

Table 15

LR Model Predicting the Likelihood of a Successful Discrimination Appeal – Racial Discrimination Cases

Fixed Effects	*b*	*SE*	*OR*	*p*	95% CI
Veteran & Case					
Pro se	-1.07	0.45	0.34	0.017*	[-1.95, -0.19]
Representation Unknown	0.85	0.52	2.34	0.103	[-0.17, 1.88]
Female or Transgender	0.48	0.56	1.62	0.384	[-0.60, 1.57]
Years of Service	-0.02	0.02	0.98	0.479	[-0.06, 0.03]
Trauma-Related					
Preservice Trauma	-1.61	0.53	0.20	0.003**	[-2.65, -0.56]
Military Sexual Trauma	0.39	0.56	1.48	0.484	[-0.71, 1.49]
Administrative Discrim.	-0.17	0.47	0.84	0.711	[-1.09, 0.75]
Physical Assault	0.29	0.39	1.33	0.463	[-0.48, 1.05]
Combat	0.77	0.60	2.17	0.198	[-0.41, 1.95]
Number of Trauma Types	0.52	0.34	1.69	0.126	[-0.15, 1.19]
Policy-Related					
DADT (Post-Repeal)	0.05	0.40	1.05	0.908	[-0.73, 0.82]
Civil Rights Act (Post-Act)	-0.13	0.27	0.88	0.618	[-0.66, 0.39]
DSM Version (V)	0.94	0.60	2.57	0.118	[-0.24, 2.13]
Mental Health Related					
MH Claims (2)	1.08	0.30	2.95	0.000***	[0.49, 1.68]
MH Claims (3/4)	0.81	0.42	2.25	0.052†	[-0.01, 1.63]
PTSD	-0.57	0.35	0.57	0.105	[-1.24, 0.12]
PTSD * *DSM*	-0.26	0.54	0.77	0.632	[-1.33, 0.80]
Random Effects	Variance	ICC			
Judge	0.59	0.15			
Year	0.14	0.04			

Note. CI = confidence intervals; SE = standard error; MH = Mental Health
† $p \leq 0.10$, *$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Sexual-Orientation Discrimination Cases Only

In the subset of sexual orientation discrimination cases, an effort was made to reduce the number of predictors, due to the relatively small number of observations. Variables not related to hypotheses 10-15 and for which significant relationships were not observed, were dropped from the model. Further, the final model did not include a random intercept for year. As depicted below in Table 16, the only significant relationship to emerge from this analysis was the number

of mental health claims (2 v. 1, *OR* = 7.56, *p* = .01). As before, PTSD claims were marginally associated with a reduced likelihood of success relative to other types of claims (*OR* = .30, *p* = .06). Unlike in the previous two models, pre-service trauma and *pro se* representation were not significant in this model. Of primary interest, hypotheses 10-15 were not supported. Specifically, the likelihood of success did not differ between heterosexual and LGBT veterans (H_{10}), veterans who were interrogated about their sexual orientation and those who were not (H_{11}), and veterans who reported MST versus those who did not (H_{14}). Nor, after controlling for *DSM* version, did the likelihood of success differ before and after the repeal of DADT (H_{13}). The association between homosexuality-based discharges and success on appeal was not supported (H_{12}). Based on a priori power calculations, this analysis is certainly underpowered, therefore, findings must be interpreted with caution.

Table 16

LR Model Predicting the Likelihood of a Successful Discrimination Appeal – Sexual Orientation Cases

Fixed Effects	*b*	*SE*	*OR*	*p*	95% CI
Veteran & Case					
Pro se	-0.34	1.08	0.71	0.752	[-2.47, 1.78]
Representation Unknown	-2.88	1.60	0.05	0.072†	[-6.02, 0.26]
LGBT	0.20	0.64	1.22	0.755	[-1.06, 1.46]
Trauma-Related					
Preservice Trauma	-0.26	0.67	0.77	0.699	[-1.57, 1.05]
Military Sexual Trauma	0.03	0.63	1.03	0.962	[-1.21, 1.27]
Homosexuality-Based Disch.	-1.29	0.83	0.28	0.121	[-2.93, 0.34]
Interrogation	0.43	0.69	1.62	0.487	[-0.88, 1.85]
Policy-Related					
DADT (Post-Repeal)	1.17	0.99	3.23	0.238	[-0.78, 3.12]
DSM Version (V)	1.49	1.43	4.42	0.297	[-1.31, 4.28]
Mental Health Related					
MH Claims (2)	2.02	0.83	7.56	0.014*	[0.40, 3.64]
MH Claims (3/4)	0.83	1.37	2.30	0.544	[-1.86, 3.52]
PTSD	-1.14	0.62	0.32	0.064†	[-2.35, 0.07]

Random Effects	Variance	ICC
Judge	1.33	0.29
Model Statistics		
Nakagawa's R2		
Conditional	0.39	
Marginal	0.21	
df	106	

Note. CI = confidence intervals; SE = standard error; MH = Mental Health
† $p \leq 0.10$, *$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Chapter Summary

This chapter addressed key research questions and hypotheses about which veterans succeed in traumatic discrimination claims and what factors contribute to their outcomes. A primary objective was assessment of the determinants of success for racial discrimination and sexual-orientation discrimination cases. Logistic regression analyses, controlling for time and policy changes, found that, across all discrimination cases, the only statistically significant predictors were representation, pre-service trauma, PTSD, and number of claimed mental health conditions. However, many of these relationships no longer held when examining racial discrimination and sexual-orientation cases separately.

Out of all variables, a strong predictor of success for sexual-orientation cases was the number of mental health conditions claimed. More specifically, a greater number of mental health disorders is statistically significantly related to successful outcomes in both race and sexual-orientation discrimination cases, while greater numbers of claimed mental health conditions beyond 2 are only marginally related to better outcomes. This outcome did not hold with number of traumatic events claimed.

On the issue of disorder type, PTSD is the most frequently claimed for discriminatory trauma. However, nonparametric analysis of variance revealed that veterans are most likely to succeed in sexual-orientation and racial-discrimination claims when they pursue benefits for

Acquired Psychiatric Disorder, which is a claim that may cover variously diagnosed disorders even if the BVA cannot pinpoint a specific one. Thus, determining the best strategy requires careful consideration. Military characteristics, such as era of service and military branch do not really make a significant difference in approval or denial except for combat service.

It is also the case that many initial hypotheses could not be resolved because there was not a sufficient number of cases to draw such conclusions. This was true in the case of perceived lack of support in combat (H_2), discrimination occurring on a military base or installation (H_3), White versus minority veteran outcomes (H_7), discrimination perpetrated by members of the victim's racial group versus members of other racial groups (H_8), and discrimination occurring during or shortly after the time of racial integration of the U.S. military (H_9). In addition, regarding sexual orientation, there were too few cases in which veterans claimed that they had concealed their identities (H_{15}) to draw conclusions. A summary of results is presented on the following page in Table 17, including unexpected findings.

Chapter 5 puts these findings in context by addressing important considerations about factors that make these cases so hard to identify and why it may benefit the VA to obscure them through opinion-writing techniques. The following chapter also offers guidance on how the existing cases can be used to help attorneys, forensic evaluators, and advocates make better predictions about the viability of a discrimination case and the nature of evidence that may assist in perfecting a claim. The chapter concludes by recommending evidentiary markers unique to race, sexual orientation, and both types of discriminatory trauma.

Table 17

Test Results for Hypotheses

	Predicted Relationship	Results	Test Statistics
All Cases			
H_1: Number of different types of discriminatory events	+	Not supported	
H_2: Perceived lack of support in combat	+	Unable to identify enough relevant cases	
H_3: Discrimination on a military installation base/ship	+	Unable to identify enough relevant cases	
H_4: Pre-enlistment trauma history	-	**Supported**	$\chi 2$ (1, 563) = 8.30, $p < .01$ $b = -.99$, $p < .05$
H_5: Adoption of *DSM-5* criteria	+	**Partially supported,** not specific to PTSD	$\chi 2$ (1, 563) = 33.40, $p < .001$ $b = 1.09$, $p = .05$
H_6: Discrimination involving physical assaults	+	Significant chi-square, no longer significant in LR	$\chi 2$ (1, 563) = 6.88, $p < .01$ $b = .58$, $p < .10$
Race Discrimination Cases Only			
H_7: White v. minority veterans	+	Unable to identify enough relevant cases	
H_8: Discrimination by same-race v. other-race others	+	Unable to identify enough relevant cases	
H_9: Racial integration of the military	+	Unable to identify enough relevant cases	
Sexual Orientation Discrimination Cases Only			
H_{10}: Heterosexual v. LGBT veterans	+	Not supported	
H_{11}: Interrogation about sexual orientation	+	Not supported	
H_{12}: Discharge on the basis of sexual orientation	+	Not supported	
H_{13}: Repeal of 'Don't Ask, Don't Tell'	+	Significant chi-square, no longer significant in LR	$\chi 2$ (1, 563) = 22.66, $p < .001$ $b = .10$, $p = .81$
H_{14}: Military Sexual Trauma	+	Not supported	
H_{15}: Concealment of sexual orientation	+	Unable to identify enough relevant cases	
Unexpected Findings	Relationship		
Pro se v. represented	-		$\chi 2$ (2, 563) = 18.99, $p < .001$ $b = -.77$, $p < .05$
Number of Mental Health Conditions Claimed (2 v. 1)	+		$\chi 2$ (2, 563) = 25.90, p < .001 $b = 1.16$, $p < .001$
Number of Mental Health Conditions Claimed (3/4 v. 1)	+		$\chi 2$ (2, 563) = 25.90, p < .001 $b = .69$, $p = .06$
PTSD v. other diagnoses	-		$\chi 2$ (1, 563) = 7.35, p < .01 $b = -.66$, $p < .05$

Chapter 5 Discussion

Summary of Research Objectives, Questions, and Hypotheses

This study was the first to examine a specific subset of cases decided by the Board of Veterans Appeals. It aimed to identify patterns in decision-making to discern any identifiable characteristics that influenced adjudication of cases where veterans claimed that discrimination experienced in the military led to a mental health condition(s). The study focused on two types of discrimination—race and sexual-orientation—to the exclusion of other forms of prejudice, such as religious or disability discrimination, specifically because of the pervasiveness of race discrimination and sexual-orientation discrimination in the military. Notably, the military as an institution promoted both forms of discrimination through racial segregation (Nalty, 1986) and prohibition of service among LGBT people (Shilts, 1993). With over 114,000 service members involuntarily discharged for sexual orientation (Ramirez & Sterzing, 2017) and countless others interrogated and investigated during service, many LGBT veterans likely suffered adverse mental health consequences (e.g., Delgado et al., 2016). The recent military transgender ban speaks to continuing institutional discrimination of sexual minorities (Wise, 2019). Likewise, racial discrimination in the military is alive today, not only because of systematic disparities in promotion and discipline all disfavoring racial minorities (Burk & Espinoza, 2012), but also in the tensions that have motivated the Commandant of the Marine Corps to ban the display of the Confederate Flag due to its impact in "degrad[ing] unit cohesion" and "inflam[ing] feelings of division" as recently as April 2020 (Berger, 2020).

Although no two individuals can be expected to respond in precisely the same manner to a discriminatory event due to different individual "vulnerabilities" (Williams et al., 2018, pp. 248-249), given the *potential* of race and sexual-orientation discrimination to manifest numerous

injuries to the mental health of some military veterans, it was anticipated that careful study of the entire population of BVA discrimination cases would help to identify key characteristics of successful claims. The VA has prioritized the adjudication of disability claims involving MST and gender harassment in recognition of systemic impediments in the evaluation of health and other records (Seamone & Traskey, 2014). Yet, there are no specially tailored mechanisms to assist veterans who experienced racial and sexual-orientation discrimination during military service. The ultimate objective of this study was to begin the overdue processes of filtering, parsing, categorizing, and cataloguing. The hope in undertaking these efforts is not only to create a dialogue but also to sketch a preliminary map of key decisional factors that claimants should consider in articulating and supporting a claim related to traumatic discrimination.

The study posed specific research questions to guide exploratory investigation of sexual-orientation and race discrimination cases and further whether there were any significant differences regarding the BVA's treatment of race discrimination cases in comparison to sexual-orientation discrimination cases. Recognizing further that discrimination invokes different evaluation and assessment criteria in the adjudication of claims for PTSD, as opposed to other mental health disorders (38 C.F.R. § 3.304(*f*)(5)), the study sought to evaluate how victims of discrimination fared under distinctly different criteria. More specifically, the study inquired into the VA's forensic requirement for PTSD stressor events to be corroborated by evidence independent of the veteran's own account to determine whether veterans have a higher likelihood of succeeding in discrimination claims related to PTSD or whether the stressor requirement was an obstacle that was too great to overcome. Considering that the *DSM-5* substantially redefined the type of event that can be considered as trauma (Stein et al., 2016), the study also aimed to

detect any changes in case outcomes when claims involving discrimination were evaluated under different *DSM* editions.

The study began by identifying several hypotheses along the full spectrum of concerns regarding traumatic discrimination claims in the aggregate, and then considering race and sexual-orientation discrimination claims separately. Overall, it was hypothesized that veterans claiming discrimination-related mental health conditions would be more likely to succeed on appeal when they claimed multiple discriminatory events, in accordance with the dose-response theory of traumatic stress injury (Gerber et al., 2018). Experiencing multiple discriminatory injuries during military service is but one component of cumulative trauma. Another important component is the experience of traumatic events prior to military enlistment. Recognizing that pre-service trauma prevents many veterans from obtaining service-connected benefits for military sexual assault (Seamone & Traskey, 2014), this study projected a lower likelihood of success on appeal for veterans with pre-enlistment trauma histories who appealed denials of traumatic discrimination claims.

Considering that physical assaults are injuries that have traditionally been associated with the *DSM*'s threshold for a traumatic event (Holmes et al., 2016), it was further hypothesized that discriminatory events involving physical assaults would be more likely to succeed on appeal. In light of the vital role of unit cohesion in the military and the impact of discrimination in undermining that necessary virtue (Kabat et al., 2018), this study hypothesized that veterans who perceived a lack of peer support in relation to discriminatory events would suffer greater traumatic injuries, especially in instances where such abandonment was perceived in a combat zone. A concluding hypothesis for all traumatic discrimination cases predicted greater psychological injuries in cases where the discrimination occurred on a military installation,

including a base or a naval vessel. The anticipated association was based on prior studies suggesting that malicious injuries occurring where military members reside and expect to be safe incur more chronic mental health conditions and disturbances (Foynes et al., 2015, p. S129) (observing how "aspects of identity are often closely tied to the work environment" in military settings).

Regarding racial discrimination, the study tested for three hypotheses. In light of studies revealing that Black veterans are less likely than White counterparts to prevail on all PTSD mental health service-connection claims (Marx et al., 2017; Murdoch et al., 2003), this study predicted that the same results would hold true for the subset of veterans claiming discriminatory trauma. White veterans claiming racial discrimination were hypothesized to be more successful in obtaining service-connection on appeal than minority veterans claiming racial discrimination. The second hypothesis considered a variant of racial discrimination involving victimization by a member of one's own race, such as ridicule for engaging in an interracial relationship, marriage, or friendship. The study anticipated that same-race incidents of racial discrimination would result in greater mental health injury, hence greater likelihood of success based on heightened perceptions of betrayal by the perpetrators (Gómez, 2018) (addressing Cultural Betrayal Trauma). The final racial discrimination hypothesis focused on the veteran's era of service, predicting that veterans who claimed discrimination related to eras of military racial segregation would be more likely to succeed in their appeals in recognition of the oppressive effects of institutionalized *de jure* discrimination (Thompson-Miller et al., 2015) (exploring Segregation Stress Syndrome).

Finally, on the topic of sexual-orientation discrimination, the study aimed to analyze five interrelated hypotheses. Two hypotheses focused upon the military's legally required

investigatory and disciplinary responses to sexual minority veterans. Here, it was anticipated that veterans who were subjected to interrogations and investigations into their sexual orientation would be more likely to experience mental health consequences and a higher likelihood of success on their claims. It was similarly hypothesized that receipt of an involuntary discharge from the military based on sexual orientation would inflict serious mental wounds and result in a higher likelihood of success on appeal. These hypotheses drew from the expanding scholarship on adverse mental health consequences facing LGBT veterans, including those discharged based upon sexual orientation (Livingston et al., 2019; Castro & Goldbach, 2018), as well as studies accounting for more chronic mental health conditions among veterans involuntarily discharged for any purpose (Brignone et al., 2017).

In the early 1990s, Meyer (1995; 2003) proposed a theory of Minority Stress, which posited identity concealment as a unique coping mechanism among sexual minorities who face discrimination. More recent research has built upon Meyer's theory in identifying mental health consequences of sexual minority veterans who engaged in identity concealment in response to military anti-gay policies (e.g., Beckman et al., 2018). Considering this literature, this study next hypothesized that veterans claiming identity concealment because of sexual-orientation discrimination would be more likely to experience mental health consequences and a greater likelihood of succeeding on appeal.

Due to the military's official embrace of the DADT policy, and the subsequent repeal of that very policy in 2011, largely due to the recognition of deleterious effects including "personal, social, or institutional barriers" to achieving one's potential and discriminatory treatment including "harassment or abuse based on sexual orientation" (Stanley, 2011b, p. 3), the study hypothesized that appeals for sexual-orientation discrimination would be more successful post-

repeal, as opposed to dates when the military still embraced the DADT policy. It was surmised that there might be greater sensitivity to the impact of the DADT policy in motivating attitudes of hatred and emboldening service members who wished to justify their personal acts of oppression on the very existence of the policy (Castro & Goldbach, 2018). Notably, in addressing each of these hypotheses, it was unknown whether the data gleaned from the legal opinions would support resolution of each of the hypotheses or whether the resulting sample size would allow for the assessment of statistical significance of subgroups. Therefore, it was expected that the research design and available data may not be able to resolve all the proposed research questions and hypotheses.

Summary of Research Methodology

No previous research of BVA decisions has identified traumatic discrimination cases and no other study besides Seamone and Traskey (2014) has set out to identify outcomes of certain types of BVA decisions for a specific population of appellants. The existing scholarship was limited to BVA cases claiming sexual assault, and the single study was qualitative in nature and did not conduct any empirical evaluation of MST decisions (Seamone & Traskey, 2014). In order to conduct any meaningful statistical analysis of traumatic discrimination cases, this study's methodology would require an accurate, reliable approach for sifting through all decisions related to a claim for service-connection of a mental health disability where the veteran alleged that the disability was caused by racial discrimination or sexual-orientation discrimination during military service. Because the BVA database contained over one million decisions at the time of this study, it would have been infeasible to review each one manually, necessitating a "big data," ML approach. Although ML approaches have been addressed with caution (e.g., Pasquale & Cashwell, 2018), many have urged that ML is ideal in identifying

hidden relationships that are only accessible through algorithmic evaluation of the contents of massive legal repositories (e.g., Surden, 2014).

This study adopted a three-part methodology. First, the research relied upon an existing database that listed the unique case numbers of all mental health service-connection BVA decisions contemporaneously identified by quality-control employees of the Board at the time of filing. As a preliminary matter, a computer scientist created a code to retrieve each case classified by the Board from the BVA's publicly available decision search database and convert it into a text file that could be read by the Python data analysis software program. In 2019, when the decisions were extracted, the BVA database contained 1,059,285 cases addressing a range of issues.

The entire population of traumatic discrimination cases lived within the 123,011 mental health service-connection cases, and the second step in data collection and analysis was to conduct REGEX and Doc2vec word-embedding searches to locate as many traumatic discrimination cases as possible, all of which were verified by trained human coders. Given the inadequacy of conventional search techniques to identify the nuanced legal analysis involved in traumatic discrimination cases (e.g., Fagan, 2016), it was necessary to use confirmed cases as training data in developing an ML approach for automatic classification of opinion text.

Inspired by successful approaches at classifying accident narratives in the text of occupational health and insurance databases (e.g., Marucci-Wellman et al., 2017: Bertke et al., 2016; Marucci-Wellman et al., 2015), the study next used combinations of ML algorithms to classify mental health service-connection cases. Models were developed for classifying case outcome, racial discrimination content, and sexual-orientation discrimination content. In all three classification schemes, the most accurate models combined Naïve Bayes, Logistic

Regression, and Support Vector Machine algorithms, which corresponded with the model combinations in the accident surveillance studies (Vallmuur et al., 2016). Using confirmed cases as training data for each type, the ML approach resulted in the identification of tentative classifications of cases numbering over 1,000 in the relevant categories. Similar to the accident surveillance studies, the inherent limitations in the ML process necessitated human confirmation of all potential classifications (Vallmuur et al., 2015). After eliminating nonconforming cases, the result was 536 racial discrimination cases, 108 sexual-orientation discrimination cases, and 9 cross-over cases that claimed both discrimination types during military service. These overlapping cases were merged with the sexual-orientation discrimination cases for a total population of 653 traumatic discrimination BVA decisions that reached a final outcome on appeal on the issue of service-connection for a mental health disorder. One sexual-orientation discrimination case was excluded based upon the fact that the veteran had not claimed a mental health disorder, but instead alleged that his disability was being labeled as a "homosexual." Thus, there were 653 decisions in the corpus for statistical analysis (536 race and 117 sexual orientation). The study conveys descriptive results, followed by results of logistic regression and more sophisticated statistical analysis.

Results of the Study

At the outset, descriptive data revealed much about the veterans appealing traumatic discrimination claims to the BVA, the nature of discrimination alleged in the cases, the types of mental health conditions linked to discriminatory events in service, and, importantly, the outcomes of such cases. Key findings include the fact that aside from a short timespan between 1995 and 1997, it was not until 2015 when denials and approvals of traumatic discrimination claims were distributed in a similar manner. Between 1999 and 2015, denials far outpaced

approvals of race and sexual-orientation discrimination claims by the VA. It has only been very recently, between 2017 and 2019, that approvals finally outpaced denials. Among veterans claiming racial discrimination where the BVA opinion indicated the veteran's race/ethnicity, Black veterans represented the largest proportion at 62%, with Whites taking the second largest proportion of race-discrimination claims, representing 14% of claimants. Latinx veterans represented the third largest group of race discrimination claimants at 9%, followed by Asian-American veterans, who constituted 6% of the population. When compared with the proportion of veterans who were minorities in 2017, 52% of minority veterans were Black, 30.8% were Latinx, and 6.7% were Asian-American (National Center for Veterans Analysis and Statistics, 2017). These statistics are noteworthy because it appears that Black veterans in the study were subjected to disproportionately higher levels of discrimination than Latinx and Asian-American veterans.

In terms of mental health conditions indicated by claimants, trauma and stressor disorders represented the largest number of claims, followed by depressive disorders, anxiety disorders, and acquired psychiatric disorders. The term "acquired psychiatric disorder" has a specific meaning in VA disability assessments and represents a mental health condition that has not been precisely or is only generally diagnosed (e.g., *Harris v. Shinseki,* 2009) (remanding a case for further evaluation when the veteran clearly suffered from a mental health disorder even though he did not qualify for a PTSD diagnosis). Veterans also claimed schizophrenia, psychotic, and bipolar disorders related to discriminatory experiences but at much lower proportions. Given that "half of the Army and Air Force servicemembers discharged under DADT were women, despite the fact that males comprise the majority of these branches" (Bonnes, 2017, p. 806), the larger proportion of women claiming sexual-orientation discrimination in this study was not

surprising. Approximately a third of the sample of sexual-orientation claims were by women, during periods when a substantially smaller proportion of women served in the Armed Forces. Disturbingly, women claiming sexual-orientation discrimination were more than twice as likely to be denied for their traumatic discrimination claims than males making the same claims.

With respect to the numerous hypotheses posed in this study, it was not possible to achieve resolution in some instances based on the manner in which judges inconsistently described factual scenarios or omitted key facts altogether, or because the study lacked a large enough sample of veterans claiming a particular subcategory of discrimination. Hence, while a small number of cases anecdotally addressed some hypotheses, there was insufficient information to accept or reject hypotheses relating to: Veterans who felt a lack of peer support due to discriminatory treatment in either garrison and combat environments (H_2); veterans who experienced discrimination onboard a ship or some other form of military installation (H_3); White veterans claiming racial discrimination (H_7); victims of racial discrimination by perpetrators who were members of their own racial group (H_8); veterans claiming racial discrimination during a time when the military was racially segregated (H_9); and veterans who reported concealing their sexual orientation in response to sexual-orientation discrimination (H_{15}). Contrarily, there were sufficient data to address the remaining hypotheses.

Regarding discriminatory trauma in general, the study rejected the hypothesis that there were differences in outcomes of racial—as opposed to sexual-orientation discrimination claims. On the contrary, outcomes were distributed in nearly identical proportions of approvals versus denials within both groups (only 1 percent difference). Additionally, veterans who raised multiple discriminatory events were not more likely to obtain service connection while veterans who claimed multiple mental health disorders were more likely to succeed in their claims when

they raised two conditions as opposed to one, and were only marginally more successful when they raised three or more conditions. Also, regarding traumatic discrimination cases in general, there was support of the hypothesis that veterans who reported traumatic events prior to entering military service were less likely to succeed in claims for either race or sexual-orientation discrimination. In many of these instances, the Board denied the discrimination claim on the basis that the medical examiners either attributed the mental health symptoms to the pre-existing traumatic events or found no link between the mental health symptoms and the discrimination suffered by the veteran given the prior trauma history.

Regarding diagnostic criteria, the study found, contrary to the hypothesized difference in outcomes, that there was no significant difference in case outcomes for veterans who were evaluated for PTSD under the diagnostic criteria of the *DSM-5*, as opposed to prior editions of the *DSM* (i.e., *DSM-IV-TR*, *DSM-IV*, *DSM-III*), even though the *DSM-5* substantially altered the definition of what qualifies as trauma for a PTSD diagnosis. This finding was consistent among veterans who claimed race discrimination as well as those who claimed sexual-orientation discrimination. While there was some evidence that, across claim types, the *DSM-5* was marginally associated with an increased likelihood of claims success, there was no specific indication that PTSD claims were treated in any different way from other claims. In evaluating the nature of discriminatory harm alleged in both race and sexual-orientation discrimination cases, there was support for the hypothesis that veterans whose claimed discrimination events included physical assault had significantly different and more successful outcomes from those who did not claim physical assault.

With regard to racial discrimination claims, the sample size of White veterans' cases was too small to approve or reject the hypotheses that White veterans were equally likely or more

likely to succeed than Black or other minority veterans in claims for racial discrimination. Substantial differences were apparent in the descriptive statistics, however. Contrary to the anticipated result that White veterans would be approved in greater proportions than Black veterans, only 8 percent of White veterans in the study who claimed racial discrimination had appeals granted, while many more minority veterans succeeded in appeals of race discrimination claims (e.g., 8 % White approved versus 41% Black). This finding was unexpected given consistent trends of racially disparate compensation awards for Black veterans claiming mental health disorders, in general. Apparently in PTSD claims not involving race discrimination, little has changed since 2003, when it was first observed by Murdoch and colleagues that "Black race was strongly, robustly, and negatively associated with veterans' odds of becoming service connected for PTSD" (p. 542). Marx and colleagues (2017) reached similar conclusions of undeniable empirical evidence of racial disparities over a decade later.

Specific to sexual-orientation discrimination, the study found that neither adverse experience with interrogation into sexual orientation nor anti-gay discharge from the military had a significant impact on the outcome of the case. Hypothesized increases in likelihood of a successful outcome were rejected, raising questions about the seeming inapplicability of research showing how both types of incidences have created significant stress and lingering mental health problems for sexual minority veterans (Ramirez & Sterzing, 2017, p. 73) (identifying "LGBT Military Minority Stressors"). While it was anticipated that sexual-orientation discrimination cases decided after the date of the repeal of the DADT policy in 2011 would be more likely to succeed, the degree to which this occurred was quite unexpected, as veterans proved to be two times more likely to succeed following repeal. Beyond this notable impact on veterans claiming sexual-orientation discrimination, the time period following repeal of DADT further appeared to

be related to the success likelihood of veterans claiming race discrimination. However, this relationship was no longer significant after the addition of control variables. Thus, these data do not support that sexual-orientation discrimination cases were more successful after DADT compared to before. While it was not possible to control for all factors that would explain the difference in success rates, it is believed that the repeal of DADT may have nevertheless increased BVA judges' sensitivity to other forms of discrimination and their deleterious effects.

Summary of Logistic Models

Multilevel logistic regression analysis was conducted for discrimination cases overall, and additional models were developed for racial- and sexual-orientation discrimination cases. While all the models yielded weak predictive performance, the models did begin to illustrate the most significant variables as well as combinations of variables contributing to outcomes in discrimination cases. In each of the models, time and policy-related variables were controlled for and included Draft era, DADT policy, and *DSM* version.

In the overall model, the variables of pre-enlistment trauma history and PTSD were negatively associated with success on appeal, and the *DSM-5* was marginally positively associated with success. Both discrimination involving physical assault and combat experience were marginally positively associated with success of claims on appeal. An unexpected finding involved veterans who are self-represented, who face 54% reduction in the odds of success compared with veterans who were represented on appeal. Finally, while veterans who claimed more than one mental health condition were more likely to succeed in their claims, those claiming three or four conditions as opposed to one were only marginally significantly more successful.

In the final race discrimination model, veterans who were self-represented were less likely to succeed on appeal, pre-service trauma was negatively associated with successful appeal, and the number of mental health conditions was positively associated with success on appeal, with the caveat that three or four conditions claimed had reduced odds of success on claims compared to two claims. Comparatively, the final sexual-orientation discrimination model revealed only two significant predictors: Two mental health conditions were more likely to result in success than one, and the claim of PTSD was marginally negatively associated with likelihood of success. The much smaller sample size of sexual-orientation discrimination cases may explain why more robust associations were not captured in the multilevel logistic regression modeling.

The findings of this study, when considered in totality, provide important insights into how the VA adjudicates traumatic discrimination claims. Three overarching conclusions emerge in the areas of: (1) differential treatment of race and sexual-orientation discrimination cases, to include the role of discriminatory policies institutionalized within the military; (2) the role and function of the *DSM*'s concept of traumatic events; and (3) the dilemma of cumulative trauma in the adjudication of traumatic discrimination cases. These three conclusions assist in etching the parameters for a practical framework for addressing traumatic discrimination claims and ultimately identification of some distinct markers for corroboration of discriminatory events which will be further examined in the following sections.

Conclusions Regarding the Board's Treatment of Discrimination Claims

A primary inquiry in this study was the differential consideration of racial and sexual-orientation discrimination by the Board. It was initially theorized that there would be marked incongruence in outcomes based upon the unique constructs of race and sexual orientation. For

instance, while racial and sexual minorities are both subjected to minority stress that can result in a mental health disorder (Meyer, 1995; Meyer, 2003), racial discrimination operates in a distinctively different manner than sexual-orientation discrimination (Carter, 2007). Although some racial minorities may have physical characteristics that make it difficult for a perpetrator to determine their race (e.g., a light-skinned Black person "passing" as White (e.g., Harris, 2018)), which might raise similar issues of identity concealment as those impacting a sexual minority person, race is largely perceived based upon one's immutable characteristics, such as "skin color and physical features" (Carter et al., 2016, p. 63). In contrast, sexual orientation is largely perceived by others based on behavior, whether this involves mannerisms, speech, conformity with societal stereotypes of gender, or same-sex sexual interactions (e.g., Soucek, 2014).

With the exception of identity concealment in the case of passing, it was hypothesized that separate mechanisms of discriminatory injury were at work for race versus sexual orientation, making unique presentations of mental health conditions more likely and different decisional outcomes more probable in response. Accordingly, the result of the study indicating a high degree of parity and no significant difference between outcomes in race discrimination and sexual-orientation discrimination case outcomes was quite surprising. While it is not possible to fully explain these results, additional findings in the study provide important context and a possible explanation.

Nearly identical proportions of approvals and denials among race and sexual-orientation discrimination cases should be further considered in light of additional findings regarding determinants of sexual-orientation discrimination cases. Specifically, this study found that, within the population of sexual-orientation discrimination cases, neither interrogation nor discharge from the military based on sexual orientation were significantly related to the outcome

of the case. These findings were similarly unexpected since both events were institutional manifestations of the military's discriminatory policy which sanctioned persecution, confrontation, and even "branding"[6] as undesirable in the case of military discharge. Ultimately, as Goldbach and Castro (2016) document, the DADT policy officially sanctioned "active" discrimination against LBGT military members (p. 60). The lack of any relationship between interrogation and discharge on case outcome suggests that the VA is not envisioning the lawful exercise of a policy, on its own, to be discriminatory. This is supported by the BVA judge who opined that "being 'branded' as a homosexual is not a disease or injury for which VA compensation may be awarded."[7] It appears that this position has similarly been articulated by the military following the repeal of DADT. According to Defense Undersecretary Clifford L. Stanley's guidance to the Boards of Correction for Military Records (2011a), while the DoD accepted that the DADT policy was discriminatory and wrong, the DoD recognized that times had changed but that discharges were lawful in earlier, less sophisticated times. Accordingly, merely having received a discharge for sexual orientation in accordance with regulation was not necessarily a basis for upgrade of the discharge without further evidence of error. A similar approach would explain why the experience of an interrogation or even a discharge from the military based on anti-gay policies would not, alone, have determinative weight in service-connection for a mental health condition.

---

[6] *See, e.g.*, Name Redacted, Citation No. 93-07668 (Apr. 22, 1993) (denying the adequacy of a PTSD stressor event based on the veteran's "feelings concerning being branded a homosexual"); Name Redacted, Citation No. 99-18573 (Jul. 7, 1999) (addressing the perception of "being branded a homosexual" based on military discharge); Name Redacted, Citation No. 12-36487 (Oct. 22, 2012) (granting PTSD service-connection, in part, based upon the reported effects of a discharge certificate "stamped with large red blocked letters branding her as 'overt homosexual'").

[7] Name Redacted, Citation No. 00-03160 (Feb. 8, 2000).

The above conclusions, which bear on official institutional acts in furtherance of the military's anti-gay policies, do not suggest ambivalence to the impact of discrimination generated or emboldened by the existence of the policies, however. The study revealed that veterans claiming service-connection for a mental health disorder related to sexual-orientation discrimination were more likely to succeed in their BVA appeals in the time period following repeal of DADT. Despite the insignificance of the repeal in overall regression modeling for sexual-orientation discrimination, the descriptive statistics support a nuanced explanation where repeal of the DADT policy may have increased the Board's willingness to corroborate accounts of discriminatory acts by specific service members (not the institution), which were not formally sanctioned. Consequently, that a Navy veteran was separated from the military for admitting he was gay did not support discriminatory trauma. However, his commander's further acts of writing a letter to the veteran's parents to tell them of the basis for the veteran's discharge and threats of a court-martial for perjury in not revealing the veteran's sexual orientation to the military upon enlistment,[8] constituted discriminatory acts falling outside the scope of compliance with military policies.

The distinction between policies and their discriminatory impacts in sexual-orientation discrimination cases sheds additional light on the lack of differences between case outcomes for racial and sexual-orientation discrimination claimants. These findings suggest that the Board has focused more on the acts of individuals, rather than institutions in all cases of discrimination. Hence, the magnitude of the perpetrator's discriminatory behavior appears more determinative than institutional policies or procedures. Accordingly, it follows that sexual minority veterans who were physically or sexually assaulted, ridiculed, or harassed in some other way based upon

[8] Name Redacted, Citation No. 10-46476 (Dec. 13, 2010).

their orientation or identity are better positioned to succeed on appeals than veterans who claim that mental health injuries resulted solely from the existence of the anti-gay policies, or even discharge from the military on that basis.

Additional results further illustrate the BVA's nuanced approach to the role of the institution in relation to traumatic discrimination claims. Contrary to expectations, even though there was too small a sample of White veterans claiming racial discrimination, the data revealed that Whites were much less likely than racial minority veterans to obtain service-connection for their discrimination claims. It was hypothesized that White veterans would be more likely to prevail in race discrimination claims in recognition that multiple studies have identified a disparate number of Black veterans claiming PTSD are denied service-connection compared to White veterans. With 8% of White veterans succeeding compared to 41% of Black veterans succeeding in racial discrimination claims, there may very well be an exception to this general rule, at least regarding claims for PTSD or a mental health disorder resulting from racial discrimination. While, admittedly, claims related to traumatic discrimination constitute an extremely small proportion (0.8%) of all service-connected claims for mental health disorders, the exceptional result is worthy of due consideration.

The miniscule success rates among Whites in relation to minorities suggests that the BVA has considered the power differential inherent in traumatic discrimination claims. Racism largely operates by exploiting the power inherent in numbers. Moreover, racial minorities have long been far outnumbered by Whites in the Armed Forces, with differences magnified at increasing levels up the chain of command (Burk & Espinoza, 2012). That White veterans fare poorly in substantiating claims of racial discrimination suggests recognition of the power dynamics of race in military service. The special consideration of this power differential is not

unlike the BVA's special consideration of the repeal of DADT, as addressed above. In both cases, the reality of serving under a tremendous power inequity may have some value in the Board's favorable consideration of substantiating evidence for the veteran's account of discriminatory stressors. However, a significant limitation of these findings is the frequency of missing race data. Race was only identifiable in a minority of discrimination cases, and it is quite likely that opinions specifying race are not representative of all discriminatory case opinions.

The Role of the *DSM* in Assessing Traumatic Events

Although veterans claiming physical assault related to discriminatory experiences were more likely to succeed on appeal, it does not appear that the changes in *DSM-5*'s PTSD diagnostic criteria had any significant impact on the outcome of a case. Existing literature highlights how changes in Criterion A made the definition of a traumatic event more stringent, limiting the range of qualifying traumatic events to "exposure to actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association, 2013, p. 271, Criterion A). For instance, the *DSM*-5 now precludes "non-immediate, non-catastrophic life-threatening illness, such as terminal cancer" from being classified as trauma, "regardless of how stressful or severe it is" (Pai et al., 2017, p. 2). Because physical assault can more easily be contemplated as a qualifying type of event for trauma under the *DSM*-5, one would expect this revised version to impact decisional outcomes.

Based on the lack of any significant relationship between *DSM* edition and outcome of appeal in PTSD cases, it appears that physical assault has likely always been significant, even before the use of the *DSM-5* in service-connection cases. Although only 177 out of the 653 cases applied the *DSM-5* criteria, likely due to the length of time before an appeal reaches the BVA, the results are nonetheless noteworthy. This conclusion suggests that traumatic

discrimination cases, on balance, have been treated in a more stringent way, with less credence given in VA evaluations to fringe, novel, or alternative conceptions of what qualifies as a traumatic event. Because veterans claiming discriminatory trauma have argued novel types of trauma, such as a "unique" form of "Asian-American PTSD,"[9] micro- and macro aggressions[10], or purely verbal harassment, the implication of this finding is that veterans who claim PTSD under alternative theories of trauma will be less likely to succeed in their claims. It would further appear that, absent some link to physical assault or fear of physical assault, veterans claiming traumatic discrimination are less likely to prevail unless additional considerations of trauma are recognized and incorporated into VA rating standards, or unless the veteran offers a well-crafted psychiatric examination diagnosing PTSD on the basis of less common trauma theories.

Cumulative Trauma Considerations in Traumatic Discrimination Claims

Seamone and Traskey (2014) previously examined the phenomenon of cumulative trauma MST cases decided by the BVA. Their research revealed that VA medical examiners and BVA judges frequently denied service-connection on the basis that veterans claiming sexual trauma in the military had suffered similar forms of trauma prior to their entry into military service. The current study revealed a similar phenomenon; not only did many sexual and racial minority veterans suffer traumatic events prior to enlistment, those who had pre-service trauma were less likely to obtain service-connection for discriminatory events in service. These findings were consistent in showing that victims of traumatic discrimination face an additional burden of

[9] Name Redacted, Citation No. 10-17948 (May 14, 2010).

[10] Name Redacted, Citation No. 18-119553 (July 19, 2018) (observing the medical examiner's conclusion that "micro-insults and macro-insults . . . are not necessarily the stuff of trauma" related to a claim for military race discrimination).

producing medical evidence to support that discriminatory events while in the military had greater impact on their mental health than did prior traumatic events. This evidentiary challenge multiplies in instances where the in-service discriminatory events did not involve physical assault, which is already a factor significantly associated with denial of a claim.

Aside from pre-enlistment trauma, the study raised an interesting point regarding the nature of traumatic events claimed by veterans who alleged traumatic discrimination. Veterans who claimed multiple discriminatory events were not more likely to succeed on appeal, and for those who claimed more than one mental health disorder, two distinct disorders most substantially increased the odds of success on appeal, while three or more disorders were less associated with success. These results were highly unexpected because they suggest that there is an optimal level of mental health disorders that results in a successful appeal in which one mental health condition is not enough to succeed regardless of its presentation of symptoms.

The study further suggests that claiming multiple discriminatory events is not likely to increase the odds of success on appeal. This is noticeably different from hostile environment racial harassment cases adjudicated under Title VII of the Civil Rights Act, where fewer discriminatory incidents have been associated with decreased chances of success and a single occurrence nearly always results in failure of the case (Carter & Scheuermann, 2020; Halcomb Lewis, 2006; Chew, 2006; Chew & Kelley, 2006). In exploring these counterintuitive findings, it seems most likely that the BVA has adopted a level of skepticism in relation to discrimination claims. Perhaps best articulated by the BVA in a case involving a claim of KKK persecution and retaliation, the judge was “prepared to accept” that some discriminatory events did occur based upon knowledge publicly available regarding the timeframe of the claim, but not other “more

extraordinary claims."[11] In light of increased scrutiny over awards for mental health disorders and calls to action by physicians regarding a "disability epidemic [of malingering and exaggeration] in the VA" (Young, 2015, p. 201), it is possible that BVA judges have become dubious of claims involving multiple instances of any type of stressor event, much like the judge in a race decision, who noted the way the veteran "appeared to 'throw out' every possibility of what he thought constituted an in-service stressor as if trying to convince the examiner of his traumatic experiences."[12]

Moreover, a claim involving multiple incidents of non-combat mental health injuries may be treated as an indicator of lack of credibility on the part of the veteran, which is the basis for many denials of service-connection (Nagin, 2015). This finding suggests that veterans claiming discrimination should focus on events that had the most significant impact on their mental health and ones that are supported by the greatest amount of corroborating evidence, whether in the form of witness statements, historical publications, or other alternatives existing outside of the military medical records. It appears that listing every known discriminatory incident could jeopardize chances of success.

Methodological Contributions of the Study

This study's methodological contributions include the combination of ML and logistic regression to identify variables that impact case outcomes. While the focus of the study was a very nuanced area of VA disability claims, there is every reason to believe that the same methodology can be used to address issues other than traumatic discrimination. The

[11] Name Redacted, Citation No. 17-4484 (Oct. 10, 2017).

[12] Name Redacted, Citation No. 17-13518 (Apr. 26, 2017).

methodology enabled extraction of all mental health service-connection cases, and the text of this data set can surely be used to explore other determinants of mental health case outcomes, such as those related to the success of MST appeals and drug addiction appeals. Likewise, the combination of REGEX and Word2vec NLP searches can be used to identify key terms and expressions within other types of appellate cases, especially the code developed to substantially improve the review of such cases.

In the same light, the ML approach suggests that for BVA cases and any appellate case with a similar narrative structure, SVM and TF-IDF will result in the strongest performing ML supervised classification models. This study has successfully developed the Python code for such classification, which may be adapted to classify other types of cases based on results validated by human beings. While some changes to the models are inevitable, this methodology is already superior at identifying BVA cases, when compared to studies that have developed NLP classification models using only 30 cases. The tools in this study permit substantially greater identification of case content in mental health appeals than any existing model.

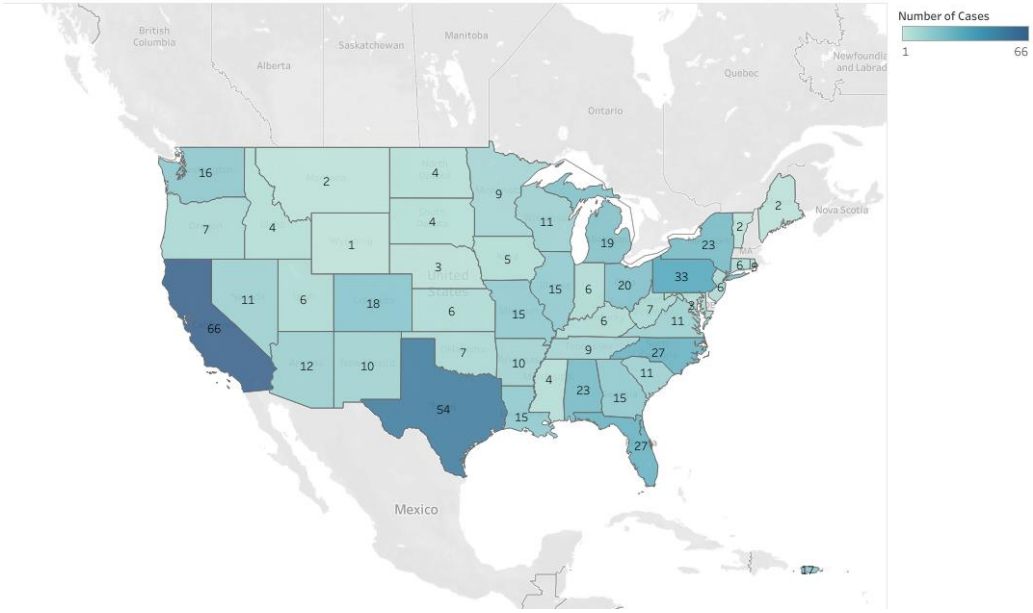
As demonstrated in the following section, the methodology for this study permitted identification of hundreds of discrimination cases that had not been identified, examined, or summarized in any meaningful way. The ability to observe trends in very different types of discrimination cases, even at a cursory level, is the greatest attribute of the ML approach. Although the below analysis is anecdotal, this quantitative approach has enabled future researchers to conduct a detailed qualitative analysis to gain the best understanding of the corpus of discrimination cases.

Detailed Descriptions of Cases

While this study primarily sought to address the determinants of case outcomes in discrimination cases by using regression analysis, the identification of the entire population of cases offered additional information that can assist interdisciplinary audiences. For instance, it was possible to capture the Regional Offices where the appeals originated. An introductory look at the density/quantity of discrimination cases by their originating region indicates that certain offices produce a greater number of traumatic discrimination cases that are denied and further appealed at the BVA. Figure 9, below, depicts the frequency of combined traumatic discrimination cases originating from different Regional Offices across the country, with darker shades indicating a higher count.

Figure 9

Density Map of Discrimination Cases by Originating Regional Office

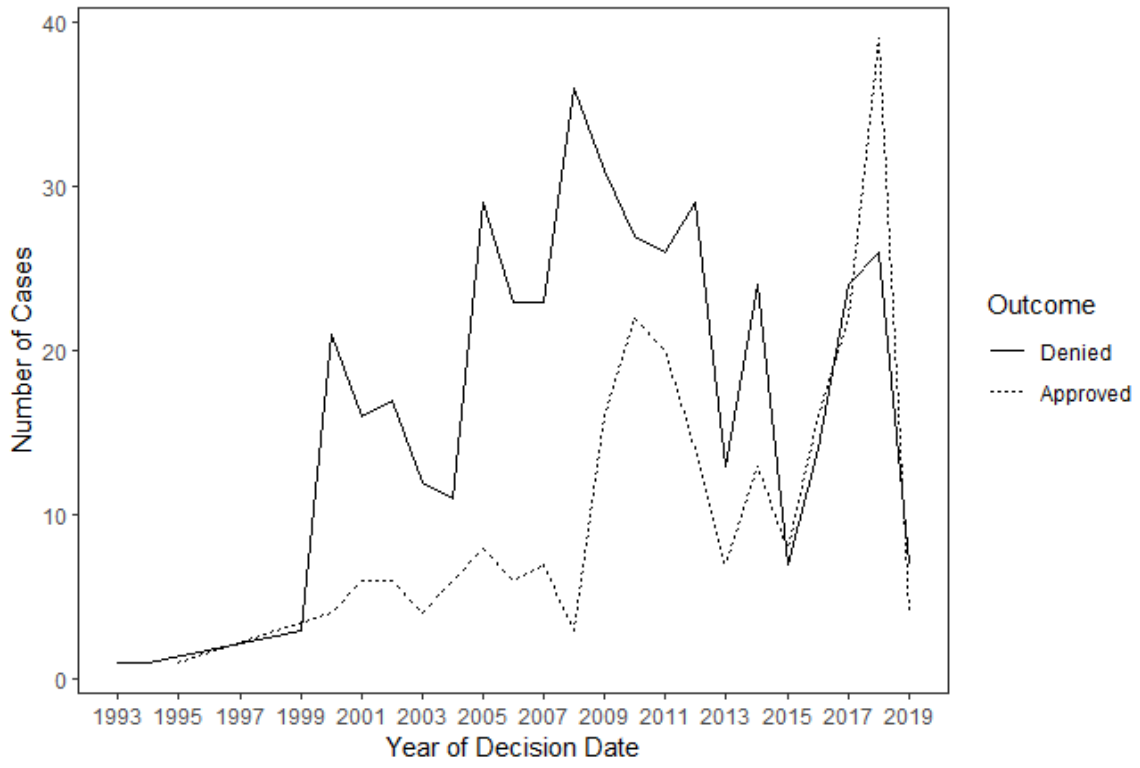


In addition to geographic dispersion, it was possible to track the rates of approvals and denials of discrimination cases over time. Regarding trends in approval and denial of traumatic discrimination claims, the data revealed a sharp increase in granted discrimination claims over

time. As illustrated in Figure 10, below, 2017 was the first-time approved claims outpaced denials. While the jagged slopes over the last couple of years are likely indicative of policy implementation, it is not possible to verify specific causes for the increase. It is important to note that for the year 2019, data were limited through the month of July. The reported drop-off does not represent a decline in approvals or denials and is attributable to the end of data collection in 2019.

Figure 10

Approved vs. Denied Discrimination Cases by Year and Outcome



During coding variables for later regression, research assistants observed and grouped various cases by fact-pattern, such as cases involving race riots. These cases were collected and reviewed for any notable trends. The following part of this chapter discusses some of the most notable trends and endeavors to provide references to specific cases to assist those readers who

would benefit from such references. This first section describes the range of discriminatory trauma scenarios claimed as the causes of mental health trauma. Next, this section will discuss considerations for corroborating the stressor event. Finally, the section will conclude by reporting on the assessment of causation, i.e., whether the claimed events caused the mental health condition.

Scope and Nature of Discrimination Claimed

The following section groups cases according to some observable characteristics and identifies potential trends. These observations were not achieved through the application of methodologically sound techniques for qualitative content analysis, such as the use of Nvivo software or other text evaluation programs (e.g., Creswell & Creswell, 2018; Saldaña, 2016; Miles et al., 2014; Kippendorff, 2013). This section is included to provide basic references for use by practitioners and to more fully explore the general statistics noted by the quantitative methods. Understanding the context for individual decisions with common fact patterns provides additional insight when read in conjunction with the empirical results.

At the outset, many traumatic discrimination cases resembled the eight types of discrimination recognized by the Department of Defense (2000). These events included verbal

harassment[13] usually described as "taunts"[14] or "epithets,"[15] "slurs,"[16] name-calling;[17] beatings;[18] threats;[19] vandalism;[20] graffiti,[21] such as the acronym "KKK" written on walls or clothing,[22]

---

[13] Name Redacted, Citation No. 14-17073 (Apr. 16, 2014) ("He felt that his mental disorder was due to inservice treatment from his drill sergeant and other soldiers who had verbally abused him, including verbal abuse which was racial in nature.").

[14] *E.g.*, Name Redacted, Citation No. 11-22305 (June 8, 2011) (noting "taunts and harassments during active duty service," including "taunts of homosexuality and 'being odd'"); Name Redacted, Citation No. 08-27374 (Aug. 13, 2008) ("The veteran contends that her current depression was caused by sexual harassment experienced during service on account of her sexual orientation. She contends that the harassment was continuous, involved the chain of command, and took the form of verbal taunts and threats."); Name Redacted, Citation No. 10-20092 (June 1, 2010) ("[T]he veteran stated that he was the victim of racist taunts while at sea.").

[15] *E.g.*, Name Redacted, Citation No. 11-32928 (Sept. 7, 2011) ("The veteran contends that he began having depressive symptoms while stationed at Dow Air Force Base in Bangor, Maine, due to a sergeant verbally harassing him with anti-gay epithets.").

[16] *E.g.*, Name Redacted, Citation No. 12-04431 (Feb. 6, 2012) ("He was also called a racial slur."); Name Redacted, Citation No. 15-53544 (Dec. 23, 2015) (noting the veteran's mental health condition was attributable, in part, to the way that "his commanding officer[s] cursed at him and often called him a racially offensive word").

[17] *E.g.*, Name Redacted, Citation No. 10-19751 (May 27, 2010) (relaying the stressor that the female service member was called a "mud shark" after she married a Black man); Name Redacted, Citation No. 07-00326 (Jan. 5, 2007) (noting the stressor of being threatened with a beating by "'[B]lack guys' [who] told the veteran to 'watch his honky ass'").

[18] Name Redacted, Citation No. 09-39810 (Oct. 20, 2009) ("The veteran also claims to be the victim of a racially motivated incident, describing being punched in the stomach by a staff sergeant."); Name Redacted, Citation No. 16-05397 (Feb. 11, 2016) ("The [Black] veteran stated that while he served on the *USS Mullany*, between July 1968 and August 1968 an officer came down to his sleeping quarters and ordered the veteran to get into his dress whites and report to the top deck. The veteran told the officer that all of his dress whites were dirty, and the officer slapped the veteran 'very hard'" . . . "in front of other enlisted white sailors," as a pattern of treatment of "racial minority groups . . . like slaves or second class citizens . . .."); Name Redacted, Citation No. 14-26550 (June 11, 2014) ("[D]uring service aboard a naval vessel in 1946, he was kicked by one of the Chief Boatswain Mates because of racism."); Name Redacted, Citation No. 14-24026 (May 28, 2014) ("The veteran reports that the [Navy] Captain . . . then made a derogatory racial slur and pushed him down the stairs backwards."). Aside from common forms of physical assaults like punches or kicks, some cases involved stressors involving the poisoning of 900 Black servicemembers' food during Basic Training in 1943 and placing glass in the food of a Black soldier. Name Redacted, Citation No. 07-37855 (Dec. 3, 2007); *see also* Name Redacted, Citation No. 18-06056 (Jan. 31, 2018) (claiming that "glass was placed in his food" as a form of "racial prejudice").

[19] *E.g.*, Name Redacted, Citation No. 09-15242 (Apr. 23, 2009) (describing threats by Black servicemen to kill the White "good ole boys" in the unit). In the Navy, a common threat was to throw the minority

"etched into" one's helmet,[23] or a noose drawn around the victim's neck in a photograph;[24] and being subject to unwarranted discipline.[25] In both sexual orientation and racial discrimination

---

sailor overboard. Name Redacted, Citation No. 11-02015 (Jan, 18, 2011) ("He was afraid that he would be killed and thrown overboard, and stated that he heard the gang of [W]hite men utter racial epitaphs while saying they should kill him and throw him overboard."); Name Redacted, Citation No. 01-00621 (Jan. 10, 2001) ("[S]omeone also wrote a note threatening that he would be stuffed in a laundry bag and dumped in the sea."). Even without a physical act, the fear of being thrown overboard due to racial motivation was evident. Name Redacted, Citation No. 08-17362 (May 27, 2008) ("He also reported racial riots and prejudice among his crewmates aboard ship . . .. He reported that several shipmates . . . were pushed overboard and some were never recovered, which made him fear to be out at night around the ship."); Name Redacted, Citation No. 04-23768 (Aug. 27, 2004) (observing the stressor that a veteran was "constantly feeling like he was going to be thrown overboard" after "three guys had threatened to throw him overboard if he did not go below deck" during a time of "racial concerns between whites and blacks" and race riots aboard ship). These threats sometimes involved holding the sailor by his or her ankles over the side of the ship. Name Redacted, Citation No. 10-18459 (May 18, 2010) ("The veteran asserted . . . that his PTSD is related to an incident aboard the *USS Wasp* during which he was 'hung over the side of the ship by four sailors . . . due to his race . . . ."). In more unfortunate cases sailors reported that they were actually thrown overboard due to their race. *See* Name Redacted, Citation No. 09-06735 (Feb. 24, 2009) (noting the stressor of "witnessing a [B]lack seaman being dropped into the ocean on December 22, 1970); Name Redacted, Citation No. 16-23064 (June 8, 2016) ("The veteran claims he developed a psychiatric condition as a result of chronic racial harassment during active service, including an incident when he was thrown overboard by fellow servicemembers.").

[20] *E.g.*, Name Redacted, Citation No. 16-43098 (Nov. 9, 2016) ("He alleged that his stereo system and speakers were destroyed.").

[21] Name Redacted, Citation No. 12-10369 (Mar. 20, 2012) ("He reported that some [W]hite service members broke into his locker and took his records and wrote racial slurs on the latrines.").

[22] *E.g.*, Name Redacted, Citation No. 18-106273 (May 30, 2018) ("He reported that, on one occasion, the words KKK were written with ketchup on his sheets."). The Ku Klux Klan arose in a number of other contexts. *See* Name Redacted, Citation No. 07-03552 (Feb. 5, 2007); Name Redacted, Citation No. 08-10422 (Mar. 28, 2008); Name Redacted, Citation No. 15-27650 (June 29, 2015); Name Redacted, Citation No. 10-02192 (Jan. 13, 2010); Name Redacted, Citation No. 05-26143 (Sept. 23, 2005); Name Redacted, Citation No. 06-03237 (Feb. 6, 2006).

[23] Name Redacted, Citation No. 08-4458 (Feb. 7, 2008) ("He claims racism, including . . . having 'KKK' and a cross etched into his head gear.").

[24] Name Redacted, Citation No. 01-00621 (Jan. 10, 2001) ("The veteran testified that he was subjected to numerous incidents of racial harassment by an unknown person or persons. Pictures of rebel flags, photos of him with a noose drawn around his neck, and 'KKK' signs were placed on his bed.").

[25] *See, e.g.*, Name Redacted, Citation No. 16-43098 (Nov. 9, 2016) ("He reported that drugs were planted under his bunk on several occasions.").

contexts, cases included allegations that the veteran's status resulted in assignment to demeaning[26] or more dangerous military duties,[27] denial of military transportation on planes or vessels,[28] lack of advancement in rank,[29] or failure to recognize exceptional performance.[30] For instance, some "[B]lack soldiers were not permitted to work on tanks because they were told that

---

[26] Name Redacted, Citation No. 02-07158 (Jul. 1, 2002) ("[T]he veteran asserted that he was the object of racial discrimination in his unit and that he was put on latrine duty during service [in Vietnam]."). Name Redacted, Citation No. 16-43098 (Nov. 9, 2016) ("He asserted that he was given excessive K.P. duty (double shifts) and extra 'walking duty' carrying heavy equipment . . .."); Name Redacted, Citation No. 18-151421 (Nov. 19, 2018) (noting depression due to "feelings of having to work the worst jobs" due to racism); Name Redacted, Citation No. 12-36487 (Oct. 22, 2012) (noting that, after being relieved of her duties as an Air Force police officer due to an investigation into homosexuality, the veteran "was required to empty the captain's ashtray, empty the garbage and perform other menial tasks" to the point where "she went home every night disgraced, ashamed, humiliated and embarrassed to be seen by anyone").

[27] On ships, a recurring theme was that the victim was the only or one of the only Black sailors and was assigned to dangerous duty in the boiler room or the engine room. *See* Name Redacted, Citation No. 04-22747 (Aug. 8, 2004) ("The only other African American sailor on board the ship, Joseph, was in the boiler room when it exploded . . .."); Name Redacted, Citation No. 11-00199 (Jan. 14, 2011); Name Redacted, Citation No. 09-29091 (Aug. 4, 2009).

[28] Name Redacted, Citation No. 11-15288 (Apr. 19, 2011) ("[D]uring his duty he was rejected by a superior officer from being allowed to fly in a plane because he was [B]lack, resulted in the veteran crying."). *See also* Name Redacted, Citation No. 16-43098 (Nov. 9, 2016):

> He also reported that on the day his company was scheduled to fly home after the [Vietnam War], he was not allowed to board the plane despite having appropriate documents. He claimed that he was told that he "looked like a gook" . . .. He reported that he went into a panic, fearing that he would be left behind with no one to vouch that he was American.

The only way this veteran was able to return home from Vietnam was "by sneaking aboard the next flight." *Id.*

[29] Name Redacted, Citation No. 12-05291 (Feb. 10, 2012) (promotion); Name Redacted, Citation No. 11-08770 (Mar. 4, 2011); Name Redacted, Citation No. 05-12923 (May 12, 2005); Name Redacted, Citation No. 01-21083 (Aug. 17, 2001) ("He described an experience during basic training . . . when his drill instructor commended his leadership and ability but said he could not be promoted because he was African American"); Name Redacted, Citation No. 01-15591 (June 6, 2001); Name Redacted, Citation No. 16-09508 (Mar. 9, 2016); Name Redacted, Citation No. 14-14364 (Apr. 2, 2014).

[30] *E.g.*, Name Redacted, Citation No. 14-07030 (Feb. 19, 2014) (addressing the stressor of being the only Pacific Islander member of the crew and that "he never received any honors, recognitions, or awards" for rescuing the ship *U.S.C.G. Forster* by spending hours doing free dive to untangle a cable stuck in the ship's propeller without diving equipment in shark-infested waters).

they could not think fast enough."[31] In another notable example, a senior enlisted Petty Officer forced a Black sailor to stand at attention for hours near his desk.[32] Abuse of military rank also played a factor in race-based trauma, such as the lieutenant who "purposely staged fights between [B]lack and [W]hite soldiers."[33] When veterans were the only member of their race in a military unit, this status was frequently noted as a prelude to racial discrimination, regardless of the veteran's racial group.[34]

Discriminatory Stressors Among Racial and Ethnic Minorities

Racial discrimination cases had specific attributes that went beyond the eight generic discrimination types (DoD Inspector General, 2000). Several veterans claimed discrimination due to being in interracial relationships[35] or interracial marriages.[36] Some veterans suffered

[31] Name Redacted, Citation No. 17-22996 (June 21, 2017).

[32] Name Redacted, Citation No. 03-07675 (Apr. 22, 2003).

[33] Name Redacted, Citation No. 14-55225 (Dec. 16, 2014).

[34] *E.g.*, Name Redacted, Citation No. 10-42891 (Nov. 15, 2010) (citing the stressor "that he was discriminated against during service because he was the sole Puerto Rican in his company"); Name Redacted, Citation No. 11-03680 (Jan. 28, 2011) (reporting "that he was the only Latino, and that he found himself the object of ridicule and harassment by both [W]hite and [B]lack airmen throughout his stay in France" in the early 1950s); Name Redacted, Citation No. 12-05291 (Feb. 10, 2012) ("According to the veteran, he was the only [W]hite man in the stockade and the [B]lack power movement was the thing of the day. He reported not getting much sleep as people were harassing and humiliating him.").

[35] Name Redacted, Citation No. 06-34997 (Nov. 13, 2006) ("She reported that she was later transferred to a military base in Alaska because she had started dating a man who was of a different racial background and the relationship was 'frowned on.'"); Name Redacted, Citation No. 09-44314 (Nov. 20, 2009) ("The veteran described for the examiner a variety of conflicts she experienced, including a Caucasian female C.O. who reportedly criticized her for dating Caucasian men.").

[36] *E.g.*, Name Redacted, Citation No. 08-05693 (Feb. 20, 2008) ("The veteran . . . indicated that he was targeted because 'I married a white spouse and I was told by higher authority they did not approve of it.'"); Name Redacted, Citation No. 18-06428 (Feb. 1, 2018) ("[T]he veteran asserts that he received backlash as the result of being in an interracial marriage."); Name Redacted, Citation No. 05-19042 (Jul. 14, 2005) (reporting that his finger was stamped by a fellow servicemember in an airplane as "part of the harassment he was getting from being married to a [W]hite woman.").

attacks in which their racial identity was threatened, such as a forced haircut to remove an Afro.[37] A Native-American service member was forced to conduct a "rain dance."[38] In other instances, nearby troops discussed participating in a lynching,[39] and setting fire to the homes of Black families,[40] while standing in the presence African-American servicemen. Other cases involved the use of symbolism of racist oppression, such as a cross-burning in front of the Black barracks,[41] display of the Confederate flag,[42] nooses,[43] being forcibly "painted with black face,"[44] and harassment from servicemen in white hoods coupled with a small cross burning in the

[37] Name Redacted, Citation No. 10-07120 (Feb. 26, 2010).

[38] Name Redacted, Citation No. 15-37875 (Sept. 3, 2015).

[39] Name Redacted, Citation No. 10-02452 (Jan. 14, 2010) ("[T]he [Black] veteran stated that upon arrival in Germany he was first greeted by [W]hite soldiers who told him they were going to 'hang themselves a nigger tonight.'").

[40] Name Redacted, Citation No. 18-21310 (Apr. 11, 2018) ("[W]hile he was in service at Fort Lewis, Washington, he was standing in the chow line with several African American soldiers when a soldier told another soldier that he and his family were members of the [KKK] and had killed and burned down the houses of African Americans in Mississippi. The veteran reported that his mind went blank with fear.").

[41] Name Redacted, Citation No. 10-47651 (Dec. 22, 2010) (citing "frequent racial harassment [at Westover Air Force Base] including having a cross burned in front of the medical services dormitory").

[42] *E.g.*, Name Redacted, Citation No. 10-15193 (Apr. 26, 2010) (noting racial discrimination by "a sergeant who wore a confederate flag on his helmet").

[43] *E.g.*, Name Redacted, Citation No. 01-6933 (March 8, 2001) ("A hangman's noose was hung on his door, and a noose with a monkey in it was placed in the shower"); Name Redacted, Citation No. 15-53391 (Dec. 22, 2015) (noting the racial stressor that "on one occasion . . . a noose was hung from another service member's bunk"); Name Redacted, Citation No. 12-05346 (Feb. 13, 2012) (having a "'[KKK] rope,' or noose, [placed] under his bed").

[44] Name Redacted, Citation No. 12-34673 (Oct. 5, 2012).

veteran's sleeping bunk.[45] One race discrimination case included "mock lynchings,"[46] while other Black veterans listed the stressor of seeing lynchings and hangings of fellow service members.[47]

Consistent with the research on military discrimination against Asian-American and Pacific-Islander veterans, some Korean War[48] and Vietnam-era cases featured claims that veterans were treated as though they were the enemy based upon their physical attributes, including being called a "gook,"[49] receiving mocking questions about what side they were on,[50] and the expression of legitimate confusion as to their military status.[51] For instance, in one case the Chinese American Vietnam Veteran claimed PTSD because:

---

[45] Name Redacted, Citation No. 16-38707 (Sept. 29, 2016) (reporting the stressor as "fearing for his life after finding a wooden cross burning in his bunk and being assaulted by six men in white hoods"). *See also* Name Redacted, Citation No. 05-33660 (Dec. 13, 2015) ("He stated that he was kidnapped by men wearing white hoods while walking back to the base and beaten. He claimed to have recognized the voice of one of his attackers as a fellow seaman in the Navy. He asserted that the attackers burned a cross and threatened him that if he ever reported what happened, he and his family would be killed.").

[46] Name Redacted, Citation No. 02-09012 (Aug. 2, 2002).

[47] Name Redacted, Citation No. 04-24317 (Sept. 1, 2004); Name Redacted, Citation No. 12-36321 (Oct. 19, 2012); Name Redacted, Citation No. 03-36084 (Dec. 22, 2003).

[48] Name Redacted, Citation No. 04-07911 (Mar. 26, 2004) (citing the stressor of racism from fellow servicemembers and stating, "I am a Japanese American, and served in Korea during the Korean War. To me, Basic Training was an insult. . ..").

[49] *E.g.*, Name Redacted, Citation No. 02-04878 (May 22, 2002) (noting a suicide attempt due to "harassment from other troops who referred to him as 'gook.'"); Name Redacted, Citation No. 10-17948 (May 14, 2010); Name Redacted, Citation No. 04-07911 (Mar. 26, 2004).

[50] *E.g.*, Name Redacted, Citation No. 10-44466 (Nov. 29, 2010); Name Redacted, Citation No. 16-45339 (Dec. 2, 2016).

[51] *E.g.*, Name Redacted, Citation No. 10-44466 (Nov. 29, 2010) (reporting the stressor of being left alone in an overrun Vietnam firebase without a way to confirm his identity to other American being treated like the enemy). Name Redacted, Citation No. 14-35027 (Aug. 6, 2014); Name Redacted, Citation No. 16-43098 (Nov. 9, 2016). In a notable case, the Chinese-American veteran was detained by Military Police in Vietnam at the mess hall "because they were convinced that he was a 'Vietnamese spy.'" Name

> He was mistaken for a Vietnamese soldier or possible spy and continually feared being persecuted or killed. He was repeatedly asked, "What's that gook doing here?" He was unwelcome in all informal social settings. He alleged that he was treated with overt and covert hostility by enlisted soldiers and officers alike. He feared being picked up and "tortured" and that he had no one to turn to for help.[52]

Another Asian-American veteran, who was stationed at Da Nang Air Base, Vietnam, from July 1970 through June 1971, explained that "the commanding officers refused to allow the veteran to go out on missions, believing him to be a traitor and spy."[53] A number of service members with thick accents or familiarity with English as a second language also claimed discrimination based upon their communication challenges.[54]

Redacted, Citation No. 16-43098 (Nov. 9, 2016). Although they released him at headquarters when his fellow soldiers vouched for him, the veteran received no apologies. *Id*.

[52] Name Redacted, Citation No. 16-43098 (Nov. 9, 2016).

[53] Name Redacted, Citation No. 10-17948 (May 10, 2010). *See also* Name Redacted, Citation No. 16-45349 (Dec. 2, 2016) (noting the stressor event during Vietnam naval service that "his fellow shipmates believed he was an enemy spy because of his Asian ethnicity, and made threats . . . that he would be thrown overboard").

[54] *E.g.*, Name Redacted, Citation No. 07-24408 (Aug. 7, 2007); Name Redacted, Citation No. 18-151421 (Nov. 19, 2018) ("The veteran stated that when he entered the service at twenty-years old that he did not know English, and this caused him stress and depression because he had a hard time adapting" as well as "feelings of having to work the worst jobs" due to "racism").

A separate subcategory of race discrimination stressors involved race riots,[55] which have also been referred to as mutinies on ships.[56] Some discrimination claims related to well-publicized incidents, such as the multi-day race riot onboard the aircraft carrier *U.S.S. Kitty Hawk*.[57] Many of the riots listed as mental health stressors erupted close in time to the assassination of the Reverend, Dr. Martin Luther King, Jr.[58] In some instances, the riots went

[55] *E.g.*, Name Redacted, Citation No. 04-06629 (Mar. 12, 2004) (noting the stressor of being "involved in a race riot on a military base"); Name Redacted, Citation No. 04-07958 (Mar. 26, 2004) (citing the stressor of being present at a race riot in Korea in the early 1970s where "[h]e witnessed a crowd throw a person off a cliff, and that he was standing next to a friend when that friend was stabbed in the neck by a rioter"); Name Redacted, Citation No. 04-11347 (Apr. 30, 2004) (reporting the stressor of "racial riots and prejudice among his crewmates aboard ship" that resulted in multiple sailors being pushed overboard and not being recovered); Name Redacted, Citation No. 08-17362 (May 27, 2008) (noting the stressor of being "assaulted during a race riot aboard ship"); Name Redacted, Citation No. 12-38565 (Nov. 13, 2012) ("[T]he veteran contends that his PTSD was triggered as a result[ ] of race riots and violence while he was stationed at Fort Dix, New Jersey, between 1969 and 1970."); Name Redacted, Citation No. 10-31123 (Aug. 18, 2010); Name Redacted, Citation No. 10-30605 (Aug. 16, 2010) (reporting the stressor of "witnessing a fellow soldier being stabbed during race riots occurring the last week of his basic training"); Name Redacted, Citation No. 05-28872 (Oct. 27, 2005) (reporting "being involved in an onboard ship riot," after which he "began to carry a knife with him while he slept and started to suffer anxiety, insomnia, and depression"). A number of race riots occurred in military prisons. *See, e.g.*, Name Redacted, Citation No. 02-06154 (June 11, 2002) (noting the stressor of witnessing " 'a couple guys set on fire' during a race riot in a jail in Long Binh" in 1968, and further observing "20 bodies laying out in bags, some shot and some burned" the following morning at the jail).

[56] Name Redacted, Citation No. 12-36508 (Oct. 22, 2012).

[57] *E.g.*, Name Redacted, Citation No. 01-06624 (Mar. 6, 2001) ("The veteran asserted that there was a race riot aboard the *U.S.S. Kitty Hawk*."); Name Redacted, Citation No. 12-14199 (Apr. 18, 2012) (denying the PTSD claim, in part, based on the fact that a document showing that race riots occurred on the carrier while he was stationed to it nevertheless did "not indicate he was assaulted in any racially motivated confrontation or incident").

[58] *E.g.*, Name Redacted, Citation No. 12-10649 (Mar. 22, 2012) (noting the claimed stressor that "shortly after the assassination of Martin Luther King, Jr., in early April 1968, there was an outbreak of racial tension in the military, that gunfire broke out, and that he witnessed wounded as he ran for cover"); Name Redacted, Citation No. 06-10786 (Apr. 14, 2006); Name Redacted, Citation No. 05-05272 (Feb. 24, 2005) ("The veteran reported that following the assassination of Dr. Martin Luther King, Jr., a riot ensued [at Fort Gordon, GA]. He elaborated that he and a [fellow soldier] were coming back from town and they were accosted by a group of [B]lack men who attacked and brutally beat [the friend] and forced him to watch the beating.").

beyond beatings, to include striking with dock wrenches,[59] drawing of bayonets,[60] cutting with knives,[61] shooting with firearms, [62] and hangings.[63] At least one riot included kidnapping,[64] and another involved an alleged race-based gang rape of a service member.[65] In such environments, some racial minority veterans reported feeling so unsafe from discrimination that they stayed in their barracks during free time to avoid confrontation.[66] In addressing race riots as a stressor, a case described how race riots were the kind of event that is a marker for PTSD.[67] Yet not all cases adopted this same rationale, with many denying the stressor without corroboration of how the riot impacted the veteran.[68] The inability to succeed in a discrimination claim related to riots

[59] Name Redacted, Citation No. 14-38345 (Mar. 14, 2018).

[60] Name Redacted, Citation No. 06-32706 (Oct. 20, 2006).

[61] Name Redacted, Citation No. 05-18298 (July 5, 2005) (describing the stressor of being on a ship where assailants stabbed sailors in their sleep when race riots broke out).

[62] *E.g.*, Name Redacted, Citation No. 13-01854 (Jan. 16, 2013) (discussing the stressor of being at Camp Pendleton Marine Base during a race riot when fellow Marines were shot); Name Redacted, Citation No. 10-02192 (describing being shot at during a Camp Pendleton Marine Base race riot).

[63] Name Redacted, Citation No. 03-36084 (Dec. 22, 2003).

[64] Name Redacted, Citation No. 15-27331 (June 26, 2015).

[65] Name Redacted, Citation No. 11-24399 (June 28, 2011) ("On April 4, 1968[,] I was in Fort George G. Meade, Maryland and a riot broke out. It was the evening that Martin Luther King Jr. was assassinated. A lot of fellow black soldiers were very upset over the assassination . . . . understandably so, and they began to riot. I was sexually assaulted and badly beaten by four of my fellow soldiers.").

[66] Name Redacted, Citation No. 08-00338 (Jan. 4, 2008).

[67] Name Redacted, Citation No.18-15419 (Mar. 14, 2018).

[68] *See, e.g.*, Name Redacted, Citation No. 08-17362 (May 27, 2008) (refusing to find corroboration due to "generalized, unspecific descriptions of stress" from being involved in a race riot onboard ship); Name Redacted, Citation No. 00-21478 (Aug. 15, 2000) (finding lack of corroboration of any riot-related stressor despite deck logs and newspaper articles on the basis that "the excerpts merely provide general confirmation of racial tension aboard the [ship]," rather than "evidence . . . indicating that the veteran was the subject of any hostile treatment or harassment, which prompted a fear for his life").

suggests that the veterans had problems corroborating the discriminatory events since these cases often involved physical assault which was a factor that was associated with greater odds of success, at least at the marginally significant level.

Discriminatory Stressors Among Sexual Minority Veterans

Although sexual minority veterans claimed similar stressors as victims of racial discrimination, such as anti-gay epithets,[69] and being sent on more dangerous missions based on their status,[70] sexual minorities also claimed unique forms of discrimination as stressor events. For example, one claimant reported anti-gay harassment based upon his attendance at barber school prior to joining the military.[71] Some lesbian service members noted that they became pregnant or got married in an effort to conceal their sexual orientation.[72] Others reported that they led double-lives and were in constant fear of being discovered.[73] The discharge of fellow

[69] With regard to verbal harassment, a stark difference was the way that the comments targeted the victim's behaviors, such as "not fitting in because of mannerisms or behaviors that were considered unusual or not gender-specific." Name Redacted, Citation No. 10-33511 (Sept. 7, 2010). *See also* Name Redacted, Citation No. 11-11625 (Mar. 23, 2011) (noting the claimed stressor of "being told he looks like a girl and being called names, teased, and laughed at").

[70] *Compare* Name Redacted, Citation No. 03-08538 (May 6, 2003) ("[H]e was set up for an undesirable discharge for homosexuality. He also noted he was sent on missions considered more dangerous, such as guarding a fuel and ammunitions dump outside Hue, which had been taken by the VietCong."); *with* Name Redacted, Citation No. 10-44466 (Nov. 29, 2010) ("While in country [in Vietnam], the veteran began to realize that his oriental heritage was causing discriminatory reactions. At one point, his lieutenant assigned him to a besieged position (Kham Duc), which unnecessarily exposed him to high risks").

[71] Name Redacted, Citation No. 11-17521 (May 6, 2011) ("In particular, he stated that his sexual orientation was questioned because prior to service he had attended school to become a barber.").

[72] *See, e.g.*, Name Redacted, Citation No. 06-09989 (Apr. 6, 2006) (reporting the stressor that the female veteran received "recurrent accusations of being a lesbian in service" and that she "became pregnant to avoid sexual harassment").

[73] *E.g.*, Name Redacted, Citation No. 19-190706 (Dec. 3, 2019) (explaining that the veteran failed to seek assistance from a chaplain or counselor when he experienced "depression, weight loss, loss of appetite, and insomnia" specifically because "he was worried that he would be discharged" because he was gay); Name Redacted, Citation No. 16-33567 (Aug. 25, 2016) (noting that the veteran attributed worsening

service members known to be gay or lesbian was also noted as a basis for depression or trauma.[74] In a salient example, a gay attorney in the Army JAG Corps claimed the stressor as being required to prosecute other gay service members while keeping his own orientation secret, which increased his fear of being discovered.[75] In numerous cases, investigations into sexual orientation were claimed as stressors that resulted in chronic and continuing mental health disorders.[76] For a subset of veterans, the humiliation of the interrogation was less traumatizing than the facts that gave rise to the investigation, such as cases were veterans were turned-in by military roommates, friends, or confidants.[77]

---

symptoms of anxiety and depression "with having to hide his sexual orientation and with his decision to come out as homosexual to his command and family" during the time of the Don't Ask, Don't Tell policy from 1999 to 2000).

[74] Name Redacted, Citation No. 03-26220 (Oct. 3, 2003) (remand order) (noting "guilt he was experiencing about the discharge of a friend from service due to homosexuality and of the veteran's guilt about his own homosexuality").

[75] Name Redacted, Citation No. 13-29293 (Sept. 12, 2013) ("[H]e described a climate of anti-gay persecution in the Army, to include derisive stories and insults that left him stressed. He indicated that, as an Army JAG, he had to investigate and prosecute crimes for what were consensual acts. He was in a constant state of terror that he himself would be discovered as a gay male.").

[76] *See, e.g.*, Name Redacted, Citation No. 19-176031 (Oct. 3, 2019) (addressing the veteran's stressor of being sexually assaulted and then investigated for homosexuality and subsequently discharged after the perpetrator reported the victim as an aggressor in order to avoid responsibility for the assault); Name Redacted, Citation No. 14-17842 (Apr. 21, 2014) (reporting the stressor of being interrogated for hours regarding sexual orientation "like [he] had something wrong," "labeled as a homosexual and sexual deviant," and "being forced into signing discharge papers stating that he engaged in homosexual activities").

[77] *E.g.*, Name Redacted, Citation No. 08-27269 (Aug. 13, 2008) (claiming trauma from being interrogated after his roommate walked in on him having sexual relations with a civilian man); Name Redacted, Citation No. 16-37173 (Sept. 22, 2016) (noting the stressor of being threatened with a court-martial by his commander for fraud in not disclosing homosexuality after the veteran was reported by "fellow soldiers [who] saw him with his boyfriend when his unit was shipping off to Desert Storm").

Yet another familiar fact pattern involved allegations of homosexuality in retaliation for refusing sexual advances by heterosexual perpetrators.[78] Sometimes, the stressor occurred after the investigation, such as the case where the base Staff Judge Advocate, a colonel, required sexual intercourse in exchange for giving the veteran an Honorable Discharge due to a finding of homosexuality.[79] To other service members, the homosexuality discharge was listed as the stressor.[80] In at least one case, the veteran claimed that the stressor was the Navy's act of notifying his parents through a letter that he had been discharged for homosexuality, which resulted in his father disowning the veteran.[81] A number of self-identified heterosexual veterans reported the stressor that they had been falsely accused of being homosexual and suffered a humiliating inquiry.[82] There was no major difference in the chances of obtaining service-connection for mental health disorders between veterans who self-identified as being gay and those who self-identified as being heterosexual when it came to allegations of homosexuality.

---

[78] *E.g.*, Name Redacted, Citation No. 09-45339 (Nov. 30, 2009) ("[T]he veteran asserts that while she was being investigated for homosexual activities at Fort Hood, she was forced to have sex with multiple male soldiers 'to prove [she] wasn't gay'"); Name Redacted, Citation No. 12-18127 (May 22, 2012) (reporting the stressor of a male airman who "gathered and used evidence of her sexual orientation against" the veteran after "she refused to have sex with him").

[79] Name Redacted, Citation No. 09-25873 (Jul. 10, 2009) ("[S]he was forced to have two sexual encounters with a base colonel in exchange for an honorable discharge.").

[80] *See, e.g.*, Name Redacted, Citation No. 12-36487 (Oct. 22, 2012) (noting the trauma of having to fight to get an honorable characterization after being forced to leave the service due to homosexuality, accompanying "ostracis[m] by military authorities and peers," and the word "homosexual" emblazoned in "big red letters" on her military discharge certificate); Name Redacted, Citation No. 14-25806 (June 6, 2014) (obtaining service-connection for major depression based upon receiving an Other Than Honorable discharge due to homosexual conduct, being unable to obtain a job as a result, and "being 'treated as a criminal/pariah' because of the discharge" for years after separation).

[81] Name Redacted, Citation No. 10-46476 (Dec. 13, 2010).

[82] *See, e.g.*, Name Redacted, Citation No. 07-04124 (Feb. 8, 2007) (finding service-connection for MDD based on "false charges of homosexuality brought against him that resulted in his discharge from service").

Claimed stressors also had similarities across sexual and racial minorities. In both instances, veterans claimed that were discriminated against because they had a friend or interacted with someone who had a sexual[83] or racial[84] minority status. In a variation of this, a mixed-race sailor claimed the stressor that he faced additional trouble because he was the "go-between" for sailors of different races during times of racial-tension and was unable to pick a side as the tension increased.[85] Yet another variation was discriminatory assault by White soldiers for following orders of a Black enlisted soldier.[86] Also, service members reported being sexually assaulted as a form of sexual minority discrimination or as a form of racial

[83] *See, e.g.*, Name Redacted, Citation No. 07-23802 (Aug. 1, 2007) ("[I]t was very possible that the veteran's depression started around the time of his discharge from the service, after he was harassed by his supervisors for his friendship with another sailor, who was allegedly gay.").

[84] *See, e.g.*, Name Redacted, Citation No. 07-36638 (Nov. 21, 2007) ("She . . . states that she was subjected to racial slurs . . . because one of her friends was [B]lack."); Name Redacted, Citation No. 11-19942 (May 23, 2011) ("[T]he veteran has alleged a stressor involving personal assault by fellow U.S. soldiers and subsequent harassment by those fellow soldiers related to his being perceived as befriending or otherwise showing kindness to an African American soldier" in the early-to-mid 1950s); Name Redacted, Citation No. 05-01360 (Jan. 18, 2005) (reporting that, in the vicinity of Camp Casey, Korea, in the 1970s the veteran "was subject to discrimination because he socialized with [B]lack soldiers"); Name Redacted, Citation No. 01-11883 (Apr. 24, 2001) (reporting the stressor of an early 1970s "assault . . . by three individuals of his own race who beat him with an entrenching tool in the barracks on Okinawa . . . when the veteran befriended an individual of another race").

[85] Name Redacted, Citation No. 14-27971 (June 19, 2014). For another case involving discrimination against a biracial veteran, see Name Redacted, Citation No. 16-34929 (Sept. 7, 2016).

[86] Name Redacted, Citation No. 15-00263 (Jan. 6, 2015); Name Redacted, Citation No. 03-01681 (Jan. 29, 2003).

discrimination.[87] In both instances, during discriminatory attacks, male victims were sometimes sodomized with objects, such as a broom handle,[88] a tree branch,[89] or axle grease.[90]

Interestingly, some instances of discrimination claimed as stressors were caused by non-military perpetrators. This included a Black soldier who was shot at by hunters while training in the woods during military exercises.[91] In another incident, the Black service member claimed trauma from witnessing the racial assault of her 2 year-old son at a penny arcade.[92] Other cases involved race-based beatings by host-nation police while the veteran was on liberty in a port city,[93] or beatings by civilian police in the United States.[94]

Discriminatory Stressors in the Combat Zone

In both minority populations, veterans who were deployed to combat zones also reported a unique form of stressor in which discrimination caused them to fear that they were in greater

[87] *See, e.g.*, Name Redacted, Citation No. 09-00659 (Jan. 7, 2009); Name Redacted, Citation No. 15-34577 (Aug. 13, 2015); Name Redacted, Citation No. 14-46538 (Oct. 21, 2014); Name Redacted, Citation No. 11-13261 (Apr. 4, 2011); Name Redacted, Citation No. 06-38068 (Dec. 7, 2006); Name Redacted, Citation No. 00-04542 (Feb. 22, 2000).

[88] Name Redacted, Citation No. 08-02269 (Jan. 22, 2008).

[89] Name Redacted, Citation No. 05-33660 (Dec. 13, 2005).

[90] Name Redacted, Citation No. 11-28201 (Jul. 28, 2011).

[91] Name Redacted, Citation No. 15-01690 (Jan. 13, 2015).

[92] Name Redacted, Citation No. 14-41220 (Sept. 16, 2014).

[93] Name Redacted, Citation No. 04-01493 (Jan. 15, 2004) ("He reported an event which occurred in Madagascar in April 1973 when he was severely beaten by Portuguese locals and the police due to his race.").

[94] Name Redacted, Citation No. 02-08592 (Jul. 29, 2002).

danger of a friendly-fire incident,[95] such as a fragging with grenades,[96] or greater danger of harm from the enemy, such as being sent on a patrol without peer support.[97] One decision cited a veteran's claimed stressor as "fear that he would be killed or left behind in Vietnam . . ." due to his race.[98] Victims of discrimination in combat environments called this "fighting two wars."[99] In one such instance, a Black veteran claimed the stressor that he was in a unit where the White commander assembled a unit made up exclusively of Blacks who were sent on dangerous missions.[100] In another instance, as "the only [B]lack soldier in his unit" in Iraq, the veteran claimed his mental health conditions were attributable, in part, to the fact that "his orders were ignored."[101] One Black combat veteran observed how he was "more traumatized by ongoing racial harassment than combat stressors."[102] Other related stressor events included having

[95] Name Redacted, Citation No. 13-02375 (Jan. 22, 2013) (reporting fear of friendly fire due to racism).

[96] *E.g.*, Name Redacted, Citation No. 98-22706 (July 27, 1998) (describing race riots involving soldiers in Vietnam rolling grenades under sleeping hooches at night); Name Redacted, Citation No. 06-11608 (Apr. 21, 2006).

[97] Name Redacted, Citation No. 10-04384 (Jan. 28, 2010); Name Redacted, Citation No. 02-08066 (Jul. 18, 2002) (forced to go to the field due to racism). Veterans claimed discrimination related stressors that left them feeling "isolated," "unsupported," and "alone." Name Redacted, Citation No. 04-11021 (Apr. 27, 2004); Name Redacted, Citation No. 16-24230 (June 16, 2016); Name Redacted, Citation No. 12-23678 (Ju1. 9, 2012).

[98] Citation No. 16-25292 (June 23, 2016).

[99] Name Redacted, Citation No. 16-25292 (June 23, 2016) ("[T]he veteran reported that he felt like he was 'fighting two wars' as he was in a racial war with other people."). *See also* Name Redacted, Citation No. 05-17699 (June 29, 2005) (noting the "war within the war").

[100] Name Redacted, Citation No. 10-04384 (Jan. 28, 2010).

[101] Name Redacted, Citation No. 15-53544 (Dec. 23, 2015).

[102] Name Redacted, Citation No. 12-36218 (Oct. 18, 2012).

weapons[103] or ammunition[104] confiscated during times of racial tension, which made the veteran feel vulnerable to enemy attack without a means of self-defense. Conversely, this included situations where White commanders armed other White soldiers but not minority soldiers in attempts to de-escalate riots, sit-ins, Afro-centric support groups, or other protest events.[105] Some veterans also indicated the traumatic event was being deployed to combat due to racist motives, such as the soldier who was "sent to Vietnam with only three months of service left" as a result of his role in "breaking up a [KKK] meeting."[106] The successful claims anecdotally addressed above corroborated the marginally relevant finding that combat increased the odds of success on a discrimination-related claim.

Discriminatory Stressors Related to Access to Weapons

Ready access to weapons in the military setting also gave rise to unique patterns of discriminatory threats, such as the White soldier who marked a bullet in black and shot the Black veteran so as to graze the victim's body.[107] Other minority veterans had weapons pointed at them,[108] or were shot at.[109] Other weapons of war that appeared in cases included minority

[103] Name Redacted, Citation No. 0927184 (Jul. 21, 2009).

[104] Name Redacted, Citation No. 08-25400 (Jul. 20, 2008); Name Redacted, Citation No. 16-22397 (June 3, 2016).

[105] Name Redacted, Citation No. 13-09260 (Mar. 19, 2013).

[106] Name Redacted, Citation No. 15-48493 (Nov. 18, 2015).

[107] Name Redacted, Citation No. 17-46296 (Oct. 17, 2017). *See also* Name Redacted, Citation No. 12-05303 (Feb. 13, 2012).

[108] Name Redacted, Citation No. 06-00696 (Jan. 9, 2006); Name Redacted, Citation No. 10-00691 (Jan. 6. 2010).

[109] Name Redacted, Citation No. 12-05303 (Feb. 13, 2012).

victims being pushed into the propellers of planes on racial grounds,[110] being shocked with a field phone,[111] and being tasered in the buttocks and testicles.[112] It was not uncommon for perpetrators to remind minority victims how easy it would be to "get rid of" them in these military contexts and settings.[113] These events, which involved harmful objects was consistent with the finding that physical assault marginally improved odds of success on discrimination claims. In these cases, even without physical contact, the reference to objects used by a perpetrator was more likely to be associated with the threat of death or serious injury implicated by Criterion A.

In some cases, veterans based their claims primarily on institutional oppression, such as the military's policy of segregation,[114] the "systematic bigotry [leading to] constant racial discrimination,"[115] the embrace of Jim Crow racial oppression,[116] and the policy against

[110] Name Redacted, Citation No. 03-05796 (Mar. 27, 2003).

[111] Name Redacted, Citation No. 14-32510 (Jul. 21, 2014).

[112] Name Redacted, Citation No. 05-09366 (Mar. 29, 2015).

[113] Name Redacted, Citation No. 11-24399 (June 28, 2011).

[114] *See, e.g.*, Name Redacted, Citation No. 07-05801 (Feb. 28, 2007) (all-Black unit in the 1940s); Name Redacted, Citation No. 15-27836 (June 29, 2015) (noting particularly the rise in racism following the forced integration of the Marine Corps); Name Redacted, Citation No. 07-09522 (Apr. 2, 2007); Name Redacted, Citation No. 05-12923 (May 12, 2005).

[115] Name Redacted, Citation No. 10-32548 (Aug. 30, 2010).

[116] Name Redacted, Citation No. 05-26143 (Sept. 23, 2005) ("[T]he veteran stated that he believed he suffered from PTSD from being a [B]lack man stationed in the South in the early 1960s. He stated he did not leave base for several months, on concerns about racism."); Name Redacted, Citation No. 16-25523 (June 27, 2016) ("As a [B]lack man in the 1960s, racial tensions were as high in the military as they were in civilian life.").

homosexual conduct.[117] To this end, in a case addressing racial trauma during WWII, the BVA observed:

> It was stated that a great majority of the Veteran's stressful events occurred from fighting the "war within the war." Times were different, military services were segregated, [B]lack soldiers were discriminated against despite their obvious abilities, and they were bombarded with racism and racial slurs.[118]

In at least one case, the veteran claimed that the racism was so bad in the rear echelon that he volunteered to go to the front lines in Vietnam just to escape the discrimination.[119] Yet, the vast majority of stressor claims involved specific discriminatory events in addition to the climate created by policies.

Assessment of Discriminatory Trauma

As noted above, veterans claimed many types of mental health disorders as a result of suffering traumatic discrimination, including bipolar disorder, schizophrenia, and major depressive disorder. While many veterans listed PTSD in addition to other conditions, some veterans never claimed PTSD as a result of discriminatory treatment.[120] In all cases not involving PTSD claims, adjudicators applied a standard of proof that required less scrutiny over

---

[117] *See, e.g.*, Name Redacted, Citation No. 09-42480 (Nov. 6, 2009) ("[T]he veteran claims that she was unfairly discharged from the military and views her discharge proceedings from the Army as a form of sexual harassment.").

[118] Name Redacted, Citation No. 05-17699 (June 29, 2005).

[119] Name Redacted, Citation No. 18-119553 (Jul. 19, 2018).

[120] *See, e.g.*, Name Redacted, Citation No. 16-33567 (Aug. 25, 2016) (addressing the impact of the anxiety induced by the "Don't Ask, Don't Tell" policy in producing bipolar disorder with moderate to severe anxious distress, and granting service-connection in large part on the "perceived lack of support" of the Navy and his daily fear of being discovered as he tried to come to terms with his sexual orientation).

the occurrence of the traumatic event. Conversely, veterans who claimed PTSD as a result of traumatic discrimination received different consideration under VA's regulatory standard for personal assault, which requires that the veteran establish the existence of a traumatic stressor event by a preponderance of the evidence. For all veterans who met this threshold for corroboration of the discriminatory stressor event, they advance to the next inquiry of whether the stressor was sufficient to meet the *DSM* criteria for a Criterion A traumatic event. The following section relates anecdotal evidence from individual cases regarding the question of adequate corroboration for discriminatory trauma.

Corroboration of the Discriminatory Trauma Stressor Event

While a "[v]eteran is competent to testify to any in-service harassment he [or she] experienced," and BVA judges may rely upon the consistency and coherence of accounts of discrimination to establish the credibility of the account,[121] all traumatic events not involving combat trauma must be proved by sufficient independent corroborating evidence. Many opinions confirm, "[W]hen the claimed stressor is not related to combat, the veteran's lay testimony, by itself, will not be enough to establish the occurrence of the alleged stressor."[122] In cases where veterans served in combat, they are eligible for a presumption of service-connection if they assert that they experienced "fear of hostile military or terrorist activity" (75 Fed. Reg. 39,843 (2010)). Consistent with the holdings of the highest reviewing courts, however, even the most "nefarious, or even criminal, acts of one service member directed toward another service

[121] Name Redacted, Citation No. 11-32928 (Sept. 7, 2011) (addressing a claim of anti-gay harassment during basic training and citing the general rule in *Grottveit v. Brown* (1993, p. 93)).

[122] Name Redacted, Citation No. 05-22837 (Aug. 19, 2005). This coincides with the Court of Appeals for Veterans Claims' ruling that "a medical opinion premised upon an unsubstantiated account is of no probative value and does not serve to verify the occurrences described" (*Swann v. Brown*, 1993, p. 233).

member" are precluded by the definition (*Acevedo v. Shinseki*, 2012, p. 291). Under these rules, the African-American soldier who was threatened with a lynching from fellow soldiers lived in fear that he might be killed, this terror failed to meet the standard for "hostile threats from an enemy force" and the veteran was forced to provide adequate corroboration of the stressor event beyond his own account of what occurred.[123]

Corroboration of a stressor event in discriminatory trauma cases is an evidentiary question of fact for VA adjudicators, rather than a medical question.[124] Discriminatory trauma qualifies for consideration as personal assault under 38 C.F.R. § 3.304(*f*), which relates to all harm inflicted by "human design that threatens or inflicts harm," regardless of the perpetrator's status (*Patton v. West*, 1999, p. 278). In these instances, the VA expects that it will be harder to find evidence from reports in medical records due to fear of retaliation for reporting and other sorts of stigma. For instance, in a racial trauma case where a Navy sailor reported that he "was threatened in boot camp by [W]hite servicemen who taunted him with KKK innuendos" and had been written up on allegations of stealing and going absent without leave, "[t]he Board recognize[d] that the present case falls within the category of situations, to include allegations of racism and racial harassment, in which it is not unusual for there to be an absence of service records documenting the events of which the veteran complains."[125]

---

[123] *Id.*

[124] Name Redacted, Citation No. 06-12927 (May 4, 2006) ("The question of whether the veteran was exposed to a [PTSD] stressor in service is a factual one, and VA adjudicators are not bound to accept uncorroborated accounts of stressors or medical opinions based on such accounts") (citing *Wilson v. Derwinski* (1992)).

[125] Name Redacted, Citation No. 08-10422 (Mar. 28, 2008).

The BVA opinions describe requisite independent corroboration as "underlying facts," such as "the names of individuals involved, the dates, and the places where the claimed events occurred."[126] This includes "a statement from a fellow service member . . .; a contemporaneous entry from the veteran's journal or diary; a contemporaneous letter home; a picture of either him . . . or the events that he claimed to have witnessed."[127] The courts have described these as "modest"[128] forms of corroboration and a relatively "low bar"[129] to meet, especially because VA regulations permit adjudicators to rely upon evidence outside of the medical record which can serve as alternative forms of proof or "markers." A non-exhaustive list of markers noted in regulatory and administrative provisions is depicted in Table 2, above, which includes factors such as perceptible declines in performance, requests for transfer to different duty stations, and records of STDs or pregnancy for cases involving sexual assault.

For example, applying these standards, the BVA found adequate corroboration of the statements of a veteran who alleged ant-gay harassment from a drill instructor at a specific base prior to his deployment to Vietnam in the "service records that show a transfer . . . overseas."[130] While BVA judges generally applied these standards in the cases identified by the study,

---

[126] Name Redacted, Citation No. 99-19055 (Jul. 13, 1999) (involving a stressor of "experiencing racism in Vietnam" and "bad experiences because of his race").

[127] Name Redacted, Citation No. 17-44884 (Oct. 10, 2017). *See also* Name Redacted, Citation No. 04-07911 (Mar. 26, 2004) (noting the expectation for corroboration of a racism stressor "contemporaneous letters from family members or statements from service comrades").

[128] Name Redacted, Citation No. 17-44884 (Oct. 10, 2017).

[129] Name Redacted, Citation No. 12-32005 (Sept. 17, 2012).

[130] Name Redacted, Citation No. 11-32928 (Sept. 7, 2011) ("His recollection of the time and place of the harassment is supported by his service records that show a transfer from Dow Air Force Base to overseas service in December 1966.").

traumatic discrimination cases raised a number of questions that were not clearly or easily addressed through the standard guidance for events causing PTSD.

Even though the VA has a duty to assist veterans in developing supporting evidence, the courts have found that this task "is not a one-way street" (*Wood v. Derwinski*, 1991, p. 193). This general rule is applied in equal force to discriminatory trauma cases. For example, a Chinese-American veteran who claimed discriminatory trauma while serving in Vietnam appealed to the BVA's common sense to no avail.[131] Observing that the veteran's representative "contends that every Vietnam veteran knows about the prejudicial attitudes towards Asians that were present in the Armed Forces during that time," the Board refused to "take judicial notice" of "unidentified" "standard historic sources" and adhered to the regulatory requirement to prove "independent verification of stressors not related to combat."[132] In a sexual-orientation discrimination case, a BVA judge similarly ruled that the veteran's claim that she became pregnant in order to avoid "recurrent accusations of being a lesbian in service" were "incapable of verification" as the only evidence of the veteran's motivation for the pregnancy was from her self-report years after the fact.[133]

In discriminatory trauma cases, perhaps the most common reason for denial of an appeal is absence of sufficient detail in the veteran's account to corroborate the stressor event, even under the more lenient evidentiary standards. In a case where a Marine Corps veteran alleged that the racial and ethnic prejudice he suffered from a Drill Instructor at Paris Island amounted to "torture[ ] every day," the BVA judge highlighted why "fe[eling] inferior due to language and

---

[131] Name Redacted, Citation No. 03-22677 (Sept. 4, 2003).

[132] *Id.*

[133] Name Redacted, Citation No. 06-09989 (Apr. 6, 2006).

cultural problems" was insufficient evidence of a stressor event: "[H]e has not cited specific stressful events (actual or apprehended physical assault, verbal abuse, ridicule, hazardous environment, etc.) that can be corroborated."[134] The Board further confirmed that a verified stressor cannot simply be a "general hostile environment" against a specific racial or ethnic minority group.[135] In another case addressing general descriptions of racism, the BVA rejected the veteran's stressor statements in holding that "[p]ersonality conflicts with superiors and being the victim of racism are not recognized stressors for granting service connection for [PTSD]."[136] Veterans in this study were more likely to establish corroboration when they provided detailed accounts of the mechanism by which they were injured at the psychic level rather than speaking in the abstract. These anecdotal accounts are consistent with the finding that PTSD claims in discrimination cases result in decreased odds of success on appeal.

The precise quality and quantity of independent corroboration appears to be nuanced and this study reveals a number of additional evidentiary standards for satisfying the requirement. Despite a prohibition on general descriptions of stressors, the BVA has nevertheless clarified that it is not necessary to prove every detail of a traumatic event for adequate corroboration (*Pentecost v. Principi*, 2002, p. 128). For instance, while a veteran's generalized statement that he suffered racist oppression would not qualify as a stressor, a "buddy statement" from a member

---

[134] *Id.*

[135] *Id.*

[136] Name Redacted, Citation No. 92-10224 (Apr. 29, 1992). An important distinction must be made. Veterans may also be denied service-connection because the type of discrimination alleged was not found to meet the diagnostic criterion for trauma. These concerns are addressed in the next section. This case underscores the need for specific acts to be explained in detail even to progress to the stage where the nature of the disorder is considered. This denial was based upon the abstract nature of the trauma described.

of the veteran's unit describing a general atmosphere of racism within the unit could serve as corroboration for the veteran's more specific allegation. This was the case where a witness attested in writing to "a racially charged atmosphere" in existence at the place and time where the veteran alleged specific acts of racial discrimination.[137]

Some veterans identified by the study questioned the VA's evidentiary standards for corroboration when applied to discrimination cases, such as the Asian-American Vietnam veteran who felt afraid to document his allegations of discrimination with commanders because they were participating in the discriminatory conduct.[138] Professing the inability to recall the names of his perpetrators and the specific dates of events occurring in Vietnam thirty years prior, "the veteran . . . indicated that the rules and regulations used by the VA did not fit his case and, as such, was not adjudicating his claim in a fair manner."[139] Yet, the BVA refused the invitation to further liberalize existing standards in his case.

In some instances, the BVA relied upon its own uncommon and unpublished set of discriminatory trauma markers. One such marker is whether enough evidence has been presented about the discriminatory injury to infer that an incident of the nature alleged commonly occurred under the same circumstances. For example, in a case involving the claim that the Black veteran walked in on senior officers holding a KKK meeting and after reporting the concerns was sent to combat in Vietnam as retaliation, the BVA explained, "The Board is prepared to accept that—even though there is insufficient [evidence] to demonstrate some of the Veteran's more extraordinary claims—it is fairly credible that the Veteran would have incurred

---

[137] Name Redacted, Citation No. 08-10422 (Mar. 28, 2008).

[138] Name Redacted, Citation No. 10-17948 (May 14, 2010).

[139] *Id*.

at least some incidents of racism during the 1960s; and that these incidents may have even devolved into acts of physical violence."[140] Sadly, however, this claim was still ultimately denied on the basis that the veteran could not prove the existence of a current mental health disability.

Historical publications and newspaper articles have likewise served as markers for racial abuse. However, there must be enough specificity in the publication to encompass the veteran's individual circumstances.[141] In a notable case, the veteran supplied an article published in the *Air University Review*, which "described a history of institutional racism in the military and personal racism between military members."[142] This article was offered as corroboration for the veteran's claimed stressor of "institutional and personal racism" while serving in the Marine Corps when stationed in Okinawa in the early 1970s, to include interracial fights involving death, improvised weapons, and bricks being thrown at him by White soldiers.[143] To the BVA, the article still lacked sufficient specificity: "The article did not reference any particular events or the general atmosphere of military race relations in Okinawa, Japan, including during the time the veteran was stationed there."[144] Evident in the title of the article, "Black-White Relations in the U.S. Military 1940-1972" (Osur, 1981), the content was overly broad in its coverage.[145]

---

[140] Name Redacted, Citation No. 17-4484 (Oct. 10, 2017).

[141] Name Redacted, Citation No. 04-07911 (Mar. 26, 2004) (rejecting magazine articles as corroboration for the stressor of discrimination against an Asian soldier during the Korean War due to his Japanese ancestry because "there is no way to relate the incident to the veteran," including any statements of the veteran describing that he had personal knowledge of the events described in the articles).

[142] Name Redacted, Citation No. 17-06402 (Mar. 2, 2017).

[143] *Id.*

[144] *Id.*

[145] *Id.*

Numerous cases cited to *Cohen v. Brown,* which held that "[a]necdotal incidents, although they may be true, are not researchable. In order to be researched, incidents must be reported and documented" (1997, p. 134).

With sufficiently detailed publications, the BVA corroborated a veteran's stressor of experiencing racial discrimination while stationed at Camp Pendleton Marine Corps Base in the 1970s, including a time when he was aware that the KKK had been holding meetings on the Base.[146] Here, the veteran shared the stressor of being punched in the face by a sergeant after the sergeant could not locate any White Marines to do fire watch and being told, "This nigger will do," reporting the assault to the command to no avail, having his company commander "promote[ ] racism in his unit by not promoting any [B]lack Marines and using racial slurs when talking to [B]lack Marines," and "fe[eling] threatened, scared, and very intimidated by the fact that the KKK was around and that the Marine Corps would not and did not care to protect him from the harassment that the [W]hite Marine Klansmen were inflicting on [B]lack Marines."[147] As corroboration for this racism-related stressor, the veteran offered excerpts from Westheider's (2008) book, *The African American experience in Vietnam: Brothers in arms*. The Board recognized the following facts as reported by the author:

> In December 1976, the Marine Corps admitted a Klan presence at Camp Pendleton, California, and in June 1979, the Pentagon warned of a dramatic increase in Ku Klux Klan activity among off-duty service personnel . . .. Throughout the surrounding area of Camp Pendleton, the Klan put up and passed out its "White Man Awake" posters and leaflets. The[y] burned a Black officer's car, openly wore

[146] Name Redacted, Citation No. 15-27650 (June 29, 2015).

[147] *Id*.

> KKK insignia, threatened Black marines and openly called for recruits to come to KKK meetings.[148]

The decision further cited facts about minority service members who were killed or injured as a result of hate crimes committed by the KKK at Camp Pendleton in the 1970s. Despite the Board's recognition that "there was no specific evidence in the claim file that the veteran was the victim of racial discrimination during his military service," the Board found sufficient corroboration based on the detailed history reported in Westheider's book: "The fact that the veteran was assigned and stationed with a unit that was present while such an event occurred strongly suggests that he was, in fact, exposed to the stressor event. Under the circumstances the Board resolves all reasonable doubt in the veteran's favor and finds that his stressor pertaining to being a victim of racial discrimination during his military service at Camp Pendleton in the 1970s is corroborated."[149]

Beyond corroboration through detailed historical and scholarly publications accounting military discrimination, in at least one case involving a claim of discriminatory trauma against an Asian-American sailor during the Vietnam war, the Board found that certain facts presented by the veteran about his life after service corroborated his claim that he was discriminated against and threatened that he would be thrown overboard because fellow sailors believed he was a spy for the VietCong due to his Asian ancestry.[150] Specifically, the veteran offered into evidence his Certificate of Naturalization in which he had changed his name and further testified that the

---

[148] *Id.*

[149] *Id.*

[150] Name Redacted, Citation No. 16-45339 (Dec. 2, 2016).

reason for changing his name was to make it "sound more 'American.'"[151] The Board specifically found that "the veteran's post-service name change, and his reasoning for changing his name, adds additional circumstantial evidence which corroborates the veteran's reports of in-service physical assaults and harassments."[152] The same judge also relied upon the veteran's "transfer to another ship" and medical records referencing the veteran's problems vomiting to constitute "circumstantial evidence of behavioral change during the veteran's active duty service," which corroborated the veteran's claims that he was transferred to get away from the sailors who threatened him and he was binge drinking at the time based on his anxious state.[153]

Medical Severity of the Discriminatory Event

Unlike the question of corroboration of the stressor event, the question of causation of a mental health disorder is a forensic question reserved to mental health professionals.[154] Even if the veteran can meet the quantum of evidence required to prove that the traumatic discrimination actually occurred, the next more pivotal inquiry requires the veteran to demonstrate that the event was of sufficient magnitude to cause mental health injury. VA mental health evaluators are required to conduct PTSD examinations in accordance with the *DSM* diagnostic criteria, which require that the traumatic event that caused PTSD must be sufficiently traumatic under Criterion A. The nature of this examination is forensic and technically guided by professional standards related to independent psychiatric examinations (Young, 2015).

---

[151] *Id.*

[152] *Id.*

[153] *Id.*

[154] Name Redacted, Citation No. 06-12927 (May 4, 2016) ("[W]hether stressors that occurred were of sufficient gravity to cause or to support a diagnosis of PTSD is a question of fact for medical professionals.").

Although VA standards specifically list "harassment" as an example of personal assault for PTSD stressor corroboration,[155] in this study, allegations of verbal harassment, alone, normally resulted in denial of service connection due to the stressor not meeting the diagnostic criteria for PTSD. For instance, even though the medical examiner found that the veteran's account of "racial issues in the military" amounted to a continuing chain of "micro insults and macro insults" in accordance with American Psychological Association standards, the provider concluded that "insults are not necessarily the stuff of trauma. The examiner noted that he had no way of firmly establishing a nexus between the Veterans [condition] and the military without resorting to speculation, if not divination."[156] Another veteran's claim involving verbal harassment was denied because "the allegation of racial discrimination on its face fails to satisfy the stressor criteria under the *DSM* . . .."[157] When another veteran claimed the stressor of being racially harassed for befriending a Black soldier in the early 1950s, the BVA found sufficient corroboration for the personal assault stressor "in light of the era in which the veteran served and the recorded prejudice and animus that was present at the time," yet, the Board found absence of a Criterion A PTSD stressor on the basis that the veteran's "response involved surprise and a sense of being wronged."[158] These cases reflected incongruence between the VA's PTSD stressor standards and the *DSM*'s trauma standard for diagnosis of PTSD. These opinions support the finding that claims

---

[155] Name Redacted, Citation No. 10-33511 (Sept. 7, 2010) (citing *Bradford v. Nicholson* (2006)).

[156] *Id*. Although this veteran was denied service-connection for PTSD for lack of a sufficient stressor, he was approved for service connection for the acquired psychiatric disorder of depressive disorder not otherwise specified, on the basis that the examiner still expressed that "the possibility exists of a connection, but supportive data are not in evidence." *Id*.

[157] Name Redacted, Citation No. 12-34237 (Oct. 2, 2012) (rejecting the "conclusory" assertion that the veteran lived in fear based on slurs from peers and superiors).

[158] Name Redacted, Citation No. 11-19942 (May 23, 2011).

of physical assault at least marginally increase the odds of success on appeal in discrimination claims.

Claimants who alleged that harassment put them in fear of physical harm or death were more likely to obtain service-connection for PTSD.[159] For instance, a veteran who was harassed for being gay succeeded in establishing a sufficient PTSD stressor of being "in fear for his life during service due to his sexual orientation."[160] This stressor was successfully corroborated by evidence of nonphysical "threatening behavior" in the form of being "awakened in the middle of the night to be harassed and . . . forced to run to the command center," having a guard stationed to watch the veteran after peers turned him in to the commander on suspicion of homosexuality, and after the commander wrote a statement urging the veteran's prosecution for fraud in not disclosing his sexual orientation at the time of enlistment.[161] Here, VA mental health examiners "stated that the veteran was . . . abused as punishment for being homosexual" and that "the veteran has PTSD due to harsh and unjust treatment in service," which caused him to "constantly relive trauma related to . . . fear of persecution."[162]

Notably, some veterans were service-connected for PTSD even when they did not claim life-threats, and even when a VA examiner opined that the traumatic stressor criterion was not satisfied. Such veterans succeeded when at least one mental health provider diagnosed PTSD on

---

[159] These claims also assisted in establishing other mental health conditions, such as bipolar disorder with anxiety. Name Redacted, Citation No. 16-33567 (Aug. 25, 2016) (claiming that fear of being outed as a sexual minority in the time of DADT resulted in "daily fear for . . . safety and security due to the immense intolerance homosexuals faced in the military at that time").

[160] Name Redacted, Citation No. 16-3713 (Sept. 22, 2016).

[161] *Id.*

[162] *Id.*

the same facts. In a notable case, a veteran who had been relieved of her duties as a military police officer, forced to work demeaning jobs, subjected to sexual comments about lesbians, surveilled by undercover agents who parked in front of her apartment, and was ultimately compelled to admit homosexuality in exchange for an honorable discharge had enough traumatic stressors to qualify for a PTSD diagnosis even though she lacked traditional evidence of trauma.[163] Another veteran claimed PTSD as a result of being falsely accused of homosexuality for living with another service member known to be gay and then having the Navy inform his parents by letter that he had been discharged on the basis of homosexuality.[164] Despite the fact that a VA examiner noted that such an event did not meet the threshold for Criterion A, the BVA gave greater weight to the veteran's treating psychiatrist, who diagnosed PTSD and periodic depression based on recurrent memories of the incidents, being on guard, mistrustful, anxious, and tense throughout the extended period of treatment.[165]

Predisposition to PTSD from Military Racial Discrimination

Many racially discriminatory events were not deemed sufficient, standing alone, to meet the threshold for traumatic stressors under Criterion A, consistent with the finding of lower odds of success when PTSD is claimed on appeal. As a possible exception, the BVA has favorably considered discriminatory events in the military as triggering a predisposition for Criterion A trauma based on past traumatic exposure. For instance, the BVA noted how the examiner:

---

[163] Name Redacted, Citation No. 12-36487 (Oct. 22, 2012) (also considering the impact of the words "overt homosexual" stamped on the veteran's DD Form 214, which caused her to forego many jobs that required submission of military discharge certificates).

[164] Name Redacted, Citation No. 10-46476 (Dec. 13, 2010).

[165] *Id.*

> referenced medical literature suggesting that African-Americans presented higher rates of PTSD due to multiple stressors including bicultural identity, institutional racism, and residual stress from trauma . . .. The examiner found that the veteran was at higher risk to develop PTSD symptoms in response to stressful life events posed by his military involvement and that the social isolation and racism he experienced in service were likely factors in developing PTSD.[166]

Although the final outcome of the case is unknown, the BVA determined that this medical opinion was sufficient to warrant a remand of the case because the new evidence demonstrated a "reasonable probability of substantiating the [PTSD] claim."[167] Importantly, the psychologist equated the "exclusion and discrimination" to a "traumatic impact that is equivalent to personal assault," without labeling it as such.[168] This rationale proved to be the exception rather than the rule from a review of the anecdotal case summaries.

Discrimination in a Combat Zone

When veterans claimed discriminatory trauma in addition to combat, results were mixed. It was not possible to disaggregate a specific basis for granting the benefits when both injury types were attributed to a mental health condition. For instance, in a case where the veteran claimed PTSD resulted from exposure to scud attacks in addition to epithets suggesting she was a lesbian while deployed in the Persian Gulf, the BVA did not link the service-connection to a single event or even to a combination. It is possible, therefore, that the combat trauma was the exclusive reason for grating benefits and the judge gave little to no weight to the mental health injuries from discrimination. This was suggested in a BVA opinion in which the VA examiner

---

[166] Name Redacted, Citation No. 17-57407 (Dec. 12, 2017) (Remanded).

[167] *Id.*

[168] *Id.*

recognized "racial tension in service" from witnessing a noose hung from a Black barracks mate's bunk, but that "the *primary* stressor that would have caused the veteran's PTSD were his claimed stressors related to being on bombing missions."[169]

This study revealed a number of cases where the veteran specifically indicated no trauma from combat, but rather trauma from discrimination occurring in a combat zone. When veterans alleged discrimination occurring in a combat setting, the BVA was more likely to recognize service connection of some mental health disorder for the discriminatory injury.[170] In a noteworthy case, the BVA granted service-connection in part on the veteran's testimony "link[ing] his psychiatric symptoms of fear of hostile, military, or terrorist activity during his service in the Republic of Vietnam, which he states was compounded by his belief that due to racism, his fellow marines would not come to his aid if attacked."[171] The BVA coupled these lay statements with the psychiatric finding that, "the Veteran's stressor of being young and in the Vietnam war and his stressor of repeatedly asking for help with no one coming to help him or check on him and instead laughing about it both satisfied Criterion A (adequate to support a diagnosis of PTSD) and were related to the Veteran's fear of hostile military or terrorist activity."[172] Even where the stressor event was insufficient to meet Criterion A, such as the case of substantiated racial micro- and macro-insults, service-connection for depressive disorder was satisfied where the Black veteran described how "he volunteered to go to Vietnam in order to escape the racism that he faced in his unit" and that he became "more sensitive to racism" during

[169] Name Redacted, Citation No. 15-53391 (Dec. 22, 2015).

[170] These cases were so few that the number was too small to compute statistically.

[171] Name Redacted, Citation No. 17-55758 (Dec. 5, 2017).

[172] *Id*.

combat service where the potential for harm was ever-present.[173] This anecdotal observation aligns with the findings that veterans claiming discrimination succeed in mental health service-connection for depression, as opposed to PTSD.

A separate line of cases addressed combat trauma related to having similar physical attributes as the enemy. The BVA recognized that this type of discriminatory trauma resulted in an "atypical presentation" of PTSD consistent with "Race-Related Posttraumatic Stress Disorder" addressed in a VA publication on Asian Pacific Islander Veterans' readjustment difficulties (Loo, 1998).[174] The examiners noted that "the veteran's traumatic event was the persistent fear of persecution and physical and emotional abuse by Caucasian GI's."[175] Another provider noted that this was "probable partial PTSD secondary to his experience of racism and discrimination during the war."[176] In this case, the symptoms that were "suggestive of PTSD," despite being atypical, included "hypervigilan[ce], especially when Caucasian veterans [are] present," anger when overhearing racial slurs, and "although he did not particularly have intrusive thoughts, per se, he admitted to ruminating over being discriminated against during the war and was angry as a result."[177] Aside from a continuous chain of verbal harassment and comparisons of his Chinese-American features with the VietCong, the primary stressor noted among the evaluators (private and VA-contracted) was the "particularly traumatizing" fear "that he would be left alone [in Vietnam] with no one to vouch for his ident[ity] as a United States

---

[173] Name Redacted, Citation No. 18-119553 (Jul. 19, 2018).

[174] Name Redacted, Citation No. 16-43098 (Nov. 9, 2016).

[175] *Id.*

[176] *Id.*

[177] *Id.*

citizen."[178] The medical examiner ruled these discriminatory events as sufficiently traumatic based on the veteran's resulting perception of "threats to his survival."[179] Although the "veteran did not claim any sort of combat trauma," per se, it was sufficient that he feared being left alone in danger in a combat zone where he could potentially face harm from his own side or the enemy. Such anecdotal accounts support the finding that combat involvement is marginally significant in increasing odds of successful appeal for disability claims.

Some veterans claiming discrimination in combat zones, nevertheless, failed to establish sufficiently traumatizing experiences. Unlike the preceding example, a different veteran was diagnosed with "a unique type of PTSD, referred to as Asian-American Posttraumatic Stress Disorder,"[180] ostensibly supported by the same studies in the successful case reported above. The claimed uniqueness of the disorder was that it "was directly related to harassment and abuse the veteran experienced as an Asian-American serving in the Vietnam conflict."[181] The veteran claimed that "he was made to feel threatened with physical harm by his own troops and subject to constant humiliations."[182] The veteran further noted that "he was not allowed to serve on certain missions due to his race" and was unable to report the discrimination to his command because those individuals perpetrated the discriminatory acts.[183] Although the veteran "asked that the VA waive the requirement for corroborating stressor evidence due to the special nature

---

[178] *Id.*

[179] *Id.*

[180] Name Redacted, Citation No. 10-17948 (May 14, 2010).

[181] *Id.*

[182] *Id.*

[183] *Id.*

of the claim," the Board declined the invitation.[184] The facts, even if they met the standard for personal assault corroboration, still lacked sufficient detail to establish Criterion A trauma.

Other cases involving discrimination in a combat zone were denied based upon factors such as timing of PTSD claims. In a case where the veteran never claimed that his PTSD resulted from racial trauma only after a medical provider claimed his PTSD related to combat experiences, the BVA found the "shift" to a new basis for the PTSD claim to be indicative of a lack of credibility.[185] The BVA opined that racism would have factored prominently into the diagnosis included in the claim if it was truly the source of the veteran's claimed PTSD.[186] This anecdotal account provides an example of why PTSD has been found to decrease the odds of succeeding in VA disability appeal based on discrimination.

Gaps in Symptoms or Treatment

Another component in the evaluation of discriminatory trauma appears to be gaps in recorded symptoms after the veteran has left service. In one particular case, the Board noted a period of ten years during which there were no medical records to reveal symptoms or treatment received. The BVA observed that the veteran "nonetheless testified that he had continuous symptoms of depression during that period which went untreated."[187] In this instance, the Board found sufficient corroboration of continued symptoms of depression based upon written statements submitted by the veteran's family members noting how "he was 'always depressed'

[184] *Id.*

[185] Name Redacted, Citation No. 06-29386 (Sept. 18, 2006).

[186] *Id.*

[187] Name Redacted, Citation No. 02-04878 (May 22, 2002).

following his discharge from the service."[188] The BVA highlighted the legal rule expressed in *Wilson v. Derwinski* (1991, p. 19), that "continuity of symptomatology, *not continuity of treatment*, is required to establish a nexus between a disorder noted in service and a chronic disorder after service."[189] Although many scholarly studies support the reluctance of sexual and racial minority veterans to seek treatment following departure from the service (National Academy of Sciences, 2018), in the absence of corroborating evidence such as family member statements, veterans with sufficient proof of discriminatory trauma were nonetheless denied service-connection based on gaps in treatment records or other evidence of continuing symptoms.[190]

Curiously, while scholarly and historical publications can be particularly helpful in corroborating the existence of the discriminatory event in terms of time and location for personal trauma, psychological studies about the impact of racial discrimination have been less compelling in establishing discrimination as the cause of PTSD. In a case where a Vietnam veteran had been diagnosed by a private provider with a unique form of "Asian-American Posttraumatic Stress Disorder," the Board gave no weight to "several psychiatric journals, indicating a link between PTSD and stressors related to racial discrimination against Asian-Americans during the Vietnam Conflict."[191] Specifically, "the Board note[d] that the psychiatric

---

[188] *Id.*

[189] *Id.* (emphasis added).

[190] *See, e.g.*, Name Redacted, Citation No. 14-24026 (May 28, 2014) (observing that the absence of treatment or complaints related to racist assaults from a superior officer in the Navy in medical records from 1991 to 2005 constituted "many years" between discharge and reference in medical records, which tended "to weigh against a claim for service connection") (citing the precedent *Maxon v. Gober*, 2000, p. 1333).

[191] Name Redacted, Citation No. 10-17948 (May 14, 2010).

literature, although indicative of abuse suffered by *some* Asian-Americans during Vietnam, d[id] not corroborate the Veteran's allegation that he was discriminated against in service."[192]

Hostility Towards Other Races as Evidence of Race-Based PTSD

In evaluating the magnitude of claimed trauma, cases frequently discuss the veteran's interaction with members of the same race as the military perpetrators. In multiple instances, a veteran claimed that he or she avoided members of the perpetrators race,[193] or experienced "current violent negative reactions" in their presence,[194] following racial trauma, which is a hallmark of PTSD's avoidance symptoms (Pineles et al., 2011). Some veterans further alleged that they began to harbor ill will towards persons of the same race as their traumatizers, and even caused committed hostile or discriminatory acts against victims of the same race as their military perpetrators.[195] The BVA has treated these claims in varied ways. While one judge acknowledged the veteran's assertion that he began to dislike African Americans after a Black commander treated him poorly, the BVA concluded, "insofar as the veteran's dislike of African Americans may have been related to service, racism is not considered a psychiatric symptom subject to service connection . . .."[196] Another judge in a different case was more blunt: "[T]o

---

[192] *Id.*

[193] *E.*g., Name Redacted, Citation No. 12-05784 (Feb. 28, 2012) ("[H]e was unable to be in crowds, especially with [B]lack people, as he was involved in a racial riot during service.").

[194] Name Redacted, Citation No. 04-32074 (Dec. 3, 2004).

[195] In a noteworthy example, the veteran presented evidence that he "became progressively more focused on his racial hatred as the source of his problems and his experiences in service as shaping his current attitudes." Name Redacted, Citation No. 06-20320 (Jul. 13, 2006). The veteran increasingly engaged in violent attacks on racial minorities after he was treated in a racially discriminatory manner. *Id.* In another case, the veteran's ex-wife provided a statement in which she shared observations of his "current bias against African Americans, [which she considered] a verification of his mistreatment in the Army." Name Redacted, Citation No. 04-32074 (Dec. 3, 2004).

[196] Name Redacted, Citation No. 17-19838 (June 5, 2017).

state the obvious, the United States government will not pay compensation for a condition based on a person's own racism."[197]

Sexual-Orientation Discrimination as Sexual Harassment

In the context of sexual-orientation discrimination, veterans in the study had an advantage in that some medical examiners considered anti-gay or gender-nonconforming verbal harassment to constitute sexual harassment, thus availing the claimants of the markers for MST.[198] Despite the benefits of falling within an area that is recognized as a sufficient personal trauma stressor, this did not equate to automatic success in establishing a PTSD diagnosis. In a notable case, while an expert opinion from the Clinical Director of Mental Health Trauma Services for a VA healthcare system conceded that the stressor constituted sexual harassment and MST, the examiner concluded that "sexual harassment does not qualify as a stressor for diagnosing PTSD."[199]

---

[197] Name Redacted, Citation No. 02-01233 (Feb. 6, 2002) (addressing a veteran's claim of stressors relating to his growing animosity towards Black and Latino Soldiers based on his experience of overhearing threats from soldiers of those races that they desired to kill him in his sleep, and after regular confrontations, some of which involved having a knife drawn on him and his brother at Fort Lewis, Washington). In this case, the veteran shared "complaints that he could not control his rage and feelings of aggression toward other races" as a result, to include being apprehensive about entering the same room). *Id*.

[198] Name Redacted, Citation No. 11-11625 (Mar. 23, 2011) (noting the examiner's conclusion that "the veteran's reports of being told he looked like a girl and being called names, teased, and laughed at . . . is considered sexual harassment and qualifies as [MST]"); Name Redacted, Citation No. 12-36487 (Oct. 22, 2012) ("The examiner further noted that the veteran may fit the criteria for military PTSD/sexual harassment given her report of biased treatment by military personnel and the blatant exposure of her sexual preference stamped on her permanent military records.").

[199] Name Redacted, Citation No. 10-33511 (Sept. 7, 2010) (citing contrary evidence but ultimately approving the PTSD claim based on a different examiner's conclusion that repeated verbal harassment for gender nonconforming behavior was the cause of PTSD).

Conversely, a VA psychiatrist's evaluation of a veteran who claimed major depression as a result of his Other-Than-Honorable discharge for homosexual acts was deemed to be more valuable to the BVA than a provider who did not support the diagnosis, specifically because the psychiatrist "thoroughly consider[ed] the psychiatric and economic toll of the circumstances of the veteran's discharge."[200] Specifically, the VA psychiatrist shared the conclusion that "a clean record was critical to employment at the time of the veteran's discharged," "for 14 years it festered in his mind," and "the circumstances of the [veteran's] discharge and the resulting stigma and emotional toll is more than 50 percent likely to have contributed to his subsequent depression."[201]

Study Limitations

This study, which is the first of its kind, has some practical limitations and some more specific statistical/methodological limitations. The primary drawback deals with the inherent limitations of analyzing written judicial decisions. At the most basic level a written decision represents a pared-down summary of the decision process leaving judges to omit many of their reasons for reaching a decision (Walker et al., 2018). Judges often tailor their written decisions to speak to certain audiences. This process necessarily involves stressing and downplaying different information based on the target audience and final objective. Judges may also censor the true reasons for their decisions to avoid criticism or allegations of bias. These realities of judicial opinion writing apply in all contexts, including at the BVA. As the BVA's former quality control expert, David Ames was responsible for evaluating BVA decisions at different stages of the process. He observes that the Board "intentionally" avoids mention of the race or

[200] Name Redacted, Citation No. 14-25800 (June 6, 2014).

[201] *Id*.

sexual orientation of claimants if these characteristics are known specifically to avoid allegations of being biased against the claimants (personal communication, D. Ames, March 26, 2019). This practice would impact the results of this study by resulting in the exclusion of discrimination cases and misrepresenting the characteristics of the true population of discrimination cases.

In this study, many cases that were excluded for lack of specificity evidenced a disturbing trend in which judges essentially sanitized the text of their decisions to obscure important facts about race and sexual-orientation discrimination. This censorship occurred in a variety of ways from deployment of euphemisms for discriminatory treatment (e.g., the characterizing a stressor as a mere "personality conflict" or feeling of persecution)[202], overly-vague descriptions of discriminatory events (e.g., suffering "harassment" and "discrimination")[203], and omission of any facts related to the discrimination altogether (e.g., use of the phrase "without getting into the vulgar details"[204] when describing alleged racial discrimination). While it appears that the censorship was intentional, the judges' motives for relying on this tactic remain unclear. Just as it is possible that the BVA desired to be sensitive to the veteran's situation, understanding that the veteran would ultimately receive and likely read the decision, it is also possible that judges did not want members of the public to have information that could reflect negatively on themselves or the VA at large.

---

[202] *See, e.g.*, Name Redacted, Citation No. 17-42581 (Sept. 26, 2017) (characterizing the claimed PTSD stressor event as having "had a personality conflict with a platoon sergeant"); Name Redacted, Citation No. 13-02375 (Jan. 22, 2013) (characterizing the veteran's claim of a traumatic stressor as "too many people against him" due to "his outspokenness about rules and procedures").

[203] See *supra* Chapter 4 (collecting BVA examples where it is impossible to determine if the behavior was based on race or sexual orientation, as opposed to some other targeted characteristic).

[204] Name Redacted, Citation No. 18-07374 (Feb. 6, 2018).

Today, the BVA reports on cases in the aggregate in a way where it is not possible to determine the race or sexual orientation of a claimant or to link those characteristics to an outcome. In light of the growing number of studies demonstrating disparities in treatment of Black veterans in initial disability determinations for mental health conditions (e.g., Marx et al., 2017; Murdoch et al., 2003), the BVA may desire to preclude future evaluations of trends in their opinions or, worse yet, evaluation of individual judges' track records in dealing with certain types of claimants. For instance, if it were possible to identify whether a specific judge denied the claims of every sexual minority veteran or every racial minority veteran to come before the judge, this could raise significant concerns about the fairness and impartiality of the Board. In Title VII cases, for example, such analyses in federal district and appellate court opinions revealed that "judges' race significantly affects outcomes in workplace racial harassment cases" with White judges issuing proportionately fewer favorable rulings for Black plaintiffs (Chew & Kelley, 2009, p. 1117). It is noteworthy that BVA decisions have recently begun to omit, rather than include, information about cases, with a consistent practice of omitting appellants' legal representation and Regional Office in cases beginning mid-2019. This is all-the-more concerning given findings that lack of representation is significantly related to denial of discrimination appeals.

As a consequence of deliberate censoring of written opinions, it is possible that this research may not have accurately identify cases involving traumatic discrimination because the authoring judge deliberately removed the most identifiable characteristics from the written product (personal communication, D. Ames, March 26, 2019). If these omissions led to a more limited sample, the consequence would be less representative research results.

Beyond the intentional omission of crucial information on the content of cases, a second limitation concerns the nature of the BVA itself. In a setting where "some 90 veterans law judges . . . decide 50,000 cases, with over 1,000 cases docketed per [judge], annually," the whole BVA appellate system has been characterized as "mass adjudication," which suffers from inherent "challenges in the effectiveness, accuracy, and consistency" of case outputs (Ho et al., 2018, p. 2). Due to the burdens of judicial overload, opinions often suffer from a lack of elaboration on reasons and bases for the court's decisions. These additional, often inadvertent, omissions may also provide incomplete analysis that results in spurious inferences as to the true reasons for a specific decision.

The third limiting factor is the short reach of BVA decisions. Normally, a court follows precedent in the practice of *stare decisis*, which requires later courts to be bound to the holdings of their own past decisions (Wishnie, 2017). When the law evolves in this manner, this practice increases the reliability of judicial decisions by adding levels of predictability and conserving time. As a statutory administrative court created by Congress (38 U.S.C. §§ 7251-7252), the BVA lacks these traditional staples of jurisprudence. Specifically, BVA decisions are not binding on the BVA (Haley, 2004), which means that BVA judges may use their own rationale to decide the contested issues in a case even if other BVA judges have rejected the same rationales. The consequence is that several BVA judges may hear traumatic discrimination claims of an identical nature and reach conflicting decisions using opposed rationale. The increasing number of potentially inconsistent outcomes is at odds with attempts to detect discernable patterns in judicial rationale and, for this study, limits the ability to identify clear pathways to successful outcomes. Similar to other semantic legal analyses, this study attempted to overcome the limitation of lack of consistency by evaluating the courts' treatment of standards

that are binding on the BVA (e.g., the regulatory requirement for evaluating personal assault, various binding cases from the VA's highest court, etc.). Discussions of binding rules have been found as reliable indicators of judicial rationale despite the possibility that judges may have differences in interpretation (Haley, 2004).

The fourth limitation of this research is the lack of a tested, validated, and empirically sound system for mining BVA cases. Even with the search features of LexisNexis, accurate appraisal of decision-rationale patterns in a set of cases requires a more exacting and comprehensive analysis. Although researchers in the field of legal analytics have made great gains in decision extraction, the field is in its infancy. Existing methods for identifying rationale still suffer from a level of imprecision that cannot ensure perfect attribution or association of concepts with decisions. Walker and his colleagues (2018), who have evaluated semantic structures of BVA decisions for years, explain several factors which obfuscate decision-making rationale, including when the judge raises an off-topic point as an example in the context of making an analogy.

A fifth limitation of this project is lack of access to claims data from Regional Offices, which prevents an accurate appraisal of the bases for denial or approval of traumatic discrimination claims that never reach the BVA. This is a concern because it often takes years to receive a decision from the BVA and many claimants who were denied at lower levels forego appeal due to lack of time, complexity of the process, and lack of assistance from qualified and experienced counsel. This results in a situation where the data are not representative of the true population of claimants or the rationales for approving or denying traumatic discrimination claims. Although decision patterns in BVA cases only represent cases that reached the BVA, there is some consensus among researchers that data from BVA cases can support some limited

inferences regarding behaviors of adjudicators at the Regional Offices which led to the appeals (Ho et al., 2018). None of these inferences, however, can be tested with any degree of certainty.

Methodological/Statistical Limitations

With regard to methodological and statistical limitations, this study has been impacted by the lack of sophistication of algorithmic classifiers which are not currently capable of interpreting the nuances of legal analytical texts (Pasquale & Cashwell, 2018). It is without question that the findings and conclusions of this study would be substantially improved by relying upon the original claims and medical records that were ultimately summarized in each of the 653 classified traumatic discrimination cases.[205] This is akin to the argument that a truly accurate and probative analysis of appellate court decisions requires access to the underlying legal briefs filed by both sides (Aletras et al., 2006). As in the case of appellate decisions outside of the BVA setting, these background documents not only provide context, but further reveal facts and arguments that the judges may have omitted in their judicial opinions. The universal truth about machine learning applies with equal force to this study: The results are only as accurate as that which forms the training data (Pasquale & Cashwell, 2018, p. 65). Some of these challenges will be perpetually insurmountable, such as the redaction of identities from the cases and confidentiality of original filings, which preclude the ability to conduct a deeper dive into supporting documents.

While it is not possible to identify precisely how many traumatic discrimination cases were missed by the classification algorithms in this study, it is highly probable that a number of decisions have been inadvertently neglected, and that those decisions, if identified, would even affect some of the study's outcomes and conclusions. This concern requires that the current

[205] Of note, the original number of classified cases was 654, but one case was excluded based on the veteran's failure to identify a disorder and only noting that he was "branded" as a homosexual.

results and conclusions be regarded with a degree of skepticism. Importantly, however, this is not a study that proposes any predictive equation like the scholarship incorporating ML approaches to classification of legal texts (e.g., Gao, et al., 2019; Kowsrihawat et al., 2018; Aletras et al., 2006). This study has more modest goals and has implemented additional safeguards for accuracy of classification by building in review and confirmation by human coders who have been trained to identify subtleties in judges' descriptions of discriminatory events.

Regarding specific methodological limitations, the ML approach used a combination of two algorithms rather than the three that were recommended in the accident surveillance literature. Accordingly, it is possible that addition of a third algorithm could produce a greater level of accuracy. After all, with 1.0 being the optimal F1 score, both the race and sexual orientation discrimination classifiers might have benefitted from additional iterations of classification. Relatedly, another potential drawback of the methodology was the use of the classifiers on the data set of 4,229 decisions, rather than all 123,011 cases addressing service-connection. If the classifiers had been applied to the entire corpus, it is possible that the new word combinations would have classified a larger number of traumatic discrimination cases.

There were substantial limitations on the sexual-orientation discrimination cases, given that only 117 cases had been identified. Beyond the fact that this pool of cases was underpowered, which cast doubt on the strength of the resulting associations, another difficulty was the smaller number of cases involving gender identity and transgender veterans. Because the military's anti-gay policies explicitly targeted gay, lesbian, and bisexual service members, the military used different tactics to address the transgender population (Goldbach & Castro, 2016). While in some cases, gender identity was addressed by the military through mental health

channels, in other cases, transgender veterans were processed through existing anti-gay policies (Beckman et al., 2018), creating the possibility of misclassification of some of some cases where gender identity was treated as sexual orientation by the military and the BVA. This possibility lessens the representativeness of the sexual-orientation cases even more.

Another methodological weakness in this study was the failure to consider intermediate outcomes, such as remands or reopenings of cases or determinations of whether a claim was well-grounded. The rationale for excluding these outcomes from the analysis was the inability to discern a final outcome. Namely, because the cases were returned for further development or consideration, it was not possible to identify whether the same case succeeded after that additional step. With 40,850 of the 123,011 mental health service-connection decisions failing to achieve any determinative outcome, it is possible that additional fact patterns in the intermediate cases would provide additional insight, especially for cases involving sexual-orientation discrimination, due to their low representation in the cases that reached final outcomes.

Study Recommendations

Even though this study cannot answer many of the key questions related to the adjudication of BVA claims and it is further limited by exclusive reliance on appellate decisions to the exclusion of adjudication at initial levels, the study still offers new and useful insights which may assist initial claimants. For instance, with knowledge of the factors that led to the denial of a claim by a Regional Office in the appellate cases, veterans and their advocates can consider whether their own claims involve similar concerns. Beyond this, in the unfortunate case where a claim is denied by a Regional Office, the veteran can potentially improve his or her claim if informed by lessons from the BVA's treatment of such issues. This section begins with specific recommendations arising from the results of the logistic regression analysis. Following

this, the section offers other practical recommendations to inform applicants and mental health evaluators on how to identify, develop, and present key evidence of traumatic discrimination in their claims. Next, the section offers some policy recommendations for the VA and other organizations, which are intended to bridge critical gaps and provide awareness of and guidance to a highly marginalized population of veterans with pressing mental health needs and lack of knowledge that they might even be eligible for life-changing benefits based on their experiences of victimization during military service.

Recommendations Based on Regression Analysis

The logistic regression analysis identified particular areas of concern that directly relate to the odds of success or failure in a VA disability claim for discrimination. First, given the role of pre-service trauma in decreasing the odds of success, it is important for mental health evaluators to distinguish the impact of pre-service trauma from trauma suffered during military service. The danger is that even after a veteran is able to overcome the multiple challenges to proving a PTSD diagnosis is linked to military service, the issue of cumulative trauma exposure can lead to the conclusion that the pre-service trauma was responsible (or more responsible) for the present symptoms than the experiences occurring during military service. Similar to Seamone and Traskey's (2014) recommendations in the context of pre-service trauma histories and claims for MST, it will be important for evaluators to establish a baseline for the traumatic events and then to show how the military trauma was as likely as not responsible for aggravating or causing current PTSD symptoms.

Another recommendation arising from the logistic regression results is for mental health providers to evaluate for other disorders along with PTSD if supported, to include depression and anxiety. Despite being the most commonly claimed disorder, a claim for PTSD, as opposed to

other mental health disorders, was shown to significantly decrease the odds of success on a discrimination appeal. Given that claims for anxiety and depression are among those which are granted most often in discrimination appeals, the evaluator should thoroughly examine the veteran for these conditions in addition to PTSD. Relatedly, the evaluator should consider the fact that claims for two mental health conditions related to discrimination have significantly greater odds of success on appeal than a single disorder. Consideration of PTSD and an anxiety or depressive disorder will assist in avoiding years of adjudication to consider additional health conditions in the event that the standards for PTSD are not satisfied.

On a final note, the regression analysis showed that veterans without representation face lower odds of success, in this case 54% decreased rates of success, on their appeals than veterans who are represented at this stage. There may be numerous reasons why veterans file these claims without assistance, including the possibility of discouragement from veterans' representatives and attorneys who have not identified discrimination-related claims as a winning strategy. Successful appeals for both race and sexual-orientation discrimination unearthed in this study suggest that there is reason for advocates to reconsider the viability of a discrimination claim. Outreach to veterans by VA and legal claims representatives may help to improve the number of veterans who seek assistance with these claims or who file them at the initial stages. It is hoped that the additional recommendations below will increase the comfort level of professionals who lack resources for addressing discrimination cases in the VA context.

Recommendations for Practice

Review of individual cases supports additional recommendations that are not as evident in the logistic regression. The corpus of 653 traumatic discrimination cases offers comprehensive and unprecedented access to the most detectable decisions involving race and

sexual-orientation discrimination in which those characteristics were mentioned in opinions.[206] Chapter 5's brief case summaries reveal the practical utility of providing more detailed information to permit ease of reference and comparison with particular cases. Table 18, below, represents one of many ways to summarize a case to include its rationale related to discriminatory trauma. Other formats that resemble the summaries presently used in legal research digests of cases could work equally well.

Table 18

Example of Case Summary

Case Information	Demographics	Claim(s)	Veteran's Background	BVA's Ruling & Remarks
18-28210 (05/07/18) Regional Office: New York, NY Judge: David Brenningmeyer Representation: Unknown	Male, Race Unknown, Air Force, Served April 1982 to December 1984 Location of Discrimination: Greece	**PTSD** (DSM-5) (Denied) **Psychiatric Disorder** (Denied)	The veteran claimed the in-service stressor of experiencing racial discrimination, specifically being referred to with racial slurs, assaulted by three white airmen, and punished for defending himself. Personnel records showed that the veteran received several disciplinary actions and was discharged after a pattern of misconduct. A VA examiner in August 2017 found that the veteran did not have PTSD according to the *DSM-5* guidelines. The examiner diagnosed the veteran with depression and alcohol abuse; these disorders were found to be less likely than not connected to his military stressors.	The Board denied the veteran's claim to psychiatric disorders because of a lack of a medical nexus between the disorders and in-service stressors. The Board found the 19-year period between the veteran's discharge in 1984 and the veteran's first attempt at seeking medical assistance for psychological issues in 2003 to "[weigh] heavily against the claims." The veteran's claim for PTSD was denied due to the lack of medical diagnosis.

BVA = Board of Veterans' Appeals; PTSD = Post-Traumatic Stress Disorder; VA = Veterans Affairs; DSM-5 = Diagnostic and Statistical Manual of Mental Disorders, 5th Edition

[206] It is highly likely that many more cases involving racial and sexual minority discrimination have been obscured by vague references and other forms of sanitization by BVA judges.

The benefit of summarizing and indexing various characteristics of the discrimination cases is the potential to identify cases of interest based on the similarity of the fact patterns for prospective applicants.

Whether the veteran represents himself or herself *pro se*, or whether veterans are aided by free Veterans Service Officers or accredited attorneys, all entities could review the summaries to consider potential challenges in corroborating the discriminatory act and establishing the severity of the mental health injury. Mental health providers could also consider cases from the perspective of adequacy of the mental health examination of similarly situated claimants. Such considerations range from the BVA's manner of applying *DSM* criteria to matters related to content and quality of mental health examinations that have been recognized as effective in supporting agency determinations on claims. In sum, the strongest recommendation for practitioners to develop a digest of summarized appeals is to triage potential issues of significance in a veteran's traumatic discrimination claim. Rather than a definitive guide, the summaries would serve as a resource to aid in evaluating potential issues that may arise in this unique claim type.

Identification of Discriminatory Trauma Markers

Although this study did not identify a robust new list of markers for race and sexual-orientation discrimination akin to MST markers as desired, the study did identify some important ones to augment the existing guidance. For instance, this study identified a new marker for ethnicity discrimination in the form of evidence of a post-service name change to sound more American.[207] Further, specific to sexual-orientation discrimination claims, the fact of being

[207] Name Redacted, Citation No. 16-45339 (Dec. 2, 2016).

close with one's family prior to discharge for homosexuality and then being distant from the family for years to avoid inquiries about the circumstances of discharge has been accepted as a marker for trauma related to one's discharge under DADT as well as corroboration of sexual orientation-harassment by peers related to the discharge.[208] In cases where veterans underwent gender transition following military service, at least one BVA decision used this fact as corroboration for the veteran's claim of severe gender identity discrimination events.[209]

Perhaps, the most prominent markers for discrimination identified by this study that are missing from existing VA guidance on personal assault stressor verification are detailed historical accounts in scholarly books, VA or military reports, and newspaper and magazine articles—in that order. This is not to say that any report of discrimination will aid in corroborating the claimed stressor, but rather that the document must have connections to the veteran's dates and locations of service and/or deployment. This study highlights the immense value of conducting searches of historical materials to provide missing links for corroborating racial and sexual-orientation discrimination events when it is not possible to identify eyewitnesses or other supporting evidence. Some specific sources are outlined below.

Another recommendation, which builds upon the short summaries of cases in this study, is conducting research to determine whether a specific stressor event has already been confirmed by the BVA in its own decision search database. If a veteran's discrimination claim relates to riots onboard the *U.S.S. Kitty Hawk*, in which several Navy sailors where physically assaulted

---

[208] Name Redacted, Citation No. 12-36487 (Oct. 22, 2012).

[209] Name Redacted, Citation No. 16-47102 (Dec. 16, 2016) (finding corroboration for threats and harassment on the basis of gender identity and being forced to act like a male while in service, in part, based on the veteran's "current status as a transitioning female and the engaging difficulties she experienced in this situation").

and severely harmed, it behooves the veteran (and advocates) to read up on official reports or books, such as Freeman's (2009) voluminous day-by-day accounting of the racial combat, and to search further for the BVA's acceptance of general facts related to events occurring onboard the same carrier on specific days or dates.[210] If it is plausible that the claimant was in the vicinity of a historically archived event, then the benefit of the doubt doctrine can be applied.

Aside from BVA decisions, one additional repository to consult is the Department of Defense (DoD) searchable public database which archives discharge upgrade determinations by the Discharge Review Boards and Boards of Correction for Military, Naval, or Homeland Security Records. Among various rationales for petitioning for discharge upgrade, one notable claim articulated in 32 C.F.R. § 70.9(c)(ii)(D) is a petition for equitable relief on grounds that the military discharge was tainted by discrimination. It is quite possible that veterans in such DoD adjudications have provided factual information under a very similar evidentiary standard which requires independent corroboration for all claims of discrimination related to one's military discharge. For example, in a similar vein as BVA cases, the Army Board of Correction of Military Records rejected a discrimination claim in which the veteran claimed that he had been called a "racial slur" and shown a "KKK hood" by his military commander on the basis that such facts were limited to "only a self-authored statement" by the veteran.[211] The use of similar—if not substantially indistinguishable—standards in the DoD boards of review as the standards for

[210] *See supra* Chapter 4 (identifying BVA traumatic discrimination claims related to events occurring onboard the *U.S.S. Kitty Hawk*).

[211] Name Redacted, Citation No. AR 2016 0005086 (Army Bd. Correction for Mil. Rec. Dec. 12, 2017). *See also* Name Redacted, Citation No. AR 2016 0013931 (Army Discharge Rev. Bd. Nov. 3, 2017) (rejecting a claim of discrimination related to sexual orientation when the applicant offered "no independent corroborating evidence" to show that his military unit was aware of his sexual minority status).

evaluating personal assault stressor corroboration would theoretically allow veterans to utilize findings regarding discrimination which have been confirmed by the DoD boards in support of their VA claims. For instance, suppose a veteran has claimed traumatic discrimination for purposes of obtaining VA service-connection related to time at Camp Hood, Texas, during the period of desegregation of the Army in 1948. Such a veteran would likely be aided by incorporating the findings of the Army Board of Correction for Military Records that:

> Although it is impossible to emphatically state that the applicant suffered from discrimination at Camp Hood solely on a review of the available records, it is known that the armed forces were in a turbulent period of transition during the late 1940s and early 1950s caused by the forced desegregation of military units. Given such an environment, racial discrimination could have occurred.[212]

Aside from the database of keyword-searchable decisions of the review boards, there may be similar value in searches of reported appeals of military courts-martial cases that reached findings of fact regarding military discriminatory events. For instance, a veteran claiming VA disability compensation for discriminatory treatment while stationed onboard the *U.S.S. Samuel Gompers* in 1978 could very well be aided by the Court of Military Appeals' acceptance of the fact that this was a time when racial slurs "were a fairly regular thing" and sailors reported receiving threatening notes referencing the KKK left in their sleeping racks (*United States v. Van Hullum*, 1983, pp. 263-264). In summary, given the importance of identifying reliable corroboration for discriminatory acts, it is recommended to search official and accessible DoD repositories.

[212] Name Redacted, Citation No. AC 94-10270A (Army Bd. Correction for Mil. Rec. 1994) (addressing claims by the Black veteran that "he experienced significant racism at Camp Hood and was prohibited from going to certain parts of the post or surrounding towns because he was a [B]lack man").

Forensic Assessment Recommendations for Psychiatric Examiners

Corroboration of discriminatory trauma requires a level of substantiation that may not normally be required in routine mental health disability examinations. To this end, practitioners recognize that it is even harder to identify evidence of sexual-orientation discrimination in military records due to the terrible consequences of being identified. Those LGBT veterans who experienced high degrees of stress could not even use the traditional resources at military bases to seek help, since both military chaplains and military counselors were required to report admissions or suspicions of homosexuality (Goldbach & Castro, 2016; Barber, 2012). Survivors of discrimination may also experience tremendous pain and discomfort reliving the traumatic experiences, especially to complete strangers (Williams et al., 2018, p. 244) (observing various "social costs" of disclosure of discriminatory victimization, including "being perceived as less likable, viewed as a complainer, and accused of attempting to avoid personal responsibility").

For many reasons, the cases identified by this study revealed that traumatized veterans, in general, frequently provide accounts over time with different details, such as dates, times, locations, and other facts. Recognizing that PTSD markers may be discredited based on evaluations of "credibility, competency, and consistency with other evidence" (Wherry, 2018, p. 494), examiners should scour the record for the veteran's prior statements to identify lapses or inconsistencies and address them in the report. If these contradictions are consistent with the manifestation of mental health symptoms or other common responses to traumatic events, the evaluator should mention this and explain why a particular recounting of events is more suitable for opining on matters of causation or diagnosis. Experienced VA practitioners warn that evaluations that ignore prior inconsistent accounts are likely to be disregarded or accorded minimal levels of reliability by the Board (Ridgway, 2012).

Examiners should further underscore the BVA's own recognition that some racial and sexual-orientation discrimination cases may involve "atypical presentations"[213] of PTSD symptoms that differ substantially from the common claims involving PTSD, such as combat trauma. Regarding both race- and sexual-orientation-related trauma, research clinicians have observed that authentic discrimination-based PTSD is frequently misdiagnosed (e.g., as substance use, major depression, or schizophrenia) or, worse yet, missed altogether (Carter et al., 2020; Williams et al., 2018). These common errors suggest that examiners should ensure that they provide more detailed rationales in support of their diagnoses and incorporate different objective measures and protocols that are specifically tailored to the assessment of discriminatory trauma.

The relationship between discriminatory physical assault and success of appeal implores examiners to carefully explore the veteran's history of physical victimization in the military. It may be more beneficial to the veteran to focus attention to discriminatory incidents involving physical abuse, given the Board's apparent negative reception of claims involving multiple discriminatory events. Efforts to corroborate the physical incidents should prove more effective than summarizing each incident that the veteran attributes to discrimination, such as verbal harassment. It is also beneficial to explore the veteran's history of discrimination occurring while deployed in a combat zone. Although there were only a small number of cases addressing this issue, those cases offered anecdotal evidence of success where the veteran articulated greater fear of harm from the enemy due to lack of support and oppression by military members who displayed discriminatory behaviors. The theoretical basis for this position is well supported in

[213] Name Redacted, Citation No. 16-43098 (Nov. 9, 2016).

the scholarly research (e.g., Kabat et al. 2018; Loo et al., 2007; Loo & Kang, 2003; Loo et al., 2001; Loo, 1998).

Although there is no single definitive standard for what constitutes a sufficient VA psychiatric examination report (Johansen, 2017), there is growing consensus that evaluators should use objective measures to assess a veteran's mental health condition for compensation purposes (e.g., Young, 2015). It is noteworthy that, over time, validated psychometric measures have been developed for the assessment of trauma resulting from race discrimination and sexual-orientation discrimination, to include military variations of civilian tests. For evaluating race-based-traumatic stress, Carter and colleagues have developed the Race-Based Traumatic Stress Symptom Scale (Carter et al., 2016; Carter & Sant-Barket, 2015). Other researchers devised the UConn Racial/Ethnic Stress & Trauma Survey (Williams et al., 2018); Race-Related Events Scale (Wealde et al., 2010); Revised Workplace Discrimination Inventory (Foynes et al., 2015); and Perceived Ethnic Discrimination Questionnaire (Brondolo et al., 2005). A military-specific questionnaire and tool called the Race Related Stressor Scale for Asian American Vietnam Veterans have been implemented to assesses discriminatory trauma encountered in the military context (Loo et al., 2007; Loo et al., 2001). Similar measures have been tailored to assessment of sexual minority discriminatory trauma, including the Minority Stress Scale (Pala et al., 2017); Heterosexist Harassment, Rejection, and Discrimination Scale (Szymanski, 2006); Workplace Sexual Identity Management Measure (Moradi, 2009); Internalized Homonegativity Inventory (Mayfield, 2001); and Lesbian Internalized Homophobia Scale (Szymanski & Chung, 2001).

Although no traumatic discrimination cases identified in this study (and none stored in the BVA decision database) referenced these tools, the lack of reference does not support the inference that discriminatory trauma assessments are inapplicable to VA evaluations. On the

contrary, VA and other researchers have begun to use measures of discriminatory trauma in the evaluation and treatment of sexual minority patients (e.g., Kabat et al., 2018) (adapting the Perceived Discrimination Scale). Based on the growing arsenal of objective measures developed and revised to forensically evaluate discriminatory trauma, examiners are urged to utilize these tools. A number of the traumatic discrimination cases in which VA experts disagreed with private examiners on the traumatic nature of discriminatory events reveal that the Board gives more weight to well-reasoned and thoroughly documented reports with a supporting rationale. PTSD diagnoses based on discriminatory trauma have succeeded even where VA examiners have refuted such diagnoses, citing the general consensus that racial slurs or other behaviors are not considered to be sufficiently traumatic. Many of these tools provide a framework for identifying why specific traumas may nonetheless meet *DSM-5* standards.

It is further recommended that examiners provide yet another form of necessary context in reports. Given the findings that PTSD claims were associated with less successful outcomes ($OR = 2.97$, $p = .055$), the study results strongly underscore the value of evaluating the veteran for PTSD in addition to other mental health disorders supported by the evidence. A claim for PTSD is harder to substantiate than other mental health conditions based on the requirement for independent corroboration of the stressor. However, when cognized as a PTSD claim, the application of the personal assault standard articulated in 38 C.F.R. § 3.304(*f*)(5) triggers a special rule that is not otherwise accessible in the evaluation of mental health conditions not involving PTSD. Specifically, the BVA has recognized that the personal assault standard permits a mental health provider to make a retrospective diagnosis of PTSD and to reach an opinion that events during military service caused the disorder. Such retrospective opinions are not permitted in other mental health contexts.

A number of cases in this study revealed that veterans who are able to satisfy stressor verification under the personal assault standard for PTSD may still be denied service-connection for PTSD based on inadequacy of the stressor to meet the separate threshold for trauma under Criterion A of the PTSD criteria in the *DSM*. While the presence of a verified PTSD stressor event does not ensure the *quality* of a traumatic stressor, it appears that preliminary stressor verification under the personal assault framework offers independent benefits. Namely, veterans who have passed the hurdles of establishing a PTSD stressor and who have obtained a retrospective medical opinion are likely to obtain further support for subsequent analyses of their claims under standards applicable to different mental health disorders. Furthermore, by addressing all potential mental health conditions reasonably raised by the evidence, even if PTSD is not initially listed on the veteran's claim, medical examiners will assist the veteran by assessing for PTSD. This measure may eliminate the need for the VA seek additional opinions and prolong the adjudication process for years. In sum, there is value in conducting stressor analyses and PTSD evaluations, even if the veteran does not ultimately succeed in a claim for PTSD service-connection.

Recommendations for Further Research

This study has started a dialogue with the goal of providing additional resources to evaluate and support disability claims related to traumatic discrimination. While many commentators infer that veterans file such claims for the cash benefits and express skepticism toward the quest for taxpayer dollars, these critics ignore other significant reasons why veterans file for disability benefits, including to obtain treatment for mental health conditions, and even to reclaim a sense of personal worth and validation (Sayer et al., 2004). Appellate level cases may be good conversation-starters, but they cannot substitute for the insights gained from Regional

Office treatment of traumatic discrimination cases at the initial adjudication stage. To enhance the dialogue, the VA Office of Research & Development should support, sponsor, or otherwise commission research into traumatic discrimination cases in initial claims adjudications at Regional Offices. Here, the goal would be to assess those cases along similar lines as this study to determine the frequency of such claims, approval rates, and factors associated with approval and denial of such claims. Given a concerning estimate that only 11% of veterans denied by Regional Offices pursue any sort of appeal (*Veterans for Common Sense v. Peake*, 2008), it is quite possible that the trends noted in this study do not represent outcomes within Regional Offices. Appreciation of the full spectrum of issues at the initial claims level, as well as the appellate level, would provide a more comprehensive and accurate appraisal for policy intervention.

Beyond expansion of the study to the adjudication of initial claims for traumatic discrimination, this study provides useful data for comparison with the adjudication of discrimination claims in other courts of law. Most notably, discrimination suits under Title VII of the Civil Rights Act have common considerations as VA disability claims. Despite a similar requirement for severity of discriminatory trauma, an important difference is the threshold for a qualifying event. An actionable hostile work environment claim requires the discriminatory conduct to be "severe or pervasive enough to alter the conditions of employment" (*Faragher v. City of Boca Raton*, 1998, p. 778). Future research should consider the nature of the relationship, if any, between discriminatory events that qualify as personal assault stressors and "trauma" for PTSD purposes in VA service-connection claims and discriminatory events that qualify as "severe or pervasive" in the context of Title VII hostile environment claims. For instance, the issue in the Ninth Circuit Court of Appeals case of *Henry v. Regents of the*

University of California (2016) was whether a supervisor's display of a hangman's noose in the Black employee's workspace was sufficient to meet the "severe or pervasive" test. To the degree that results are similar, comparisons may offer additional strategic assistance in both types of adjudication.

Along these lines, the methodology employed by this study seems equally appropriate to evaluate any administrative appellate decisions involving discrimination that rely on *de novo* review. Yamada (2010; 2004) and Carter and Scheuermann (2020, 2012) have identified a number of different forums where claims for discrimination may be heard. For instance, there may be value using ML and logistic regression in the context of Equal Employment Opportunity Commission, state workers' compensation, or Social Security disability claims to the extent that the standard of review and case format is similar.

Policy Recommendations

Consolidate, Catalogue, and Publicize Known Discriminatory Occurrences

Those who have been involved in historic discriminatory events, including victims, perpetrators, and institutions, often prefer to avoid these memories in the spirit of moving forward (Carter & Scheuermann, 2020). One cost of this aversion for some victims of discrimination is lasting health consequences and continued stigma. Organizations also suffer consequences, including lack of institutional knowledge that could provide important lessons for mitigating and responding to discrimination in the present. Military discrimination, however, raises a completely different set of considerations due to the statutory responsibilities of the VA. As long as the VA has a duty to assist veterans in substantiating their disability claims related to the psychological harms inflicted by discrimination while serving, the common societal and political response of ambivalence to the effects of past discrimination is not an option.

The VA should do more to assist veterans in corroborating their discriminatory experiences, especially considering existing policies which are not fully implemented. This study confirmed that veterans who file appeals for traumatic discrimination claims are less likely to obtain service-connection for mental health conditions arising from such victimization. Across time, denials far outpaced approvals of these claims for nearly two uninterrupted decades. It is worth recalling that this study was limited to veterans who had initially been denied service-connection and then battled for years to appeal their cases to the VA, leaving an unknown population of veterans initially denied service connection for discriminatory trauma claims. Within the identified cases, careful review of known traumatic discrimination appeals revealed that lack of corroboration for a discriminatory stressor in the case of PTSD claims was a primary reason for denial of these appeals. In essence, the veteran was unable to produce reliable independent evidence to corroborate that the discriminatory injury even occurred. Without substantiating the occurrence of the claimed traumatic event, even the most forensically accurate medical opinion diagnosing PTSD would be disregarded.

Even though the personal assault stressor verification standard in 38 C.F.R. § 3.304(*f*)(5) was developed for the express purpose of liberalizing the corroboration requirements in recognition that the sensitive issues involved in victimization like harassment make it more difficult to identify corroborating evidence, most veterans claiming traumatic discrimination are still unable to meet this lower burden. The VA's obligation to provide more effective assistance to veterans who face greater challenges in obtaining corroborating evidence is further underscored by the mysterious existence—and the VA's inconsistent use—of the U.S. Army &

Joint Records Research Center (JSRRC).[214] The JSRRC is a DoD organization that exists for the express purpose of providing "direct support" to the VA by researching military records to determine if there is evidence to corroborate a veteran's claim of a stressor event (Records Management & Declassification Agency, n.d.). In some traumatic discrimination cases identified by this study, the JSRRC was able to identify documentary evidence, such as deck logs for ships, daily summaries of events for military bases, and searches for identities of veterans by name or military unit.[215] Yet, in many of these instances, the JSRRC was still unable to corroborate a veteran's stressor. While this study was unable to identify the specific threshold for VA referral to the JSRRC for assistance in establishing claimed discriminatory stressors, there is value in recognizing the VA's occasional reliance on the JSRRC to do what the veteran was unable to do alone (National Veterans Legal Services Program, 2019). This study has confirmed that the JSRRC is a resource for potential use in meeting the VA's duty to assist veteran claimants who have experienced discriminatory trauma, especially given the greater obstacles to identifying evidence in these specific types of claims (e.g., Gurung et al., 2018, p. 80) (noting how sexual-orientation discrimination is "less well-documented within the military," more underreported, and "less recognizable" than other types of victimization, including MST).

To veterans and their representatives, the JSRRC is essentially a black box. The organization "does not conduct research for persons or agencies other than the VA" (Records

---

[214] In the past, this organization was also named the U.S. Armed Services Center for Unit Records Research (CURR), and the Research of Unit Records, Environmental Support Group (ESG) prior to the CURR (Finn et al., 2009, p. 60 n.66).

[215] *See, e.g.*, Name Redacted, Citation No. 08-17362 (May 27, 2008) (obtaining and reviewing command histories for a specific ship during specific years as well as the deck logs for the same ship in specific months); Name Redacted, Citation No. 02-06154 (June 11, 2002) (confirming a riot at the Long Binh Jail in Vietnam occurring in August 1968).

Management & Declassification Agency, n.d.), and only assigns projects in response to formal requests by a designated VA "JSRRC coordinator"[216] at each Regional Office. To date, the JSRRC has not published any handbooks, guides, or information papers intended to assist veterans in conducting their own research, despite access to superior resources and institutional knowledge that would significantly increase veterans' ability to corroborate their claims. While a single published opinion from the CAVC (*Gagne v. McDonald*, 2015), a VA benefits treatise (National Veterans Legal Services Program, 2019), and a scholarly article from VA insiders (Finn et al., 2009, p. 60 n. 64) have all cited to a JSSRC *Stressor Verification Guide,* it appears that even this document is secreted away from public access.

While it is unclear precisely how the JSRRC operates, it appears that the full potential of this entity has not been realized and that its internal operations represent a missed opportunity to meet the organization's purpose and to assist veteran claimants and appellants. From the traumatic discrimination cases reviewed in this study and a brief description by the National Veterans Legal Services Program (2019), it appears that the JSRRC approaches each inquiry afresh and does not utilize any consolidated database of discriminatory events that it has *confirmed* over the years based on the investigation of individual claims. If this is true, the JSRRC should create such a database and enable veterans and their advocates to make queries in in support of their claims. If such a database does exist, JSRRC should make this database public, or at least accessible to veterans. In the event certain information contains personally identifying information, such information should be protected using standard privacy protocols akin to the BVA Decision Search database. However, a veteran who claims that a riot occurred on a specific ship in a specific time period should be able to query whether the JSRRC has

[216] Name Redacted, Citation No. 16-11876 (Mar. 24, 2016) (addressing the research process to confirm a veteran's exposure to herbicides while in Thailand).

already corroborated any similar stressors occurring on the same ship. Making such information accessible can save years of unnecessary work for the veteran, and for the VA.

Since, by definition, the JSRRC is an agency with expertise on corroborating stressors including discriminatory trauma, the JSRRC should provide further assistance in the form of telephone research consultations and more general assistance in the form of circulars, handbooks, and websites to aid in the identification of corroborating evidence. If the veteran is unable to identify sufficient evidence, the JSRRC should permit individual requests from veterans for research assistance. Privacy concerns could be resolved by releasing evidence to VA claims personnel for redaction, or through summarized reports by JSRRC personnel of relevant findings that veterans can submit with their claims.

It is noteworthy that this study was only accomplished through reliance on resources developed by the BVA. None of these resources would have been accessible without extensive use of the Freedom of Information Act (FOIA), to include comprehensive requests over time (Ames, 2018; Peake, 2018). It is unclear whether any legal or advocacy groups have used FOIA petitions to free up resources that have been cloistered away at the JSRRC. However, the success of the FOIA petitions in the BVA context support the launching of similar campaigns to obtain additional resources for evaluating and proving the existence of military discrimination. Frequently, organizations such as the Veterans Legal Services Clinic at Yale Law School and the National Veterans Council for Legal Redress litigate the denial or untimely response to FOIA requests in the federal courts against the DoD and the VA (Yale Law School, 2020). With the backing of such groups, it is likely that additional resources will be accessible for those veterans who stand to benefit.

If the JSRRC remains underutilized, an alternative method for assisting veterans in corroborating discriminatory stressor events is to create a public-facing clearinghouse where historical accounts of military discrimination are catalogued and made accessible. Admittedly, such an organization may lack access to official databases and other resources that make the JSRRC the optimal agency for such assistance. However, much can be gained from consolidation of information that is publicly known. The benefit of assigning this responsibility to a governmental organization is that researchers can publish official reports that would likely have greater weight when considered by the VA. While the DoD operates historical research institutes and libraries that could be assigned with expanded responsibilities in archiving and collecting evidence of historical military discrimination, the Defense Equal Opportunity Management Institute (DEOMI) appears to be the natural home for such a collection, given this organization was created to address racial tension in the military and promote equity and fairness throughout the armed forces (Defense Equal Opportunity Management Institute, 2020). In line with this founding mission, DEOMI regularly conducts surveys of command climates within different military units.

Considering the undercurrent in various BVA opinions to obscure discussions of discriminatory trauma, it is possible that proposals to catalogue and publicize discriminatory military histories have been considered and rejected. The literature suggests that discrimination claims raise a different set of factors than other types of disability claims, which result in considerations of morality and entitlement (Nielson et al., 2010). With concerns over a purported "disability epidemic in the VA" from within the VA urging the organization to provide more safeguards against exaggerated and fraudulent claims for disability benefits (Young, 2015, p. 201), critics may see compensation for discriminatory events as an extension of the epidemic

or, worse yet, a new form of reparations for societal wrongs, invoking additional controversies related to the heated discourse on slavery reparations (e.g., Winbush, 2003). It is possible that these objections will remain an obstacle to any government-sanctioned or -initiated efforts to enhance the VA's ability to assist veterans who suffered discriminatory trauma.

If the federal government declines to take an active role, universities and nonprofits may be viable alternatives. These organizations can make a huge difference by helping to identify, catalogue, organize, and publicize existing documentation of military discrimination. For example, now operating as an integral component of the Modern Military Association of America, the Servicemembers Legal Defense Network (also more recently named OutServe-SLDN) created tremendous resources to assist sexual minority veterans facing institutional oppression through disciplinary and administrative action as well as those facing individual discrimination from commanders and peers. The annual publication of the *Conduct Unbecoming* reports during the existence of the DADT policy catalogued various discriminatory practices, in some cases related to specific bases and specific military units. Within SLDN's archives (e.g., Cleghorn et al., 2003, p. 34) and Collins and colleagues' report (2003, p. i), it is possible to identify pictorial evidence of sexual-orientation discrimination, such as anonymous notes left for service members and graffiti, appearing below in Figure 11 (left, then right, respectively).

Figure 11

Archived Photographs Revealing Military Sexual-Orientation Discrimination

The photograph to the right depicts "[g]raffiti found on the walls at Fort Campbell, Kentucky, after a soldier killed another soldier perceived to be gay by beating him with a baseball bat" (Collins et al., 2003, p. i). Efforts to consolidate and catalogue such instances and make them easily accessible to veteran claimants can have tremendous value in corroborating events. Other organizations that have, on occasion, conducted investigations into military sexual-orientation discrimination include Human Rights Watch (Collins et al., 2003), the Palm Center, the RAND Corporation (National Defense Research Institute, 1993), and various congressional committees.

Organizations and affiliated scholars who research discrimination include the U.S. Naval Historical Center (see, e.g., Sherwood, 2007). In an important initiative, Texas Tech University partnered with the Marine Corps History Division to create an online database of Vietnam-related Marine Corps documents through The Vietnam Center & Sam Johnson Vietnam Archive (Texas Tech University, 2019). Examination of the online contents did identify some materials on race relations, but no catalogued resources addressing discriminatory events. Another hugely important resource of value is the work of the Congressional Black Caucus, which in the 1970s

conducted on-site visits to several worldwide military installations to investigate the occurrence of race discrimination within the Armed Forces. Their official reports, such as *The Report on Racism in the U.S. Military*, are quite helpful (e.g., Chisolm, 1971), but so too are newspapers and magazines in which congressional representatives shared their observations of specific military bases at specific times. For instance, local media reports have captured detailed accounts of Black service members returning home to Fort Bragg, North Carolina, from Vietnam tours who were routinely greeted with signs indicating, "Welcome to Fayetteville—Home of the Ku Klux Klan" (Associated Press, 1971).

The function of a clearinghouse for military discrimination would be to consolidate what is known, to create an accessible network of referral and mutual assistance in helping to confirm discriminatory events, and to provide support to veterans and advocates who are making disability claims related to traumatic discrimination while serving in the military. From a policy perspective, aside from the recent national "awakening" regarding systemic racism in law enforcement (Worland, 2020) and the public display of Confederate statues (Aguilera, 2020), the notion of healing societal wounds does not appear to be a major priority in the current national agenda. Yet, inevitably, administrations and priorities do change. For instance, while efforts to assist and support sexual minority veterans impacted by DADT have repeatedly failed in the current political environment (Legal Services Center et al., 2018) (discussing the fate of the Restore Honor to Service Members Act), such efforts have succeeded in other countries. Most notably, as a form of reconciliation and healing, the Canadian government recently agreed to provide monetary compensation to veterans of the armed forces who had been persecuted and involuntarily removed from service on the basis of sexual orientation (Legal Services Center et al., 2018). A major component of this national effort includes measures to ensure that the

historical lesson is not forgotten, such as the creation of monuments and even a medal issued to those who served. If the climate in the United States becomes more amendable to healing, the memorialization of military discrimination can inform such policy initiatives.

Conclusion

This study cast additional rays of light on an area that has been largely obscured from public view. Even with the aid of ML to detect hidden patterns, much remains unknown regarding those veterans who have literally fought double wars to serve their nation. The war of hate and prejudice has often made casualties of those very veterans who were able to survive aggression from a foreign enemy. And, these wounds, so closely related to the veteran's identity and culture, often result in lasting health consequences. Unsurprisingly, some veterans in this study (like combat veterans in other studies (Kabat et al., 2018)) reported greater distress from discriminatory wounds than those sustained in combat.

This study did not explore whether victims of discriminatory trauma *should* be entitled to VA benefits for such injuries. It is beyond question that the VA's own statutory and regulatory requirements mandate provision of benefits and treatment for veterans whose race or sexual-orientation discrimination in service led to mental health injury. This study addressed the more pressing concern of how well the VA is meeting its duties and responsibilities for this small but not unimportant subset of disability claimants. More importantly, this study addressed whether there are any trends or frameworks that offer guidance to injured veterans to help them navigate these rare and complex claims.

While a substantial number of veterans claiming traumatic discrimination has failed to establish that the discriminatory event even occurred, let alone that they have a qualifying mental health condition linked to their military service, some veterans have nevertheless succeeded on

both fronts. This study has attempted to fill the void by evaluating what approaches work in these claims and what approaches fail. While this study offers no predictive formula to estimate the success of a claim, it does catalogue decisions of substance in many different manifestations of discrimination to help veterans and their advocates triage potential issues that arise in their own cases. The study also recommends numerous measures to overcome the most common challenges in adjudication of traumatic discrimination claims, including identification of some unique markers for corroborating the discriminatory event and suggestions for mental health providers to better support their diagnoses in examinations involving atypical presentations of mental health conditions related to discriminatory trauma.

Cornell West observes, “To talk about race in America is to explore the wilderness inside ourselves and come to terms with a history that we’d rather conceal” (Kelly-Gangi, 2018, p. 27). This adage rings true regarding the VA’s treatment of discrimination cases involving race and sexual orientation. However, the difference between general public discourse and the VA’s treatment of disability claims is that the VA *must*, by statute, regulation, and its own organizational mandate not only explore the wilderness of military discrimination, but *remediate* its deleterious effects on the veteran’s mental and physical well-being.

A common occurrence for many veterans is suppression, denial, and avoidance of past discriminatory experiences. Threatened with retaliation in the case of racial discrimination and even criminal prosecution in the case of sexual-orientation discrimination, veterans left the military facing ongoing, residual consequences of unresolved emotional pain and traumatic stress. Under these circumstances, veterans may see the VA as an “extension” of the same institutional culture that engaged in or otherwise promoted and condoned discriminatory treatment (Shipherd et al., 2018, p. 463). The very thought of filing a claim may instill fears of

continued discriminatory treatment by VA administrative staff, disability evaluators, or medical providers (Legal Services Center et al., 2017). Fears of further marginalization, in addition to discomfort in revisiting horrifying and degrading experience, keeps countless veterans from seeking assistance with the physical and mental health consequences of their victimization, which reasonably includes increased risk of suicide (Lehavot et al., 2016; Matarazzo et al., 2014).

Because VA benefits must be applied for to be received, eligible veterans require education, outreach, and support. Research shows that the primary motivation for filing a VA disability compensation claim is the prospective claimant's perception of the likelihood of success (Autor et al., 2011). The immense burden of simply identifying traumatic discrimination cases in this study suggests that veterans should be told that discriminatory injury from military service is not only compensable, but a basis for the full range of service-connected benefits, including healthcare. Veterans require guides, fact sheets, expert consultation, other structured approaches, and mental health support to assist in pursuing traumatic discrimination claims.

In the advent of the recent transgender ban and the resurgence of hate groups within the Armed Forces, discussions of military discrimination are not relegated to the annals of history. Military discrimination continues today, undermining unit cohesion, putting service members at greater risk, and contributing to chronic mental health conditions in many instances (Shane, 2020; Esper, 2020; Harkins, 2020; Thompson, 2020; Bergman, 2020; Shane, 2019). Military policymakers have argued that DoD cannot focus on rehabilitation when its full-time job concerns defending the nation from hostile forces (Seamone, 2011). By contrast, healing, rehabilitation, and making-whole are all components of the VA's vital role with veterans. Far beyond compensation, VA service-connection has immense "symbolic" value in providing

sorely needed “acknowledgment, validation and relief from self-blame” (Sayer et al., 2004, p. 2133). In the case of traumatic discrimination, the time is overdue for leveraging VA benefits to end the war of minority oppression that has continued to rage and manifest in the home front long after the war abroad.

References

Abrams, R. B. (2020, June 15). Memorandum for all U.S. Commands and units in the Republic of Korea, Subject: Order prohibiting display of the Confederate Battle Flag. Camp Humphreys, South Korea: United States Forces Korea.

Acevedo v. Shinseki, 25 Vet. App. 286 (Ct. App. Vet. Cl. 2012).

Adelman, D. E., & Glicksman, R. L. (2018). Presidential and judicial politics in environmental litigation. *Arizona State Law Journal*, *50*(1), 3-70.

Afari, N., Pittman, J., Flotom E., Owen, L., Buttner, M., Hossain, N., Baker, D. G., Lindamer, L., & Lohr, J.B. (2015). Differential impact of combat on postdeployment symptoms in female and male veterans of Iraq and Afghanistan. *Military Medicine, 180*(3), 296-303. https://doi.org/10.7205/MILMED-D-14-00255

Agresti, A. (1992). A survey of exact inference for contingency tables. *Statistical Science, 7*(1), 131-153. https://doi.org/10.1214/ss/1177011454

Aguilera, J. (2020, June 9). Confederate statutes are being removed amid protests over George Floyd's death: Here's what to know. *Time*. Retrieved from https://time.com/5849184/confederate-statues-removed/

Aletras, N., Tsarapatsanis, D., Preotiuc-Pietro, D., & Lampos, V. (2006). Predicting judicial decisions of the European Court of Human Rights: A natural language processing perspective. *Peed Computer Science*, *2*, 1-19. https://doi.org/10.7717/peerj-cs.93

American Law Institute (1965). *Restatement (Second) of Torts*. American Law Institute.

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Washington, DC: Author. https://doi.org/10.1176/appi.books.9780890425596

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., Text Revision). Washington, DC: Author. https://doi.org/10.1176/appi.books.9780890420249.dsm-iv-tr

American Psychiatric Association (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.). Washington, DC: Author. https://doi.org/10.1176/ajp.145.10.1301

American Psychiatric Association (1952). *Diagnostic and statistical manual of mental disorders*. American Psychiatric Association. Washington, DC: Author. https://doi.org/10.1176/appi.books.9780890425596

Ames, D. (2018, April 17). Freedom of Information Act Request.

Andreasen, N. C. (2010). Posttraumatic Stress Disorder: A history and a critique. *Annals of the New York Academy of Sciences*, *1208*, 67-71. https://doi.org/10.1111/j.1749-6632.2010.05699.x

Androff, D. (2018). A case study of a grassroots truth and reconciliation commission from a community practice perspective. *Journal of Social Work, 18*(3), 273-287. https://doi.org/org.10.1177%2F1468017316654361

Arzio v. Shinseki, 602 F.3d 1343 (Fed. Cir. 2010).

Asay, C. D., Sloan, A., & Sobczak, D. (2020). Is transformative use eating the world? *Boston College Law Review, 61*, 905-970.

Associated Press. (1971, November 18). Laird denies military racism report. *Angus-Leader* (Sioux Falls, South Dakota), 28.

Autor, D. H., Duggan, M. G., & Lyle, D. S. (2011). Battle scars? The puzzling decline in employment and rise in disability receipt among Vietnam era veterans. *American Economic Review: Papers and proceedings, 101*(3), 339-344. https://doi.org/10.1257/aer.101.3.339

Autor, D. H., Duggan, M., Greenberg, K., & Lyle, D. S. (2016). The impact of disability benefits on labor supply: Evidence from the VA's disability compensation program. *American Economic Journal: Applied Economics, 8*(3), 31-68. https://doi.org/10.3386/w21144

Banjade, R., Maharjan, N., Niraula, N. B., & Rus, V. (2016). DTSim at Sem Eval-2016 Task 2: Interpreting similarity of texts based on automated chunking, chunk alignment and semantic relation prediction. *Association of Computational Linguistics: Proceedings of SemEval-2016*, 809-813.

Barber, M. E. (2012). Mental health effects of Don't Ask, Don't Tell. *Journal of Gay & Lesbian Mental Health, 16*, 346-352. https://doi.org/10.1080/19359705.2012.705143

Baum, L. (2006). *Judges and their audiences: A perspective on judicial behavior*. Princeton, NJ: Princeton University Press.

Beckman, K., Shipherd, J., Simpson, T., & Lehavot, K. (2018). Military sexual assault in transgender veterans: Results from a nationwide survey. *Journal of Traumatic Stress, 31*, 181-190. https://doi.org/10.1002/jts.22280

Benafort, B., Ojeda, T., & Bilbro, R. (2018). *Applied text analysis with Python: Enabling language-aware data products with machine learning*. Sebastopol, CA: O'Reilly Media, Inc. https://doi.org/10.1007/978-1-4842-2388-8

Benecke, M. (2011). Turning points: Challenges and successes in ending Don't Ask, Don't Tell. *William & Mary Journal of Women and Law, 18*, 35-86.

Benecke, M. M., Corbett, K. M., & Osburn, C. D. (1999). Diminishing core values: The consequences for military culture of "Don't Ask, Don't Tell, Don't Pursue." In M. F. Katzenstein & J. Reppy (Eds.). *Beyond zero tolerance: Discrimination in military culture* (pp. 213-223). Lanham, MD: Rowman & Littlefield Publishers.

Berger, D. H. (2020, April 20). A letter from the Commandant. Washington, DC: Headquarters, United States Marine Corps.

Bergman, J. (2020, July 14). Coast Guard officials have refused to testify in race-based academy discrimination hearing. *Military.com*. Retrieved from https://www.military.com/daily-news/2020/07/14/coast-guard-officials-have-refused-testify-race-based-academy-discrimination-hearing.html

Bertke, S. J., Meyers, A. R., Wurzelbacher, S. J., Measure, A., Lampl, M. P., & Robins, D. (2016). Comparison of methods for auto-coding causation of injury narratives. *Accident Analysis and Prevention, 88*, 117-123. https://doi.org/10.1016/j.aap.2015.12.006

Bland, J. M., & Altman, D. G. (1995). Multiple significance tests: The Bonferroni method. *BMJ, 310* (6973), 170. https://doi.org/10.1136/bmj.310.6973.170

Blank, R. M., Dabady, M. D., & Citro, C. F. (2004). Defining discrimination. In R. M. Blank, M. D. Dabady, & C. F. Citro (Eds.), *Measuring racial discrimination* (pp. 55-70). Washington, DC: National Academies Press. https://doi.org/10.17226/10887

Blatz, C. W., Schumann, K., & Ross, M. (2009). Government apologies for historical injustices. *Political Psychology, 30*(2), 219-241. https://doi.org/10.1111/j.1467-9221.2008.00689.x

Blosnich, J. R., Dichter, M. E., Cerulli, C., Batten, S., & Bossarte, R. M. (2014). Disparities in adverse childhood experiences among individuals with a history of military service. *JAMA Psychiatry, 71*(9), 1041-1048. https://doi.org/10.1001/jamapsychiatry.2014.724

Board of Veterans' Appeals (2019). *Department of Veterans Affairs (VA) Board of Veterans' Appeals Annual Report Fiscal Year (FY) 2018*. Washington, DC: U.S. Department of Veterans Affairs.

Board of Veterans' Appeals (2018, March 8). *The purplebook* (version 1.0.0). Washington, DC: U.S. Department of Veterans Affairs.

Bonnes, S. (2017). The bureaucratic harassment of U.S. servicewomen. *Gender & Society, 31*(6), 804-829. https://doi.org/10.1177%2F0891243217736006

Bowling, K. L., Firestone, J. M., & Harris, R. J. (2005). Analyzing questions that cannot be asked of respondents who cannot respond. *Armed Forces & Society, 31*(3), 411-437. https://doi.org/10.1177%2F0095327X0503100305

Bradford v. Nicholson, 20 Vet. App. 200 (Ct. App. Vet. Cl. 2006).

Brignone, E., Fargo, J. D., Blais, R. K., Carter, M. E., Samore, M. H., & Gundlapalli, A. V. (2017). Non-routine discharge from military service: Mental illness, substance use disorders, and suicidality. *American Journal of Preventive Medicine, 52*(5), 557-565. https://doi.org/10.1016/j.amepre.2016.11.015

Brondolo, E., Kelly, P. K., Coakley, V., Gordon, T., Thompson, S., Levy, E., Cassells, A., Tobin, J. N., Sweeny, M., & Contrada, R. J. (2005). The perceived ethnic discrimination questionnaire: Development and preliminary validation of a community version. *Journal of Applied Social Psychology, 35*, 335-365. https://doi.org/10.1111/j.1559-1816.2005.tb02124.x

Bruyneel, K. (2014). The king's body: The Martin Luther King Jr. Memorial and the politics of collective memory. *History & Memory, 26*(1), 75-108. https://doi.org/10.2979/histmemo.26.1.75

Burk, J., & Espinoza, E. (2012). Race relations within the U.S. military. *Annual Review of Sociology, 38*, 401-422. https://doi.org/10.1146/annurev-soc-071811-145501

Burke, J., & Espinoza, E. (2012). Race relations within the U.S. military. *Annual Review of Sociology, 38*, 401-422, https://https://doi.org/org/10.1146/annurev-soc-071811-145501

Burns, R. (2020, July 9). Milley: Confederate names on Army bases divide the military. *The Washington Post*. Retrieved from https://www.washingtonpost.com/world/national-security/milley-confederate-names-on-army-bases-divide-the-military/2020/07/09/19a3ad8a-c225-11ea-8908-68a2b9eae9e0_story.html

Calantone, R. J., & Vickery, S. K. (2010, October). Introduction to the *Special Topic Forum*: Using archival and secondary data sources in supply chain management. *Journal of Supply Chain Management*, 1-11. https://doi.org/10.1111/j.1745-493X.2010.03202.x

Campbell-Sills, L., Cohan, S. L., & Stein, M. B. (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. *Behaviour Research and Therapy, 44*(4), 585-599. https://doi.org/10.1016/j.brat.2005.05.001

Carpuat, M. (2015). More distributional semantics: New models and applications. Retrieved from http://www.cs.umd.edu/class/fall2015/cmsc723/slides/inclass_19.pdf

Carter, R. T., & Pieterse, A. L. (2020). *Measuring the effects of racism: Guidelines for the assessment and treatment of Race-Based Traumatic Stress Injury.* New York, NY: Columbia University Press.

Carter, R. T., & Scheuermann, T. D. (2020). *Confronting racism: Integrating mental health research into legal strategies and reforms*. New York, NY: Routledge Taylor & Francis Group. https://doi.org/10.4324/9781315148564

Carter, R. T., Kirkinis, K., & Johnson, V. E. (2020). Relationships between trauma symptoms and Race-Based Traumatic Stress. *Traumatology*, *26*(1), 11-18. https://doi.org/10.1037/trm0000217.

Carter, R. T., Johnson, V. E., Forquer, E., Muchow, C., Lyons, J., & Galgay, C. (2016). Development of classes of racism measures for frequency and stress reactions: Relationships to race-based traumatic symptoms. *Traumatology*, *22*(1), 63-74. https://doi.org/10.1037/trm0000057

Carter, R.T., & Sant-Barket, S.M. (2015). Assessment of the impact of racial discrimination and racism: How to use the race-based traumatic stress symptom scale in practice. *Traumatology*, *21*, 32-39. https://doi.org/10.1037/trm0000018

Carter, R.T., Mazzula, S., Victoria, R., Vazquez, R., Hall, S., Smith, S., Sant-Barket, S., Forsyth, Bazelais, K., & Williams, B. (2013). The development of the Race-Based Traumatic Stress Symptom Scale. *Psychological Trauma: Theory, Policy, Research, and Practice*, *5*, 1-9. https://doi.org/10.1037/a0025911

Carter, R. T., & Scheuermann, T. D. (2012). Legal and policy standards for addressing workplace racism: Employer liability and shared responsibility for Race-Based Traumatic Stress. *University of Maryland Law Journal of Race, Religion, Gender and Class*, *12*, 1-100.

Carter, R. T., & Forsyth, J. M. (2009). A guide to the forensic assessment of Race-Based Traumatic Stress reactions. *The Journal of the American Academy of Psychiatry and the Law*, *37*(1), 28-40.

Carter, R. T. (2007). Racism and psychological and emotional injury: Recognizing and assessing race-based traumatic stress. *The Counseling Psychologist*, *35*, 13-105. https://doi.org/10.1177%2F0011000006292033

Carney, C. P., Sampson, T. R., Voelker, M., Woolson, R., Thorne, P., & Doebbeling, B. N. (2003). Women in the Gulf War: Combat Experience, Exposures, and Subsequent Health Care Use. *Military Medicine*, *168*(8), 654-661. https://doi.org/10.1093/milmed/168.8.654

Castro, C. A., & Goldbach, J. (2018). The perpetrator hypothesis: Victimization involving LGBT service members. In L. W. Roberts, & C. H. Warner (Eds.), *Military and veteran mental health* (pp. 145-157). New York, NY: Springer. https://doi.org/10.1007/978-1-4939-7438-2_10

Chawla, N. V., Japkowicz, N., and Kotcz, A. (2004). Special issue on learning from imbalanced data sets. *ACM SIGKDD Explorations*. https://doi.org/10.1145/1007730.1007733

Chew, P. K. (2006). Freeing racial harassment from the sexual harassment model. *Oregon Law Review*, *85*, 615-647.

Chew, P. K., & Kelley, R. E. (2009). Myth of the color-blind judge: An empirical analysis of racial harassment cases. *Washington University Law Review*, *86*, 1117-1166.

Chew, P. K., & Kelley, R. E. (2006). Unwrapping racial harassment law. *Berkeley Journal of Employment and Labor Law*, *27*, 49-110.

Chisolm, S. (1971, November 17). Report on racism in the U.S. military. *Congressional Record*, *117*, H41854-58.

Christensen, D., & Tsilker, Y. (2017, May 5). *Racial disparities in military justice: Findings of substantial and persistent racial disparities within the United States military justice system*. Alexandria, VA: Protect our Defenders.

Chu, C. A. (2001). Empirical analysis of the Federal Circuit's claim construction trends. *Berkeley Technology Law Journal*, *16*(3), 1075-1164.

Cleghorn, J. M., Greer, S. E., Osburn, C. D., Ralls, S. E., & Westcott, K. W. (2003). *Conduct unbecoming: The ninth annual report on "Don't Ask, Don't Tell, Don't Pursue, Don't Harass."* Washington, DC: Servicemembers Legal Defense Network.

Cofone, I. N. (2019). Algorithmic discrimination is an information problem. *Hastings Law Journal, 70*, 1389-1443.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*, 155-159. https://doi.org/10.1037/0033-2909.112.1.155

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Erlbaum. https://doi.org/10.1016/C2013-0-10517-X

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple correlation/regression analysis for the social sciences*. New York, NY: Taylor & Francis.

Cohen, M. (2015). When judges have reasons not to give reasons: A comparative law approach. *Washington & Lee Law Review, 72*, 483-571.

Collins, A., Fellner, J., Brown, C., & Corvin, I. (2003, January). *Uniform discrimination: The "Don't Ask, Don't Tell" policy of the U.S. military*. Washington, DC: Human Rights Watch.

Cloitre, M., Stolbach, B. C., Herman, J. L., van der Kolk, B., Pynos, R, Wang J., & Petkova, E. (2009). A developmental approach to complex PTSD: Childhood and adult trauma as predictors of symptom complexity. *Journal of Traumatic Stress*, *22*(5), 399-408. https://doi.org/10.1002/jts.20444

Coleman, E. T., Tarloski, E., & Heller, M. B. (2017). Depressive disorders. In (Eds.) B. Clauss, & S. Simcox, *Service member and veterans rights*. New York, NY: Matthew Bender Elite Products. Congressional Budget Office (2018, December 13). Narrow eligibility for veterans' disability compensation by excluding certain disabilities unrelated to military duties: Options for reducing the deficit: 2019-2028. Retrieved from https://www.cbo.gov/

Contreary, K., Tennant, J., & Ben-Shalom, Y. (2017). Impacts of the 2010 VA PTSD rule change on Veterans Disability Compensation and reported cognitive disability. *Journal of Disability Policy Studies, 28*(3), 141-149. https://doi.org/10.1177%2F1044207317714747

Cortright, D. (2005). *Soldiers in revolt: GI resistance during the Vietnam War*. Chicago, IL: Haymarket Books.

Cotton, C., & Ridings, J. (2011). Getting out/getting in: The DSM, political activism, and the social construction of mental disorders. *Social Work in Mental Health, 9*(3), 181-205. https://doi.org/10.1080/15332985.2010.534359

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed method approaches* (5th ed.). Los Angeles, CA: Sage.

Defense Equal Opportunity Management Institute. (2020). Training world-class EO and EEO professionals. Retrieved from https://www.deomi.org/index.cfm

DeMouchel, W. (2012). Multivariate Bayesian logistic regression of analysis of clinical study safety. *Statistical Science, 27*(3), 319-339. https://doi.org/10.1214/11-STS381

Daoud, J. I. (2017). Multicollinearity and regression analysis. *Journal of Physics: Conference Series* (949, no. 012009), https://doi.org/10.1088/1742-6596/949/1/012009

Department of Veterans Affairs (1993, May 19). Direct service connection (Post-Traumatic Stress Disorder). *Federal Register, 58*, 29,109-29.

Department of Veterans Affairs (2000, October 16). Post-Traumatic Stress Disorder claims based on personal assault. *Federal Register, 65*, 61,132.

Department of Veterans Affairs (2009, August 24). Stressor Determinations for Posttraumatic Stress Disorder. *Federal Register, 74*, 42, 617.

Department of Veterans Affairs (2010a, July 13). Stressor Determinations for Posttraumatic Stress Disorder. *Federal Register, 75*, 39, 843.

Department of Veterans Affairs (2010a, July 15). Stressor Determinations for Posttraumatic Stress Disorder. *Federal Register, 75*, 41, 092.

Department of Veterans Affairs (2014, August 4). Schedule for rating disabilities—Mental disorders and definition of psychosis for certain VA purposes. *Federal Register, 79*(149), 45,093.

Dickerson, J. (2014). A compensation system for military victims of sexual assault and harassment. *Military Law Review, 222*, 211-270.

Doan, N. J., & Morton, B. C. (2010). A new era for establishing service connection for Posttraumatic Stress Disorder (PTSD): A proposed amendment to the stressor verification requirements. *Veterans Law Review, 2*, 249-260.

Duncan, S. H. (2011). Workplace bullying and the role restorative practices can play in preventing and addressing the problem. *Industrial Law Journal, 32*, 2331-2366. Available at SSRN: https://ssrn.com/abstract=1916138

Esper, M. T. (2020, June 19). Memorandum for Chief Management Officer of the Department of Defense, Subject: Actions for improving diversity and inclusion in the Department of Defense. Washington, DC: U.S. Department of Defense.

Estrada, A. X., Probst, T. M., Brown, J., & Graso, M. (2011). Evaluating the psychometric and measurement characteristics of a measure of sexual orientation harassment. *Military Psychology, 23*(2), 220-236. https://doi.org/10.1080/08995605.2011.559394

Fagan, F. (2016). Big data legal scholarship: Toward a research program and practitioner's guide. *Virginia Journal of Law and Technology, 20*, 1-81.

Faragher v. City of Boca Raton, 524 U.S. 775 (1998).

Farham, M. D. (2017, February 28). Race riots at sea—1972 *Kitty Hawk* incident fueled fleet-wide unrest. *Navy Times*. Retrieved from https://www.navytimes.com/militarhonor/black-military-history/2017/02/28/race-riot-at-sea-1972-kitty-hawk-incident-fueled-fleet-wide-unrest/

Finn, S., Jones, T., & Morton, B.C. (2009). VA's duty to assist in the context of PTSD stressor verification: What must VA do to fulfill the Veterans Claims Assistance Act of 2000. *Veterans Law Review, 1*, 50-68.

Fisher, R. A. (1922). On the interpretation of X^2 from contingency tables, and the calculation of *P*. *Journal of the Royal Statistical Society, 85*(1), 87-94. https://doi.org/10.2307/2340521

Foynes, M. M., Smith, B. N., & Shipherd, J. C. (2015). Association between race-based and sex-based discrimination, health, and functioning: A longitudinal study of Marines. *Medical Care, 53*(4 Suppl. 1), S128-S135. https://doi.org/10.1097/mlr.0000000000000300

Frankel, V. (1946). *Man's Search for Meaning*. New York, NY: Beacon Press.

Freeman, G. A. (2009). *Troubled water: Race, mutiny, and bravery on the U.S.S. Kitty Hawk*. New York, NY: Palgrave Macmillan.

Frost, M. H., & Bateman, P. A. (2010). *Writing deskbook for administrative judges: An introduction*. Durham, NC: Carolina Academic Press.

Fugere v. Derwinski, 1 Vet. App. 103 (1990).

Gagne v. McDonald, 27 Vet. App. 397 (Ct. App. Vet. Cl. 2015).

Gain, B., Bandyopadhyay, D., De, A., Saikh, T., & Ekbal, A. (2019). IITP at AILA 2019: Report Artificial Intelligence for Legal Assistance Shared Task. *Proceedings of FIRE 2019-Forum for Information Retrieval Evaluation*, 1-6. Retrieved from http://ceur-ws.org/Vol-2517/T1-3.pdf

Galatzer-Levy, I. R., & Bryant, R. A. (2013). 636,120 ways to have Posttraumatic Stress Disorder. *Perspectives on Psychological Science, 18,* 651-662. https://doi.org/10.1177/1745691613504115.

Galgani, F., Compton, P., and Hoffmann, A. (2012). Combining different summarization for legal text. in *Proceedings of the Workshop on Innovative Hybrid Approaches to the Processing of Textual Data* HYBRID '12. (USA: Association for Computational Linguistics), 115–123.

Ganesan, K., and Zhai, C. (2012). Opinion-based entity ranking. *Information Retrieval Boston.* 15, 116–150. doi:10.1007/s10791-011-9174-8

Gao, J., Ning, H., Sun, H., Liu, R., Han, Z., Kong, L., & Qi, H. (2019). FIRE2019@AILA: Legal retrieval based on information retrieval model. *Proceedings of FIRE 2019-Forum for Information Retrieval Evaluation*, 1-6. Retrieved from http://ceur-ws.org/Vol-2517/T1 11.pdf

Gasparelli, K., Crowley, H., Ficke, M., McKenzie, B., Oosman, S., & Nixon, S. A. (2016). Mobilizing reconciliation: Implications of the Truth and Reconciliation Commission Report for physiotherapy in Canada. *Physiotherapy Canada, 68*(3), 211-212.

Gates, G. (2003, July 9). Fact sheet: Gay veterans top one million. Washington, DC: Urban Institute. Retrieved from https://www.urban.org/research/publication/gay-veterans-top-one-million

Gerber, M. M., Frankfurt, S. B., Contractor, A. A., Oudshoorn, K., Dranger, P., & Brown, L. A. (2018). Influence of multiple traumatic event types on mental health outcomes: Does count matter? *Journal of Psychopathology and Behavioral Assessment, 40,* 645-654 https://doi.org/10.3138/ptc.68.3.GEE

Gibson, G. (2019, February 21). Senator Elizabeth Warren backs reparations for black Americans. *Reuters*.

Gilbert v. Derwinski, 1 Vet. App. 49 (1991).

Goldbach, J. J., & Castro, C. A. (2016). Lesbian, gay, bisexual, and transgender (LGBT) service members: Life after Don't Ask, Don't Tell. *Current Psychology Reports, 18,* 56-67. https://doi.org/10.1007/s11920-016-0695-0

Gómez, J. M. (2018). What's in betrayal? Trauma, dissociation, and hallucinations among high-functioning ethnic minority emerging adults. *Journal of Aggression, Maltreatment & Trauma*, *28*(10), 1181-1198. https://doi.org/10.1080/10926771.2018.1494653

Grady, K. (2019). Mining legal data: Collecting and analyzing 21st Century gold. In E. Walters (Ed.), *Data-driven law: Data analytics and the new legal services* (pp. 11-32). Boca Raton, FL: CRC Press.

Greene, S. S., Patel, P., & Porter, K. (2017). Cracking the code: An empirical analysis of consumer bankruptcy outcomes. *Minnesota Law Review, 101*, 1031-1098.

Gurung, S., Ventuneac, A., Rendina, H. J., Savarese, E., Grov, C., & Parsons, J. T. (2018). Prevalence of military sexual trauma and sexual orientation discrimination among lesbian, gay, bisexual, and transgender military personnel: A descriptive study. *Sexuality Research & Social Policy, 15,* 74-82. https://doi.org/10.1007/s13178-017-0311-z

Hachey, B., and Grover, C. (2004). A rhetorical status classifier for legal text summarisation. In *Text Summarization Branches Out* (aclweb.org), 35–42.

Halcomb Lewis, D. M. (2016). The creation of a hostile work environment by a workplace supervisor's single use of the epithet "Nigger." *American Business Law Journal, 53,* 393-430. https://doi.org/10.1111/ablj.12080

Hall, M. A., & Wright, R. F. (2008). Systematic content analysis of judicial opinions. *California Law Review, 96,* 63-122.

Haley, S. H. (2004). Single-judge adjudication in the Court of Appeals for Veterans Claims and the devaluation of stare decisis. *Administrative Law Review, 56,* 535-574.

Halley, J. E. (1999). *Don't: A reader's guide to the military's anti-gay policy*. Durham, NC: Duke University Press.

Harkins, G. (2020, July 14). "Sailors using the N-word": Navy leaders hear painful cases of racism. *Military.com*. Retrieved from https://www.military.com/daily-news/2020/07/14/sailors-using-n-word-navy-leaders-hear-painful-cases-of-racism.html

Harper, F. M., & Konstan, J. A. (2015). The MovieLens Datasets: History and Context. Available at: https://doi.org/10.1145/2827872

Harris v. Shinseki, No. 07-3374, 2009 App. Vet. Claims LEXIS 969 (Ct. App. Vet. Cl. June 4, 2009).

Harris, K. L. (2018). Biracial American colorism: Passing for white. *American Behavioral Scientist, 62*(14), 2072-2086. https://doi.org/10.1177/0002764218810747

Harris, C. T., Peeples, R., & Metzloff, T. B. (2008). Does being a repeat player make a difference? The impact of attorney experience and case-picking on the outcome of medical malpractice lawsuits. *Yale Journal of Health Policy, Law and Ethics*, *8*(2), 253 282. Available at: https://digitalcommons.law.yale.edu/yjhple/vol8/iss2/1

Harris, Z. (1954). Distributional structure. *Word, 10*(23), 146-162.

Hayes, A. F. (2006). A primer on multilevel modeling. *Human Communication Research, 32*(4), 385-410.

Henry v. Regents of the University of California, 644 Fed. App'x. 787 (9th Cir. 2016) (unpublished)

Ho, D. E., Handan-Nadler, C., Ames, D., & Marcus, D. (2018, August). *Quality review of mass adjudication: A randomized experiment at the Board of Veterans Appeals, 2003-16* (Working Paper No. 19-005). Palo Alto, CA: Stanford Institute for Economic Policy Research. https://doi.org/10.1093/jleo/ewz001.

Holder, K. A. (2016). *The disability of veterans*. Washington, DC: U.S. Census Bureau, Social, Economic, and Housing Statistics Division.

Holmes, S. C., Facemire, V. C., & DaFonseca, A. M. (2016). Expanding Criterion A for Posttraumatic Stress Disorder: Considering the deleterious impact of oppression. *Traumatology, 22*(4), 314-321. https://psycnet.apa.org/doi/10.1037/trm0000104

Holroyd, T. R. (1992). Homosexuals and the military: Integration or discrimination? *Journal of Contemporary Health Law and Policy, 8*(1), 429-453. Available at: https://scholarship.law.edu/jchlp/vol8/iss1/25

Honchar, A. (2018, January 31). Financial forecasting with probabilistic programming and Pyro. Retrieved from https://medium.com/@alexrachnog/financial-forecasting-with-probabilistic-programming-and-pyro-db68ab1a1dba

Hox, J. J., Moerbeek, M., & Van de Schoot, R. (2010). *Multilevel analysis: Techniques and applications*. New York, NY: Routledge.

Ignatow, G., & Mihalcea, R. (2018). *An introduction to text mining: Research design, data collection, and analysis*. Los Angeles, California: Sage.

Jay, T. (2009). Do offensive words harm people? *Psychology, Public Policy, and Law, 15*(2), 81-101. https://psycnet.apa.org/doi/10.1037/a0015646

Johansen, T. (2017). Core competencies in VA compensation and pension exams for PTSD and other mental disorders. *Psychological Injury and Law*, *10*, 234-243. https://doi.org/10.1007/s12207-017-9298-2

Jones, J., & Carter, R. T. (1996). Racism and racial identity: Merging realities. In B. P. Bowser & R. G. Hunt (Eds.). *Impacts of racism on White Americans* (2nd ed., pp. 1-24). Newbury, CA: Sage.

Kabat, D. H., Stellman, S. D., & Stellman, J. M. (2018). Perceived racial, ethnic, and gender discrimination among male and female Vietnam-era veterans and PTSD symptoms in later life. In A. Spiro III, R. A. Settersten, Jr., & C. M. Aldwin (Eds.), *Long-term outcomes of military service: The health and well-being of aging veterans* (pp. 57-70). Washington, DC: American Psychological Association.

Kakhki, F. A., Freeman, S. A., & Mosher, G. A. (2019). Evaluating machine learning performance in predicting injury severity in agribusiness industries. *Safety Science*. https://doi.org/10.1016/j.ssci.2019.04.026

Kauth, M. R., & Landism D. (1996). Applying lessons learned from minority integration in the military. In G. M. Herek, J. B. Jobe, & R. Carney (Eds.), *Out in force: Sexual orientation and the military* (pp. 86-105). Chicago, IL: University of Chicago Press.

Kayalvizhi, S., Thenmozhi, D., & Aravindan, C. (2019). Legal assistance using word embeddings. *Proceedings of FIRE 2019-Forum for Information Retrieval Evaluation,* 1-4. Retrieved from http://ceur-ws.org/Vol-2517/T1-6.pdf

Kelly-Gangi, C. (2018). *Essential black wisdom: Quotes of inspiration and strength*. New York, NY: Fall River Press.

Keppel, G., & Wickens, T. D. (2004). *Design and analysis: A researcher's handbook* (4th ed.). Upper Saddle River, NJ: Pearson Prentice-Hall.

Kim, G., Sellbom, M., & Ford, K.-L. (2014). Race/ethnicity and measurement equivalence of the Everyday Discrimination Scale. *Psychological Assessment*, *26*(3), 892-900. https://doi.org/10.1037/a0036431

Kowsrihawat, K., Vateekul, P., & Boonkwan, P. (2018). Predicting judicial decisions of criminal cases from the Thai Supreme Court using bi-directional GRU with attention mechanism. *2018 5th Asian Conference on Defense Technology (ACDT)*, pp. 50-55. https://doi.org/10.1109/ACDT.2018.8592948

Krippendorff, K. (2013). *Content analysis: An introduction to its methodology* (3rd ed.). Los Angeles, CA: Sage.

Kubany, E. S., Ralston, T. C., & Hill, E. E. (2010). Intense fear, helplessness, 'and' horror? An empirical investigation of DSM-IV PTSD Criterion A2. *Psychological Trauma: Theory, Research, Practice, and Policy*, *2*(2), 77-82. https://doi.org/10.1037/a0019185

Lawless, R. M., Robbennolt, J. K., & Ulen, T. (2016). *Empirical methods in law* (2nd ed.). New York, NY: Wolters Kluwer.

Lederer, D. J., Bell, S. C., Branson, R. D., Chalmers, J. D., Marshall, R., Maslove, D. M., Ost, D. E., Punjabi, N. M., Schatz, M., Smyth, A. R., Stewart, P. W., Suissa, S., Adjei, A. A., Akdis, C. A., Azoulay, É., Bakker, J., Ballas, Z. K., Bardin, P. G., Barreiro, E., Bellomo, R., … Vincent, J. L. (2019). Control of Confounding and Reporting of Results in Causal Inference Studies. Guidance for Authors from Editors of Respiratory, Sleep, and Critical Care Journals. *Annals of the American Thoracic Society*, *16*(1), 22–28. https://doi.org/10.1513/AnnalsATS.201808-564PS

Legal Services Center, Outvets, & Veterans Legal Services. (2018). *Do ask, do tell, do justice: Pursuing justice for LGBTQ military veterans.* Jamaica Plain, MA: Legal Services Center Of Harvard Law School.

Lehavot, K., Simpson, T. L., & Shipherd, J. C. (2016). Factors associated with suicidality among a national sample of transgender veterans. *Suicide and Life-Threatening Behavior, 46*, 507-524. https://doi.org/10.1111/sltb.12233

Lehring, G. L. (2003). *Officially gay: The political construction of sexuality by the U.S. military*. Philadelphia, PA: Temple University Press.

Levy, O., & Goldberg, Y. (2014). Neural words embedding as implicit matrix factorization. *Advances in Neural Information Processing Systems*, *3*, 2177-2185.

LexisNexis (n.d.). Connectors: Reference guide. Retrieved on February 23, 2019 from https://www.lexisnexis.com/help/CU/Building_a_Search/Connectors.htm

LexisNexis. (2019). Lexis Advance research: Source information, U.S. Board of Veterans Appeals. Retrieved from https://advance.lexis.com

Liang, C. T. H., Li, L. C., & Kim, B. S. K. (2004). The Asian American Racism-Related Stress Inventory: Development, factor analysis, reliability, and validity. *Journal of Counseling Psychology*, *51*(1), 103-114. https://doi.org/10.1037/0022-0167.51.1.103

Livingston, N. A., Berke, D. S., Ruben, M. A., Matza, A. R., & Shipherd, J. C. (2019). Experiences of trauma, discrimination, microaggressions, and minority stress among trauma-exposed LGBT veterans: Unexpected findings and unresolved service gaps. *Psychological Trauma: Theory, Research, Practice, and Policy*, *11*(7), 695-703. https://doi.org/10.1037/tra0000464

Logie, C. H., & Earnshaw, V. (2015). Adopting and validating a scale to measure sexual stigma among lesbian, bisexual, and queer women. *PLOS One*, *10*(2), 1-13. https://doi.org/10.1371/journal.pone.0116198

Loo, C. M., Lim, B. R., Koff, G., Morton, R. K., & Kiang, P. N. (2007). Ethnic-related stressors in the war zone: Case studies of Asian American Vietnam veterans. *Military Medicine, 172*(9), 968-971. https://doi.org/10.7205/milmed.172.9.968

Loo, C. M., & Kiang, P. (2003). Race-related stressors and psychological trauma: Contribution of Asian American Vietnam veterans. In L. Z. Hau (Ed.). *Asian Americans: Vulnerable populations, model interventions, and clarifying agendas* (pp. 19-43). Boston, MA: Jones & Bartlett Publishers.

Loo, C. M., Fairbank, J. A., Scurfield, R. M., Ruch, L. O., King, D. W., Adams, L. J., & Chemtob, C. M. (2001). Measuring exposure to racism: Development and validation of a Race-Related Stressor Scale (RRSS) for Asian American Vietnam veterans. *Psychological Assessment, 13*(4), 503-520. https://doi.org/10.1037/1040-3590.13.4.503

Loo, C. (1998, Spring). Race-related Posttraumatic Stress Disorder. In *A report on Asian Islander veterans by the Vet Center Asian Pacific Islander Working Group* (pp. 40-50). Washington, DC: U.S. Department of Veterans Affairs, Readjustment Counseling Service.

Lucks, D. (2017). African American soldiers and the Vietnam War: No more Vietnams. *The Sixties: A Journal of History, Politics and Culture*, *10*(2), 196-220. https://doi.org/10.1080/17541328.2017.1303111

Marucci-Wellman, H.R., Corns, H. L., & Lehto, M. R. (2017). Classifying injury narratives of large administrative databases for surveillance—A practical approach combining machine learning ensembles and human review. *Accident Analysis and Prevention*, *98*, 359-371. https://doi.org/10.1016/j.aap.2016.10.014

Marucci-Wellman, H. R., Lehto, M. R., & Corns, H. L. (2015). A practical tool for public health surveillance: Semi-automated coding of short injury narratives from large administrative databases using Naïve Bayes algorithms. *Accident Analysis and Prevention*, *84*, 165-176. https://doi.org/10.1016/j.aap.2015.06.014

Marx, B. P., Engel-Rebitzer, E., Bovin, M. J., Parker-Guilbert, K. S., Moshier, S., Barretto, K., Szafranski, D., Gallagher, M. W., Holowka, D. W., Rosen, R. C., & Keane, T. M. (2017). The influence of veteran race and psychometric testing on veterans affairs posttraumatic stress disorder (PTSD) disability exam outcomes. *Psychological assessment*, *29*(6), 710–719. https://doi.org/10.1037/pas0000378

Mason, R. C. (2016, September 19). *Overview of the appeal process for veterans' claims* (No. 7-5700, R42609). Washington, DC: Congressional Research Service.

Matarazzo, B. B., Barnes, S. M., Pease, J. K., Russell, L. M., Hanson, J., Soberay, K. A., & Gutierrez, P. M. (2014). Suicide risk among lesbian, gay, bisexual, and transgender military personnel and veterans: What does the literature tell us? *Suicide and Life Threatening Behavior*, *44*(2), 200-217. https://doi.org/10.1111/sltb.12073

Mattheson, J. H. (2009a). Why courts pierce: An empirical study of piercing the corporate veil. *Berkeley Business Journal*, *7*, 1-16.

Mattheson, J. H. (2009b). The modern law of corporate groups: An empirical study of piercing the corporate veil in the parent-subsidiary context. *North Carolina Law Review*, *87*, 1091-1155.

Maxon v. Gober, 230 F.3d 1330 (Fed. Cir. 2000).

Mayes, S. K. (2014). Unraveling the PTSD paradox: A proposal to simplify the adjudication of claims for service connection for Posttraumatic Stress Disorder. *Veterans Law Review*, 6, 125-186.

Mayfield, W. (2001). The development of an internalized homonegativity inventory for gay men. *Journal of Homosexuality*, *41*(2), 53-76. https://doi.org/10.1300/J082v41n02_04

McCausland, J. (2019, May 25). Inside the U.S. military's battle with white supremacy and far-right extremism. *NBC News*. Retrieved from https://www.nbcnews.com/think/opinion/inside-u-s-military-s-battle-white-supremacy-far-right-ncna1010221

McCullagh, P. (1980). Regression models for ordinal data. *Journal of the Royal Statistical Society: Series B (Methodological)*, *42*(2), 109-127.

McKenzie, K., Scott, D. A., Campbell, M. A., & McClure, R. J. (2010). The use of narrative text for injury surveillance research: A systematic review. *Accident Analysis and Prevention*, *42*, 354-363. https://doi.org/10.1016/j.aap.2009.09.020

McLean, H. B. (2019). Delay, deny, wait till they die: Balancing veterans' rights and non-adversarial procedures in the VA disability benefits system. *SMU Law Review, 72*, 277-316. https://dx.doi.org/10.2139/ssrn.3341489

McNeilly, M. D., Anderson, N. B., Armstead, C. A., Clark, R., Corbett, M., Robinson, E. L., Pieper, C. F., & Lepisto, E. M. (1996). The perceived racism scale: a multidimensional assessment of the experience of white racism among African Americans. *Ethnicity & disease*, *6*(1-2), 154–166.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior*, *36*, 38-56.

Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: Conceptual issues and research evidence. *Psychology Bulletin*, *129*, 674697. https://dx.doi.org/10.1037%2F0033-2909.129.5.674

Mikolov, T., Chen, K., Corrado, G., & Dean, J. (2013). Efficient Estimation of Word Representations in Vector Space. *arXiv [cs.CL]*, 1-12. Retrieved from https://arxiv.org/abs/1301.3781

Miles, M. B., Michael Huberman, A., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Los Angeles, CA: Sage.

MilitaryBenefits.Info (2020). 2020 VA disability rates. Retrieved from https://militarybenefits.info/va-disability-rates/

Molitor v. Shulkin, 28 Vet. App. 397 (2017).

Moradi, B. (2009). Sexual orientation disclosure, concealment, harassment, and military cohesion: Perceptions of LGBT military veterans. *Military Psychology, 21*, 513-533. https://doi.org/10.1080/08995600903206453

Moran v. Principi, 16 Vet. App. 243 (2002).

Moshiashwili, V. H. (2014). Ending the second "splendid isolation?" Veterans law and the Federal Circuit in 2013. *American University Law Review, 63*, 1437-1515. Available at SSRN: https://ssrn.com/abstract=2460774

Murdoch, M., Hodges, J., Cowper, D., Fortier, L., & van Ryn, M. (2003). Racial disparities in VA service connection for Posttraumatic Stress Disorder disability. *Medical Care, 41*(4), 536-549. https://doi.org/10.1097/01.mlr.0000053232.67079.a5

Murphy, K & Myors, B. (2003). Statistical Power Analysis: A Simple and General Model for Traditional and Modern Hypothesis Tests, Second Edition. Statistical Power Analysis: A Simple and General Model for Traditional and Modern Hypothesis Tests: Second Edition. https://doi.org/10.4324/9781410609267

Mahwah, NJ: Erlbaum. O'Brien, S & Dunson, D. (2004) Bayesian multivariate logistic regression. *Biometrics, 60*, 739-746. https://doi.org/10.1111/j.0006-341x.2004.00224.x

Nadal, K. L. (2018). *Microaggressions and traumatic stress: Theory, research, and clinical treatment*. Washington, DC: American Psychological Association. https://doi.org/10.1037/0000073-000

Nagelkerke, N. J. D. (1991). A note on a general definition of the coefficient of determination. *Biometrica, 78*(3), 691-692. https://doi.org/10.1093/biomet/78.3.691

Nagin, D. L. (2015). The credibility trap: Notes on a VA evidentiary standard. *University of Memphis Law Review, 45*, 887-914. http://nrs.harvard.edu/urn 3:HUL.InstRepos:27814585

Nakagawa, S., & Schielzeth, H. (2013). A general and simple method for obtaining R2 from generalized linear and mixed-effects models. *Methods in Ecology and Evolution*, *4*, 133-142. https://doi.org/10.1111/j.2041-210x.2012.00261.x

Nalty, B. C. (1986). *Strength for the fight: A history of Black Americans in the military*. New York, NY: The Free Press.

Nanda, G. (2017, May). Improving the autocoding of injury narratives using a combination of machine learning methods and natural language processing techniques (Unpublished Ph.D. dissertation). Purdue University. ProQuest No. 10269831

Nanda, G., Grattan, K. M., Chu, M. T., Davis, L. T., & Lehto, M. R. (2016). Bayesian decision support for coding occupational injury data. *Journal of Safety Research*, *57*, 71-82. https://doi.org/10.1016/j.jsr.2016.03.001

National Center for PTSD. (2019, October 17). How common is PTSD in adults? Retrieved from https://www.ptsd.va.gov/understand/common/common_adults.asp

National Center for PTSD. (2018, September 24). How common is PTSD in veterans? Retrieved from https://www.ptsd.va.gov/understand/common/common_veterans.asp

National Center for Veterans Analysis and Statistics. (2017, March). *Minority veterans report: Military service and VA benefit utilization statistics*. Washington, DC: U.S. Department of Veterans Affairs.

National Defense Research Institute. (1993). *Sexual orientation and U.S. military personnel policy: Options and assessment* (No. MR-323-OSD). Santa Monica, CA: RAND Corp. Available at: https://www.rand.org/pubs/monograph_reports/MR323.html

National Academy of Sciences. (2018). *Evaluation of the Department of Veterans Affairs health services*. Washington, DC: National Academies Press. https://doi.org/10.17226/24915

National Organization of Veterans Advocates v. Secretary of Veterans Affairs, 330 F.3d 1345 (Fed. Cir. 2003).

National Veterans Legal Service Program (2019). *Veterans benefits manual* (Vol. 1). New York, NY: LexisNexis Publishing.

Nielson, L., Nelson, R. L., & Lancaster, R. (2010). Individual justice or collective legal mobilization? Employment discrimination litigation in the post civil rights United States. *Journal of Empirical Legal Studies, 7*(2), 175-201. https://doi.org/10.1111/j.1740-1461.2010.01175.x

Northeastern University Office of Human Subject Research Protection (2019, November 12). Notification of IRB action (No. CPS 19-10-11).

O'Brien, S., & Dunson, D. (2004) Bayesian multivariate logistic regression. *Biometrics, 60,* 739-746. https://doi.org/10.1111/j.0006-341X.2004.00224.x

Office of the Inspector General. (2000, March 16). *Evaluation report: Military environment respect to the homosexual conduct policy* (Report No. D-2000-101). Washington, DC: U.S. Department of Defense.

Oren-Kolbinger, O. (2019). Measuring the effect of social background on judicial decision-making in tax cases. *Florida Tax Review*, *22*(2), 579-620. https://dx.doi.org/10.2139/ssrn.2852862

Osborne, V. A., Gage, L. A., & Rolbiecki, A. J. (2012). Psychosocial effects of trauma on military women serving in the National Guard and Reserves. *Advances in Social Work, 13*(1), 166-184.

Pager, D., & Shepherd, H. (2008). The sociology of discrimination: Racial discrimination in employment, housing, credit, and other consumer markets. *Annual Review of Sociology, 34*, 181-209.

Pai, A., Suris, A. M., & North, C. S. (2017). Posttraumatic Stress Disorder in the DSM-5: Controversy, change, and conceptual considerations. *Behavioral Sciences, 7*(1), 7. https://doi.org/10.3390/bs7010007

Pala, A. N., Dell'Amore, F., Steca, P., Clinton, L., Sandfort, T., & Rael, C. (2017). Validation of the Minority Stress Scale among Italian gay and bisexual men. *Psychology of Sexual Orientation and Gender Diversity*, *4*(4), 451-459. https://dx.doi.org/10.1037%2Fsgd0000243

Parson, E. R. (1984). The "gook-identification" and posttraumatic stress disorder in black Vietnam veterans. *The Black Psychiatrists of America Quarterly, 13*(2), 14-18.

Pasquale, F., & Cashwell, G. (2018). Prediction, persuasion, and the jurisprudence of Behaviorism. *University of Toronto Law Journal, 68*, 63-81. Available at SSRN: https://ssrn.com/abstract=3067737

Patton v. West, 12 Vet. App. 272 (1999).

Peak, M. L. (2018, September 2018). Response to Freedom of Information Act Request (No. 18-06982-F).

Pedregosa, F., Varoquaux, G., Gramfort, A., Michel, V., Thirion, B., Grisel, O., Blondel, M., Prettenhoffer, P., Weiss, R., Douborg, V., Vanderplas, J., Passos, A., Cornapeau, D., Brucher, M., Perrot, M., & Duchesnay, E. (2011) Scikit-learn: Machine Learning in Python. *J. Mach. Learn. Res.* 12, 2825–2830.

Pedregosa, F. (2011). Scikit-learn: Machine learning in Python. *Journal of Machine Learning Research, 12*, 2825-2830.

Pentecost v. Principi, 16 Vet. App. 124 (Ct. App. Vet. Cl. 2002).

Pineles, S. L., Mostoufi, S. M., Readhy, C. B., Street, A. E., Griffin, M. G., & Resick, P. A. (2011). Trauma reactivity, avoidant coping, and PTSD symptoms: A moderating relationship? *Journal of Abnormal Psychology, 120*(1), 240-246. https://doi.org/10.1037/a0022123

Rackin, H. M. (2017). Comparing veteran and non-veteran racial disparities in mid-life and well-being. *Population Research and Policy Review*, *36*(3), 331-356. https://doi.org/10.1007/s11113-016-9419-8

Rethana, M. (2018, September 11). Bayesian statistics and naïve Bayes classifier refresher. Retrieved from https://medium.com/@mark.rethana/bayesian-statistics-and-naive-bayes classifier-33b735ad7b16

Ramirez, H. M., & Sterzing, P. (2017). Coming out in camouflage: A queer theory perspective on strength, resilience, and resistance of lesbian, gay, bisexual, and transgender service members and veterans. *Journal of Gay and Lesbian Social Services, 29*(1), 68-86. https://doi.org/10.1080/10538720.2016.1263983

Ramirez, H. M., Rogers, S. J., Johnson, H. L., Banks, J., Penny Seay, W., Tinsley, B. L., & Warren Grant, A. (2013). If we ask, what might they tell: Clinical assessment lessons from LGBT military personnel post-DADT. *Journal of Homosexuality, 60*(2-3), 401-418. https://doi.org/10.1080/00918369.2013.744931

Records Management & Declassification Agency. (n.d.). Joint Services Records Research Center Mission. Retrieved on May 10, 2020 from https://www.rmda.army.mil/jsrrc/RMDA-JSRRC-Mission.html

Renjit, S., & Idicula, S. M. (2019). CUSAT NLP@AILA-FIRE2019: Similarity in legal texts using document level embeddings. *Proceedings of FIRE 2019-Forum for Information Retrieval Evaluation*, 1-6. Retrieved from http://ceur-ws.org/Vol-2517/T1-4.pdf

Richardson, R. E., Hall, R., & Joiner, S. (2016). Workplace bullying in the United States: An analysis of state court cases. *Cogent Business & Management*, *3*, 1-11.

Ridgway, J. D. (2012). Erratum to: Mind reading and the art of drafting medical opinions in veterans benefits claims. *Psychological Injury and Law*, *5*, 72-87. https://doi.org/10.1007/s12207-012-9119-6

Ridgway, J. D. (2009). Why so many remands?: A comparative analysis of appellate review by the United States Court of Appeals for Veterans Claims. *Veterans Law Review*, *1*, 113-166.

Riley, R. E. (2010). Simplify, simplify, simplify—An analysis of two decades of judicial review in the veterans' benefits adjudication system. *West Virginia Law Review, 113,* 67-93. Available at: https://researchrepository.wvu.edu/wvlr/vol113/iss1/8

Roberts, P. E. (2015). Post-9/11 veterans: Welcoming them home as colleagues and clients. *University of Memphis Law Review*, 45, 771-835. Available at: https://scholarship.law.wm.edu/facpubs/1791

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Los Angeles, CA: Sage.

Salton, G., & Buckley, C. (1988). Term-weighting approaches in automatic text retrieval. *Information Process Management.* 24, 513–523. https://doi.org/10.1016/0306-4573(88)90021-0

Sayad, S. (2019). Naïve Bayesian. Retrieved from https://www.saedsayad.com/naive_bayesian.htm

Sawyer v. United States, 10 F.2d 416 (2d Cir. 1926).

Sayer, N. A., Spoont, M., & Nelson, D. (2004). Veterans seeking disability benefits for Posttraumatic Stress Disorder: Who applies and the self-reported meaning of disability compensation. *Social Science & Medicine*, *58*, 2133-2143. https://doi.org/10.1016/j.socscimed.2003.08.009

Sohangir, S., & Wang, D. (2017). Improved sqrt-cosine similarity measurement. *Journal of Big Data*, *4*(25), 1-13. https://doi.org/10.1186/s40537-017-0083-6

Schroeder v. West, 212 F.3d 1265 (Fed. Cir. 2000).

Seamone, E. R. (2014). Educating family court judges on the front lines of combat readjustment: Toward the formulation and delivery of a core curriculum on military family issues. *Family Court Review*, *52*(3), 458-510. https://doi.org/10.1111/fcre.12104

Seamone, E. R., & Traskey, D. M. (2014). Maximizing VA benefits for survivors of Military Sexual Trauma: A practical guide for survivors and their advocates. *Columbia Journal of Gender and Law*, *26*(2), 343-487. Available at SSRN: https://ssrn.com/abstract=2456033

Seamone, E. R. (2011). Reclaiming the rehabilitative ethic in military justice: The suspended punitive discharge as a method to treat military offenders with PTSD and TBI and reduce recidivism. *Military Law Review*, *208*, 1-212. Available at SSRN: https://ssrn.com/abstract=2456062

Securities Exchange Commission v. Chenery, 332 U.S. 194 (1947).

Sepanian, A. (2014). Cleaning house with Rule 41(b): An empirical study of the multi-factor tests for involuntary dismissals. *Southwestern Law Review*, *44*, 425-442.

Shane III, L. (2020, February 6). Signs of white supremacy, extremism up again in poll of active-duty troops. *Military Times*. Retrieved from https://www.militarytimes.com/news/pentagon-congress/2020/02/06/signs-of-white-supremacy-extremism-up-again-in-poll-of-active-duty-troops/

Shane III, Leo (2019, February 28). White nationalism remains a problem for the military, poll suggests. *Military Times*. Retrieved from https://www.militarytimes.com/news/pentagon-congress/2019/02/28/white-nationalism-remains-a-problem-for-the-military-poll-shows/

Sheehan, C. M., Hummer, R. A., Moore, B. L., Huyser, K. R., & Butler, J. S. (2015). Duty, honor, country, disparity: Race/ethnic differences in health and disability among male veterans. *Population Research and Policy Review*, *34*(6), 785-804. https://doi.org/10.1007/s11113-015-9358-9

Sherwood, J. D. (2007). *Black sailor, white navy: Racial unrest in the fleet during the Vietnam War era*. New York, NY: New York University Press. https://doi.org/10.2307/27694874.

Shilts, R. (1993). *Conduct unbecoming: Lesbians and gays in the U.S. military, Vietnam, to the Persian Gulf*. New York, NY: St. Martin's Press.

Shipherd, J. C., Ruben, M. A., Livingston, N. A., Curreri, A., & Skolnik, A. A. (2018). Treatment experiences among LGBT veterans with discrimination-based trauma exposure: A pilot study. *Journal of Trauma and Dissociation*, *19*(4), 461-475. https://doi.org/10.1080/15299732.2018.1451973

Sibrava, N. J., Bjornsson, A. J., Perez Benitez, A. C. I., Moitra, E., Weisberg, R. B., & Keller, M. B. (2019). Posttraumatic Stress Disorder in African American and Latinx adults: Clinical course and the role of racial and ethnic discrimination. *American Psychologist*, *74*(1), 101-116. https://doi.org/10.1037/amp0000339

Sinay, M. & Hsu, J. (2014). Bayesian inference of a multivariate regression model. *Journal of Probability and Statistics*, *2014*(673657), 1-14. https://doi.org/10.1155/2014/673657

Singleton, P. (2009). The effect of disability insurance on health investment: Evidence from the Veterans Benefits Administration's Disability Compensation Program. *The Journal of Human Resources*, *44*(4), 998-1022. https://doi.org/10.1353/jhr.2009.0017

Smedley, B. D., Myers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshman. *The Journal of Higher Education*, *64*(4), 434 452. https://doi.org/10.2307/2960051

Smoller, J. W. (2016). The genetics of stress-related disorders: PTSD, depression, and anxiety disorders. *Neuropsychopharmacology*, *41*(1), 297-319. https://doi.org/10.1038/npp.2015.266

Soucek, B. (2014). Perceived homosexuals: Looking gay enough for Title VII. *American University Law Review*, *63*(3), 715-788. Available at SSRN: https://ssrn.com/abstract=2335132

Stanley, C. L. (2011a, September 20). Memorandum for secretaries of the military departments, Subject: Correction of military records following the repeal of Section 654 of Title 10, United States Code. Washington, DC: Department of Defense.

Stanley, C. L. (2011b, January 28). Memorandum for secretaries of the military departments, Subject: Repeal of Don't Ask, Don't Tell and possible future impact on policy. Washington, DC: Department of Defense.

Stein, J. Y., Wilmot, D. V., & Solomon, Z. (2016). Does one size fit all? Nosological, clinical, and scientific implications of variations in PTSD Criterion A. *Journal of Anxiety*

Disorders, 43, 106-117. https://doi.org/10.1016/j.janxdis.2016.07.001
Surden, H. (2014). Machine learning and law. *Washington Law Review*, *89*(1), 87-116. Available at: https://digitalcommons.law.uw.edu/wlr/vol89/iss1/5
Suykens, J. A. K., and Vandewalle, J. (1999). Least Squares Support Vector Machine Classifiers. *Neural Process. Letters* 9, 293–300. https://doi.org/10.1023/A:1018628609742
Szymanski, D. M. (2006). Does internalized heterosexism moderate the link between heterosexist events and lesbians' psychological distress? *Sex Roles, 54*, 227-234. https://doi.org/10.1007/s11199-006-9340-4
Szymanski, D. M., & Chung, B. (2001). The Lesbian Internalized Homophobia Scale: A rational/theoretical approach. *The Journal of Homosexuality*, *41*(2), 37-52. https://doi.org/10.1300/j082v41n02_03
Tape, T. G. (n.d.). The area under a ROC curve. *Interpreting diagnostic tests*. Retrieved on May 1, 2020 from http://gim.unmc.edu/dxtests/roc3.htm
Thompson, M. (2020, July 8). Racism in the ranks: Could the military finally be changing? *Pogo*. Retrieved from https://www.pogo.org/analysis/2020/07/racism-in-the-ranks/
Thompson-Miller, R., Feagin, J. R., & Picca, L. H. (2015). *Jim Crow's legacy: The lasting impact of segregation*. Lanham, MD: Rowman & Littlefield. https://doi.org/ 10.1111/soin.12133
Thompson-Miller, R. K. (2011, May). *Jim Crow's legacy: Segregation Stress Syndrome* (unpublished doctoral dissertation). College Station, TX: Texas A & M University.
Tsai, J., & Rosenheck, R. A. (2016). US veterans use of VA mental health services and disability compensation increased from 2001 to 2010. *Health Affairs, 35*(6), 966-973. https://doi.org/10.1377/hlthaff.2015.1555
Udomrath, P. (2008). Mental health and the psychological consequences of natural disasters in Asia. *International Review of Psychiatry*, *20*, 441-444. https://doi.org/10.1080/ 09540260802397487
United States v. Van Hullum, 15 M.J. 261 (Ct. Mil. App. 1983).
U.S. Court of Appeals for Veterans Claims. (2019). *Fiscal year 2019 annual report October 1, 2018, to September 20, 2019, United States Court of Veterans Appeals*. Washington, DC: U.S. Department of Veterans Affairs.
U.S. Department of Veterans Affairs (2020, February 28). The Board of Veterans' Appeals decision search results. Retrieved from https://www.index.va.gov/search/va/bva.jsp
U.S. Government Accountability Office. (2019, May). *Military Justice: DoD and the Coast Guard need to improve their capabilities to assess racial and gender disparities* (No. GAO-19-334). Washington, DC: Author.
Utsey, S. O. (1999). Development and validation of a short form of the Index of Race-Related Stress (IRRS)-Brief Version. *Measurement and Evaluation in Counseling and Development*, *3*, 149-167 https://doi.org/10.1080/07481756.1999.12068981
Vallmuur, K., Marucci-Wellman, H. R., Taylor, J. A., Lehto, M., Corns, H. L., & Smith, G. S. (2016). Harnessing information from injury narratives in the 'big data' era: Understanding and applying machine learning for injury surveillance. *Injury Prevention*, *22*, i34-i42, https://doi.org/10.1136/injuryprev-2015-041813
Van Gilder, B. J. (2017). Coping with sexual identity stigma in the U.S. military: An examination of identity management practices prior to and after the repeal of Don't Ask, Don't Tell. *Identity: An International Journal of Theory and Research*, *17*(3), 156-175. https://doi.org/10.1080/15283488.2017.1340162

Veterans Benefits Administration. (2013). *Veterans Benefits Administration, Annual benefits report, Fiscal Year 2013*. Washington, DC: U.S. Department of Veterans Affairs.

Veterans Benefits Administration. (2011, August 3). *VA adjudication procedures manual rewrite M21-1MR.* Washington, DC: U.S. Department of Veterans Affairs.

Veterans for Common Sense v. Peake, 563 F. Supp. 2d 1049 (N.D. Cal. 2008), *aff'd in part, rev'd in part, and remanded by* Veterans for Common Sense v. Shinseki, 644 F.3d 845 (9th Cir. 2011), *cert. denied*, 568 U.S. 1086 (2013).

Vogt, W. P., & Burke Johnson, R. (2016). *The SAGE dictionary of statistics & methodology* (5th ed.). Los Angeles, CA: Sage.

Waelde, L. C., Pennington, D., Mahan, C., Mahan, R., & Kabour, M. (2010). Psychometric properties of the Race-Related Events Scale. *Psychological Trauma: Theory Research, Practice, and Policy*, *2*(1), 4-11. https://psycnet.apa.org/doi/10.1037/a0019018

Walker, V. R., Foerster, D., Ponce, J. M., & Rosen, M. (2018, November 1). Evidence types, credibility factors, and patterns or soft rules for weighing conflicting evidence: Argument mining in the context of legal rules governing evidence assessment. *Proceedings of the 5th Workshop on Argument Mining*, 68-78. http://dx.doi.org/10.18653/v1/W18-5209

Walker, V. R., Okpara, N., Hemendinger, A., & Ahmed, T. (2017, June). Semantic types for decomposing evidence assessment in decisions on veterans' disability claims for PTSD. The Second Workshop on Automated Detection, Extraction and Analysis of Semantic Information in Legal Texts (ASAIL 2017), at the 16th International Conference on Artificial Intelligence and Law, London, UK (ICAIL 2017), 1-10. Available at: https://scholarlycommons.law.hofstra.edu/faculty_scholarship/1134

Webb, S. C., & Hermann, W. J. (2002). *Historical overview of racism in the military*. Patrick Air Force Base, FL: Directorate of Research, Defense Equal Opportunity Management Institute.

Westheider, J. E. (2008). *The African American experience in Vietnam: Brothers in Arms.* Lanham, MA: Rowman & Littlefield Publishers, Inc. https://doi.org/10.1353/jmh.0.0113

Wherry, J. L. (2018). Indeterminable parade rest: The impossibility of establishing service connection in veterans' disability compensation claims when records are lost or destroyed. *Brooklyn Law Review*, *83*(2), 477-515.

Wilson v. Derwinski, 2 Vet. App. 614 (Ct. App. Vet. Cl. 1992).

Williams, M. T., Metzger, I. W., Leins, C., & DeLapp, C. (2018). Assessing racial trauma within a *DSM-5* framework: The UConn Racial/Ethnic Stress and Trauma Survey. *Practice Innovations*, *3*(4), 242-260. https://psycnet.apa.org/doi/10.1037/pri0000076

Williams, M. T., & Leins, C. (2016). Race-based trauma: The challenge and promise of MDMA-assisted psychotherapy. *MAPS Bulletin*, *26*(1), 32-37.

Winbush, R. A. (Ed.). (2003). *Should America pay? Slavery and the raging debate on reparations*. New York, NY: Amistad.

Winters, J. V. (2018). Veteran status, disability rating, and public sector employment. *Health Economics*, *27*, 1011-1016.

Wise, J. E. (2019). Loss of moral high-ground: The transgender ban, a military psychiatrist's perspective and call to action. *Journal of Gay & Lesbian Mental Health*, *23*(2), 114-116. https://doi.org/10.1080/19359705.2019.1579037

Wishnie, M. J. (2017). "A boy gets into trouble": Service members, civil rights, and veterans' law exceptionalism. *Boston University Law Review*, *97*, 1007-1774. Available at SSRN:

https://ssrn.com/abstract=2938090
Wolanek, C. C., & Liu, H. (2017). Applying strict scrutiny: An empirical analysis of free exercise cases. *Montana Law Review*, *78*, 275-312.
Worland, J. (2020, June 11). America's long overdue awakening to systemic racism. *Time*. Retrieved from https://time.com/5851855/systemic-racism-america/
Xiao, C., Zhong, H., Guo, Z., Tu, C., Liu, Z., Sun, M., Feng, Y., Han, X., Hu, Z., Wang, H., & Xu, J. (2018). CAIL2018: A Large-Scale Legal Dataset for Judgment Prediction. *arXiv [cs.CL]*. Available at: http://arxiv.org/abs/1807.02478
Yamada, D. C. (2010). Workplace bullying and employment law: A ten-year progress report and assessment. *Comparative Labor Law and Policy Journal*, *32*, 251-284. Available at SSRN: https://ssrn.com/abstract=1507950
Yamada, D. C. (2004). Crafting a legislative response to workplace bullying. *Employee Rights and Employment Policy Journal*, *8*, 475-521. Available at SSRN: https://ssrn.com/abstract=1303725
Young, G. (2015). Towards balanced VA and SSA policies in psychological injury disability assessment. *Psychological Injury and Law*, *8*, 200-218. https://doi.org/10.1007/s12207-015-9230-6
Zhang, X., Green, E., Chen, M., & Souleyrette, R. R. (2019). Identifying secondary crashes using text mining techniques. *Journal of Transportation Safety & Security*, 1-21, https://doi.org/110.1080/19439962.2019.1597795

Appendix A

Code Used to Obtain Decisions from BVA Database

README.md

```
## Summary of the steps I took:

1. Downloaded the case files
  - Code is in `/download_cases/`
1. Renamed the case files to be their citation numbers.
  - Code is in `/rename_case_files/`
1. Used UTFCast to convert all of them to UTF-8 format.
  - Two had some unknown encoding that couldn't be converted to UTF-8 and
    couldn't be read by Notepad, so those cases
    were discarded / ignored going forward.
  - There was no code written for this step.
1. Separated the cases that only had a "Remand" section from the cases that had
  an "Order" section so that it'd be quicker
  to run regexes against the former.
  - Code is in
    `/separate_cases_based_on_whether_they_only_have_a_remand_section.py`
```

download_cases/README.md

```
### How to use it
```

1. Start a terminal session using the Miniconda virtual environment.
   1. Go to Start (in Windows) and type "Anaconda" and select the "Anaconda Prompt" program.
1. Run `conda activate C:\Users\Nathan\Miniconda3\envs\categorize_court_cases\venv` to activate the virtual environment.
   1. Run `conda env list` to see a list of all environments. You can specify the environment by name or by path.
1. Run `cd C:\Users\Nathan\Documents\Upwork\2019\06\categorize_court_cases` to switch to the directory of the project.
   1. To create a new scrapy project, run `scrapy startproject project_name`
1. To run the crawler *locally*:
   1. `cd` into the project's directory and run `scrapy crawl name_of_crawler`.
      - The name of the crawler is defined in a file within `project_name/spiders/` directory.
1. To run the crawler *on ScrapingHub*:
   1. Deploy the spider to ScrapingHub: ([Source](*https://www.youtube.com/watch?v=JYch0zRmcgU*))
      1. `pip install shub`
      1. `shub login`
      1. `shub deploy`
   1. In the ScrapingHub Job dashboard, click "Run" and select the name of the spider you created.
1. To download the case files stored on Google Cloud Storage:

1. Start a Google Cloud SDK Shell.

1. Run `gsutil -m cp -R gs://nathan-wailes-upwork-evan-seamone/ .`

Notes

- Example URL for a case: https://www.va.gov/vetapp19/files3/a19000160.txt

- You can't search for a case on the BVA website with the case's docket number

as it appears in the Excel workbook,

because the format doesn't match. The BVA website expects a format like

'95-38 222'.

- Example URL to search across all years for a particular citation number

("0918001" in this case):

https://www.index.va.gov/search/va/bva_search.jsp?QT=&EW=0918001&AT=&ET=&RPP=

10&DB=2019&DB=2018&DB=2017&DB=2016&DB=2015&DB=2014&DB=2013&DB=20

12&DB=2011&DB=2010&DB=2009&DB=2008&DB=2007&DB=2006&DB=2005&DB=20

04&DB=2003&DB=2002&DB=2001&DB=2000&DB=1999&DB=1998&DB=1997&DB=19

96&DB=1995&DB=1994&DB=1993&DB=1992

- [Using Crawlera with

Scrapy](*https://support.scrapinghub.com/support/solutions/articles/22000188399-using-crawlera-with-scrapy*)

download_cases/requirements.txt

```
google-api-core==1.12.0
google-auth==1.6.3
google-cloud-core==1.0.2
google-cloud-storage==1.16.1
google-resumable-media==0.3.2
googleapis-common-protos==1.6.0
```

download_cases/scrapinghub.yml

```
project: 395148
stacks:
  default: scrapy:1.6-py37
requirements:
 file: requirements.txt
```

download_cases/scrapy.cfg

```
# Automatically created by: scrapy startproject
#
# For more information about the [deploy] section see:
# https://scrapyd.readthedocs.io/en/latest/deploy.html


[settings]
default = download_cases.settings
```

```
[deploy]

#url = http://localhost:6800/

project = download_cases
```

download_cases/setup.py

```python
# Automatically created by: shub deploy

from setuptools import setup, find_packages

setup(
    name         = 'project',
    version      = '1.0',
    packages     = find_packages(),
    entry_points = {'scrapy': ['settings = download_cases.settings']},
    package_data = {
        'download_cases': [
            'citation_numbers.csv'
        ]
    },
    zip_safe=False,
)
```

download_cases/download_cases/__init__.py

```python
# Code from:
# https://medium.com/@rutger_93697/i-thought-this-solution-was-somewhat-complex-3e8bc91f83f8

import os
import json
import pkgutil
import logging

path = "{}/google-cloud-storage-credentials.json".format(os.getcwd())

credentials_content = '''''...'''

with open(path, "w") as text_file:
    text_file.write(json.dumps(json.loads(credentials_content)))

logging.warning("Path to credentials: %s" % path)
os.environ["GOOGLE_APPLICATION_CREDENTIALS"] = path
```

download_cases/download_cases/citation_numbers.csv

```
citation_number

0000006

0000013

0000015
```

download_cases/download_cases/items.py

```python
# -*- coding: utf-8 -*-

# Define here the models for your scraped items
#
# See documentation in:
# https://doc.scrapy.org/en/latest/topics/items.html

import scrapy


class GetCaseUrlsItem(scrapy.Item):
    # define the fields for your item here like:
    # name = scrapy.Field()
    pass
```

download_cases/download_cases/middlewares.py

```python
# -*- coding: utf-8 -*-

# Define here the models for your spider middleware
#
# See documentation in:
# https://doc.scrapy.org/en/latest/topics/spider-middleware.html

from scrapy import signals


class GetDownloadCasesSpiderMiddleware(object):
    # Not all methods need to be defined. If a method is not defined,
    # scrapy acts as if the spider middleware does not modify the
    # passed objects.

    @classmethod
    def from_crawler(cls, crawler):
        # This method is used by Scrapy to create your spiders.
        s = cls()
        crawler.signals.connect(s.spider_opened, signal=signals.spider_opened)
        return s

    def process_spider_input(self, response, spider):
        # Called for each response that goes through the spider
```

```
25.         # middleware and into the spider.
26.
27.         # Should return None or raise an exception.
28.         return None
29.
30.     def process_spider_output(self, response, result, spider):
31.         # Called with the results returned from the Spider, after
32.         # it has processed the response.
33.
34.         # Must return an iterable of Request, dict or Item objects.
35.         for i in result:
36.             yield i
37.
38.     def process_spider_exception(self, response, exception, spider):
39.         # Called when a spider or process_spider_input() method
40.         # (from other spider middleware) raises an exception.
41.
42.         # Should return either None or an iterable of Response, dict
43.         # or Item objects.
44.         pass
45.
46.     def process_start_requests(self, start_requests, spider):
47.         # Called with the start requests of the spider, and works
48.         # similarly to the process_spider_output() method, except
49.         # that it doesn't have a response associated.
50.
51.         # Must return only requests (not items).
52.         for r in start_requests:
53.             yield r
54.
55.     def spider_opened(self, spider):
56.         spider.logger.info('Spider opened: %s' % spider.name)
57.
58.
59. class GetCaseUrlsDownloaderMiddleware(object):
60.     # Not all methods need to be defined. If a method is not defined,
61.     # scrapy acts as if the downloader middleware does not modify the
62.     # passed objects.
63.
64.     @classmethod
65.     def from_crawler(cls, crawler):
66.         # This method is used by Scrapy to create your spiders.
67.         s = cls()
68.         crawler.signals.connect(s.spider_opened, signal=signals.spider_opened)
69.         return s
70.
71.     def process_request(self, request, spider):
72.         # Called for each request that goes through the downloader
73.         # middleware.
74.
75.         # Must either:
76.         # - return None: continue processing this request
77.         # - or return a Response object
78.         # - or return a Request object
79.         # - or raise IgnoreRequest: process_exception() methods of
80.         #   installed downloader middleware will be called
81.         return None
82.
83.     def process_response(self, request, response, spider):
84.         # Called with the response returned from the downloader.
85.
```

```
        # Must either;
        # - return a Response object
        # - return a Request object
        # - or raise IgnoreRequest
        return response

    def process_exception(self, request, exception, spider):
        # Called when a download handler or a process_request()
        # (from other downloader middleware) raises an exception.

        # Must either:
        # - return None: continue processing this exception
        # - return a Response object: stops process_exception() chain
        # - return a Request object: stops process_exception() chain
            pass

        def spider_opened(self, spider):
            spider.logger.info('Spider opened: %s' % spider.name)
```

download_cases/download_cases/pipelines.py

```
# -*- coding: utf-8 -*-

# Define your item pipelines here
#
# Don't forget to add your pipeline to the ITEM_PIPELINES setting
# See: https://doc.scrapy.org/en/latest/topics/item-pipeline.html


class GetCaseUrlsPipeline(object):
    def process_item(self, item, spider):
        return item
```

download_cases/download_cases/settings.py

```
# -*- coding: utf-8 -*-

# Scrapy settings for download_cases project
#
# For simplicity, this file contains only settings considered important or
# commonly used. You can find more settings consulting the documentation:
#
#     https://doc.scrapy.org/en/latest/topics/settings.html
#     https://doc.scrapy.org/en/latest/topics/downloader-middleware.html
#     https://doc.scrapy.org/en/latest/topics/spider-middleware.html

BOT_NAME = 'download_cases'

SPIDER_MODULES = ['download_cases.spiders']
NEWSPIDER_MODULE = 'download_cases.spiders'


# Obey robots.txt rules
ROBOTSTXT_OBEY = True
```

```
20.
21.
22. # Crawlera
23. DOWNLOADER_MIDDLEWARES = {'scrapy_crawlera.CrawleraMiddleware': 300}
24. CRAWLERA_ENABLED = True
25. CRAWLERA_APIKEY = '...'
26. CONCURRENT_REQUESTS = 32
27. CONCURRENT_REQUESTS_PER_DOMAIN = 32
28. AUTOTHROTTLE_ENABLED = False
29. DOWNLOAD_TIMEOUT = 600
30.
31.
32. ITEM_PIPELINES = {
33.     'scrapy.pipelines.files.FilesPipeline': 500
34. }
35. FILES_STORE = 'gs://.../'
36. IMAGES_STORE = 'gs://.../'
37. GCS_PROJECT_ID = "..."
```

download_cases/download_cases/spiders/__init__.py

```
1.  # This package will contain the spiders of your Scrapy project
2.  #
3.  # Please refer to the documentation for information on how to create and manage
4.  # your spiders.
```

download_cases/download_cases/spiders/download_cases.py

```
1.          import csv
2.  import pkgutil
3.  import re
4.
5.  import scrapy
6.  from scrapy.selector import SelectorList
7.
8.
9.  def get_citation_numbers():
10.     citation_numbers = []
11.
12.     csv_file_data = pkgutil.get_data("download_cases", "citation_numbers.csv")
13.
14.     reader = csv.DictReader(csv_file_data.decode('utf-8-sig').splitlines(),
15.                             delimiter=',')
16.     for index, row in enumerate(reader):
17.         citation_numbers.append(row['citation_number'])
18.
19.     assert isinstance(citation_numbers, list)
20.     return citation_numbers
21.
22.
23. class DownloadCasesSpider(scrapy.Spider):
24.     name = "download_cases"
25.
26.     # I'm appending "&SPC=false" to the end of the URL to avoid the
```

```
    # autosuggestions.
    base_url = 'https://www.index.va.gov/search/va/bva_search.jsp?QT=&EW=%s' \
               '&AT=&ET=&RPP=10&DB=2019&DB=2018&DB=2017&DB=2016&DB=2015' \
               '&DB=2014&DB=2013&DB=2012&DB=2011&DB=2010&DB=2009&DB=2008' \
               '&DB=2007&DB=2006&DB=2005&DB=2004&DB=2003&DB=2002&DB=2001' \
               '&DB=2000&DB=1999&DB=1998&DB=1997&DB=1996&DB=1995&DB=1994' \
               '&DB=1993&DB=1992&SPC=false'

    citation_numbers = get_citation_numbers()

    def start_requests(self):
        assert isinstance(self.citation_numbers, list)
        for citation_number in self.citation_numbers:
            assert isinstance(citation_number, str)
            url = self.base_url % citation_number
            yield scrapy.Request(url=url, callback=self.parse)

    def parse(self, response):
        result = response.xpath('//*[@id="results-area"]/div[1]/a/@href')
        if isinstance(result, SelectorList):
            result = result[0]
        case_url = result.extract()

        citation_number = re.findall('EW=(\d+)', response.url)[0]
        yield {
            'file_urls': [case_url],
            'citation_number': citation_number
        }
```

download_cases/project.egg-info/dependency_links.txt

<empty file>

download_cases/project.egg-info/entry_points.txt

[scrapy]

settings = download_cases.settings

download_cases/project.egg-info/not-zip-safe

<empty file>

download_cases/project.egg-info/PKG-INFO

```
Metadata-Version: 1.0

Name: project

Version: 1.0

Summary: UNKNOWN

Home-page: UNKNOWN

Author: UNKNOWN

Author-email: UNKNOWN

License: UNKNOWN

Description: UNKNOWN

Platform: UNKNOWN
```

download_cases/project.egg-info/SOURCES.txt

```
setup.py

download_cases/__init__.py

download_cases/case_file_urls.csv

download_cases/citation_numbers.csv

download_cases/google-cloud-storage-credentials.json

download_cases/items.py

download_cases/middlewares.py

download_cases/pipelines.py

download_cases/settings.py

download_cases/spiders/__init__.py

download_cases/spiders/download_case_files.py
```

```
download_cases/spiders/download_cases.py

project.egg-info/PKG-INFO

project.egg-info/SOURCES.txt

project.egg-info/dependency_links.txt

project.egg-info/entry_points.txt

project.egg-info/not-zip-safe

project.egg-info/top_level.txt
```

download_cases/project.egg-info/top_level.txt

```
download_cases
```

rename_case_files/get_filenames_of_files_that_werent_renamed.py

```
1.  import os
2.
3.  path_to_cases = 'C:\\Users\\<Username>>\\Desktop\\full'
4.
5.  cases_we_didnt_find_the_order_section_for = []
6.
7.  for index, filename in enumerate(os.listdir(path_to_cases)):
8.      if len(filename) > 12:
9.          print(filename)
```

rename_case_files/rename_case_files.py

```
1.  import os
2.  import re
3.
4.  base_directory = "C:\\Users\\<Username>\\Desktop\\full"
5.  file_names = os.listdir(base_directory)
6.
7.  for file_name in file_names:
8.      full_path_to_file = os.path.join(base_directory, file_name)
9.      try:
10.
11.         try:
12.             with open(full_path_to_file, 'r', encoding='utf16') as infile:
13.                 file_contents_as_a_string = infile.read()
14.         except:
```

```
            with open(full_path_to_file, 'r', encoding='ISO-8859-1') as infile:
                file_contents_as_a_string = infile.read()

        # (?<=Citation Nr: )(\d+)
        # Citation Nr: (\d+)
        citation_number_matches = re.match('Citation Nr: (\d+)',
                                           file_contents_as_a_string)
        citation_number = citation_number_matches[1]
        print(citation_number)

        new_file_name = citation_number + '.txt'
        new_full_path = os.path.join(base_directory, new_file_name)
        os.rename(full_path_to_file, new_full_path)
    except:
        print("Error with file: %s" % full_path_to_file)
```

separate_cases_based_on_whether_they_have_an_order_section.py

```
import argparse
import os
import re
from shutil import copyfile


def separate_cases_based_on_whether_they_only_have_a_remand_section(base_path,
                                                                   every_nth_case):

    path_to_input_cases = os.path.join(base_path,
                                       '02 case files converted to utf-8')
    base_path_for_output = os.path.join(base_path,
                                        '03 case files separated based on '
                                        'whether they have an ORDER section')
    path_to_where_cases_with_an_order_section_should_go = os.path.join(
        base_path_for_output, 'has an ORDER section')
    path_to_where_cases_without_an_order_section_should_go = os.path.join(
        base_path_for_output, 'does not have an ORDER section')

    for path in [path_to_where_cases_with_an_order_section_should_go,
                 path_to_where_cases_without_an_order_section_should_go]:
        if not os.path.exists(path):
            os.makedirs(path)

    for index, filename in enumerate(os.listdir(path_to_input_cases)):
        path_to_file = os.path.join(path_to_input_cases, filename)
        if index % every_nth_case == 0:
            pass
        else:
            continue

        with open(path_to_file, 'r', encoding='utf-8') as infile:
            case_text = infile.read()

            if re.findall('(\n\s*ORDERS?\s*\n)', case_text):
                path_to_output_file = os.path.join(
                    path_to_where_cases_with_an_order_section_should_go,
                    filename)
```

```
                copyfile(path_to_file, path_to_output_file)
            else:
                path_to_output_file = os.path.join(
                    path_to_where_cases_without_an_order_section_should_go,
                    filename)
                copyfile(path_to_file, path_to_output_file)

    path_to_done_file = os.path.join(base_path_for_output, 'done.txt')
    with open(path_to_done_file, 'w') as outfile:
        outfile.write("Done")


if __name__ == '__main__':
    parser = argparse.ArgumentParser(
        description='Separate the case files based on whether they only have a '
                    'remand section or not.')
    parser.add_argument('--base_path', type=str,
                        help='the path to the parent folder of the folder '
                             'containing the input case files')
    parser.add_argument('--every_nth_case', type=int,
                        help='If not specified, the program will only consider '
                             'every 1000th case, which is '
                             'useful for testing.')

    args = parser.parse_args()
    base_path = args.base_path if args.base_path else 'C:\\Users\\Nathan\\Desktop'
    every_nth_case = args.every_nth_case if args.every_nth_case else 1000
    separate_cases_based_on_whether_they_only_have_a_remand_section(base_path,
                                                                    every_nth_case)
```

extract_order_sections.py

```
import argparse
import os
import re
from collections import defaultdict


def extract_the_orders_into_new_files_in_a_new_directory(base_path,
                                                         every_nth_case,
                                                         debug=False):
    path_to_input_cases = os.path.join(base_path,
                                       '03 case files separated based on '
                                       'whether they have an ORDER section',
                                       'has an ORDER section')
    base_path_for_output = os.path.join(base_path,
                                        '04 isolated orders sections')
    if not os.path.exists(base_path_for_output):
        os.makedirs(base_path_for_output)

    cases_we_didnt_find_the_order_section_for = []
    matches_against_the_regex = defaultdict(list)
    cases_without_the_string_ORDER_in_it = []
    cases_with_multiple_matches = []

    number_of_cases_considered = 0

```

```
    for index, filename in enumerate(os.listdir(path_to_input_cases)):
        path_to_file = os.path.join(path_to_input_cases, filename)
        if index % every_nth_case == 0:
            number_of_cases_considered += 1
            pass
        else:
            continue
        with open(path_to_file, 'r', encoding='utf-8') as infile:
            case_text = infile.read()
            regex_matches = get_order_section(case_text)

            if len(regex_matches) >= 1:
                output_orders_section_to_a_new_file(base_path_for_output,
                                                    filename, regex_matches)

                if len(regex_matches) > 1:
                    cases_with_multiple_matches.append(filename)
            else:
                cases_we_didnt_find_the_order_section_for.append(filename)

            if debug:
                if 'ORDER' not in case_text:
                    cases_without_the_string_ORDER_in_it.append(filename)
                for match in regex_matches:
                    matches_against_the_regex[filename].append(match)

    output_the_list_of_cases_that_we_didnt_find_an_order_section_for(base_path,
                                                                     cases_we_didnt_f
ind_the_order_section_for)

    if debug:
        print_results(cases_we_didnt_find_the_order_section_for,
                      matches_against_the_regex,
                      cases_without_the_string_ORDER_in_it,
                      cases_with_multiple_matches, number_of_cases_considered)


def get_order_section(case_text):
    regex_to_find_order_section = r"\n" \
                                  r"\s*ORDERS?\s*\n" \
                                  r"\s*(.+?)\s*\n" \
                                  r"\s*(?:" \
                                      r"(?:" \
                                          r"(?:[^\n]+\n)?" \
                                          r"[^\n]+\n[^\n]+" \
                                          r"Board\sof\sVeterans['’]\sAppeals" \
                                      r")" \
                                      r"|(?:_____)" \
                                      r"|(?:[A-Z\ \.\:]{3,}?\s*\n)" \
                                  r")"
    regex_matches = re.findall(regex_to_find_order_section, case_text,
                               re.DOTALL)
    return regex_matches


def output_orders_section_to_a_new_file(base_path_for_output, filename,
                                        regex_matches):
    path_to_output_file = os.path.join(base_path_for_output, filename)
    case_text_to_output = "\n\n".join(regex_matches)
    with open(path_to_output_file, 'w') as outfile:
        outfile.write(case_text_to_output)
```

```
86.
87.
88. def output_the_list_of_cases_that_we_didnt_find_an_order_section_for(base_path,
89.                                                                      cases_we_didnt_f
    ind_the_order_section_for):
90.     path_to_output_file = os.path.join(base_path,
91.                                        '04 cases we didnt find the order '
92.                                        'section for.txt')
93.     with open(path_to_output_file, 'w') as outfile:
94.         for filename in cases_we_didnt_find_the_order_section_for:
95.             outfile.write(filename + '\n')
96.
97.
98. def print_results(cases_we_didnt_find_the_order_section_for,
99.                   matches_against_the_regex,
100.                         cases_without_the_string_ORDER_in_it,
101.                         cases_with_multiple_matches, number_of_cases_considered):
102.           print("\n\n***\n")
103.           print("Number of cases considered: %d" % number_of_cases_considered)
104.           print("\n***\n\n")
105.
106.           print("\n\n***\n")
107.           print("Cases we didn't find the order section for:")
108.           print("\n***\n\n")
109.           for case_filename in cases_we_didnt_find_the_order_section_for:
110.               print(case_filename)
111.
112.           print("\n\n***\n")
113.           print("Cases with multiple matches:")
114.           print("\n***\n\n")
115.           for case_filename in cases_with_multiple_matches:
116.               print(case_filename)
117.
118.           print("\n\n***\n")
119.           print("Matches against the regex:")
120.           print("\n***\n\n")
121.
122.           for case_filename in sorted(matches_against_the_regex.keys()):
123.               for match in matches_against_the_regex[case_filename]:
124.                   print(case_filename)
125.                   print('\n\n')
126.                   print(match)
127.                   print("\n\n<<<<<<<<<<<<<<>>>>>>>>>>>>>>>\n\n")
128.
129.           print("\n\n***\n")
130.           print("Cases without the string 'ORDER' in them:")
131.           print("\n***\n\n")
132.
133.           for filename in cases_without_the_string_ORDER_in_it:
134.               print(filename)
135.
136.
137.       if __name__ == '__main__':
138.           parser = argparse.ArgumentParser(
139.               description='Extract the orders sections from cases into new files in
    a'
140.                           ' separate directory.')
141.           parser.add_argument('--base_path', type=str,
142.                               help='the path to the parent folder of the folder '
143.                                    'containing the input case files')
144.           parser.add_argument('--every_nth_case', type=int,
```

```
145.                                 help='If not specified, the program will only conside
    r '
146.                                      'every 1000th case, which is useful for testing.
    ')
147.             parser.add_argument('--debug', type=int,
148.                                 help='This will print information about what was done
     '
149.                                      '/ found.  1 for True, default is False')
150.
151.             args = parser.parse_args()
152.             base_path = args.base_path if args.base_path else 'C:\\Users\\<Username>\
    \Desktop'
153.             every_nth_case = args.every_nth_case if args.every_nth_case else 1000
154.             debug = args.debug if args.debug else False
155.             extract_the_orders_into_new_files_in_a_new_directory(base_path,
156.                                                                  every_nth_case, debu
    g)
```

Appendix B

NLP Search Terms and Code

Certificate of Registration

This Certificate issued under the seal of the Copyright Office in accordance with title 17, *United States Code*, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Acting United States Register of Copyrights and Director

Registration Number
TXu 2-210-772
Effective Date of Registration:
May 04, 2020
Registration Decision Date:
August 07, 2020

Title

Title of Work: Natural Language Processing Code for Discrimination Decisions

Completion/Publication

Year of Completion: 2020

Author

- **Author:** Evan Ryan Seamone
Author Created: computer program
Work made for hire: Yes
Citizen of: United States

Copyright Claimant

Copyright Claimant: Evan Ryan Seamone
8875 SW 73rd LN, Gainesville, FL, 32608, United States

Rights and Permissions

Name: Evan Ryan Seamone
Email: eseamone@yahoo.com
Telephone: (520)234-7104
Address: 8875 SW 73rd LN
Gainesville, FL 32608 United States

Certification

Name: Evan Ryan Seamone
Date: May 04, 2020

```
import xlrd
from xlwt import Workbook
from xlutils.copy import copy
import os
import chardet
import enum
from EvanSeamoneFunctions import *
from operator import itemgetter
import numpy as np

mainBook = xlrd.open_workbook("C:/Users/Owner/Desktop/Evan Seamone/Data/100_cosine_similarity_cases.xlsx") #Main Data File
sheet = mainBook.sheet_by_index(0) #Main Data Sheet within workbook
copyBook = copy(mainBook) #Copy of main data file
copySheet = copyBook.get_sheet(0) #copy of data sheet within  workbook


def main():

 countFiles = 1
 r = 1 #Variable used as an index

 with os.scandir("C:/Users/Owner/Desktop/Evan Seamone/Case Files/") as root_dir: #Location of file with cases
  for path in root_dir:
   if path.is_file() and countFiles <= 123013:  #loop until EOF or until Max amount of case files reached
    filename = str(int(sheet.cell_value(r, 0))) #Gets filename an casts it to a string
    if (len(filename) != 7): #Checks to see if filename is not 7 characters long
     new_filename = "" #Initializes new variable to store temp filename
     for f in range(7 - len(filename)): #For each character in filename thats < 7
      new_filename += "0" #Add a "0" until length of filename is 7
     new_filename += filename #Adds original filename with zeroes in front
     filename = new_filename #Switches variable names
     filename += ".txt" #Adds file extension to end of string
    encodingType = getEncodingType(filename) #Get encoding type to open all files in case folder
    file = open("C:/Users/Owner/Desktop/Evan Seamone/Case Files/{}".format(filename), "r", encoding = encodingType) #File variable
    print("\nCount RO/SO: {}/1000".format(r))
    print("Total Number in Folder: {}/123013".format(countFiles))
    case_text = file.read() #Variable to store case text as one string
    lines_original = sent_tokenize(case_text) #Tokenizes "case_text"
    caseNo = getCaseNo(lines_original) #Variable that calls function to store case number
    docketNo = getDocketNo(lines_original) #Variable that calls function to get the docket number
    claimDate = getClaimDate(lines_original) #Variable that calls function to get the date case was claimed
    copySheet.write(r, 5, docketNo) #Writes the docket number to the copied excel file
    copySheet.write(r, 6, claimDate) #Writes claimDate to the copied excel file
    lines = getUpdatedLines(lines_original) #Formats lines in order to get a dictionary of the case
    copyBook.save("C:/Users/Owner/Desktop/Evan Seamone/Data/Temporary Data.xls") #Saves copied excel file
    print("Case Number: {}".format(caseNo)) #Prints case number
    print("Docket Number: {}".format(docketNo)) #Prints docket number
    print("Claim Date: {}\n".format(claimDate)) #Prints claimDate
    if (sheet.cell_value(r, 6) == "None"): #Checks excel datasheet to make sure SO/RO varaible is "None" and caseNo matches number in row r of excel datasheet
     words= dictionary(lines) #Stores words in an array
     #words = fixDictionary(words) #Stores updated dictionary as "words" variable
     keywordData = getKeywordIndexes(lines, words) #Variable that stores a 2D array with first array being keyword indexes and second array being keywords
     keywordIndexes = keywordData[0] #Variable that stores keyword indexes
     startIndexes = []
     for i in range(0, len(keywordIndexes)): #Loops through keywordIndexes to updated indexes
      tempStartIndex, keywordIndex = getNewIndex(lines_original, words, keywordIndexes, i) #Stores starting index of two sentences before keyword
      #print(tempStartIndex, keywordIndexes[i])
      keywordIndexes[i] = keywordIndex #Updates keywordIndexes[i] from index of keyword to start index of two sentences before keyword
      startIndexes.append(tempStartIndex) #Appends "tempStartIndex" to startIndexes
     allParagraphs, keywords, keywordIndexes = getParagraphs(lines_original, words, startIndexes, keywordData[1], keywordIndexes) #Calls getParagraphs function
     if (len(allParagraphs) > 1): #Checks length of "allParagraphs" array to make sure it's not empty
      allParagraphs, keywords, keywordIndexes = sort(allParagraphs, keywords, keywordIndexes) #Sorts the paragraphs
     decisionSectionIndexes = getDecisionSectionIndexes(lines_original) #Variable that calls getDecisionSectionIndexes and stores them in an array
     decisionArray = getDecisionArray(decisionSectionIndexes[0], decisionSectionIndexes[1], decisionSectionIndexes[2]) #Variable that stores the decision(s) in an array

     decisionDictionary = getDecisionDictionary(decisionArray) #Gets a dictionary array of the decision line in order to predict the outcome based on keywords
     decisionLine = getDecisionLine(decisionDictionary) #Gets the line that mentions any sort of issue looked at in the study which can be seen in the function
     decision = getDecision(decisionDictionary, decisionLine[0], decisionLine[1]) #Tries to predict the decision based on the most recent outcome after mentioning any of the keywords we are looking for whe
     issues = getIssues(case_text, words) #Gets the veterans claimed issues at begining of case
     if (sheet.cell_value(r, 2) == "None"): #Checks to make sure cell (r, 2) is "None" or empty
      add_data(caseNo, decision, keywords, decisionArray, decisionLine[0], decisionLine[1], issues, r) #Adds data to the excel sheet
      add_discrim(caseNo, allParagraphs, keywords, r) #Adds discrimination outcome(s) to excel sheet
    r += 1 #Increases index by 1
    countFiles += 1 #Increases file counter by 1

main()
```

```
# -*- coding: utf-8 -*-
"""
Created on Fri Jan 24 15:44:08 2020

@author: Owner
"""

import xlrd
from xlwt import Workbook
from xlutils.copy import copy
import os
import chardet
import enum
from nltk.corpus import stopwords
from nltk import sent_tokenize
from EvanSeamoneParagraphs import *
from EvanSeamoneParagraphs import bannedLines
import re

stop_words=stopwords.words('english')

def get_relevant_section(case_text):
    regex_to_find_relevant_section1 = r"\n\s*REASONS\sAND\sBASES\sFOR\sFINDINGS?\sAND\sCONCLUSIONS??\s*\n\s*(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+Board\sof\sVeterans[']\sAppeals)|(?:_
    regex_to_find_relevant_section2 = r"\n\s*REMAND??\s*\n\s*(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+Board\sof\sVeterans[']\sAppeals)|(?:_____)|(?:[A-Z\.\:]{3,}?\s*\n))"

    relevant_section1 = re.findall(regex_to_find_relevant_section1, case_text, re.DOTALL)
    relevant_section2 = re.findall(regex_to_find_relevant_section2, case_text, re.DOTALL)

    regex_to_find_relevant_sentences = '[^.]* (?:racial|racism|race-based|trauma|ptsd|harass|slur|mistreat|maltreat|oppress|discriminat)[^.]*\.'
    relevant_sentences1=re.findall(regex_to_find_relevant_sentences, ".join(relevant_section1), re.DOTALL)
    relevant_sentences2=re.findall(regex_to_find_relevant_sentences, ".join(relevant_section2), re.DOTALL)
    relevant_sentences= relevant_sentences1+relevant_sentences2
    return ".join(relevant_sentences)


#Function that takes in a string and remmoves special case characters
#Function returns string with the characters removed
def removeCharacters(line):

  newLine = ""

  specialCharacters = ['[', '@', '_', '!', '#', '$', '%', '^', '&', '*', '(', ')', '<>', '?', "/", "\\", '|', '}', '{', '~', ':', ']',
                       ';', '§', "\t", "\n"]
  upperLines = ["DOCKET NO.", "M.S.", "38 U.S.C.A.", "U.S.C.A.", "38 C.F.R.", "C.L.", "PTSD", "PTSD."]

  for i in range(len(line)):
    tempChar = line[i]
    if (tempChar not in specialCharacters):
      if (tempChar == " " and line[i - 1] != " "):
        newLine += tempChar
      elif (tempChar != " "):
        newLine += tempChar

  return newLine


#Function that takes in an array of strings
#returns an array of strings formatted in order to get certain Case info
def getUpdatedLines(lines_original):

  string2 = "Member, Board of Veterans' Appeals"
  string3 = "Member Board of Veterans' Appeals"
  string4 = "Member, Board of Veterans Appeals"
  string5 = "Member Board of Veterans Appeals"
  string6 = "Acting Member, Board of Veterans' Appeals"
  string7 = "Acting Member Board of Veterans' Appeals"
  string8 = "Acting Member, Board of Veterans Appeals"
  string9 = "Acting Member Board of Veterans Appeals"
  string10 = "Veterans Law Judge"
  string11 = "Department of Veterans Affairs"
  string12 = "_____"
  string13 = "_____"
  string14 = "_____"
  string15 = "REMAND"
  string16 = "_____"
  string17 = "+"
  string18 = "_____"
  string19 = "_____"

  strings = [string2, string3, string4, string5, string6, string7, string8, string9, string10, string11, string12, string13,
          string14, string15, string16, string17, string18, string19]

  upperLines = ["DOCKET NO.", "M.S.", "38 U.S.C.A.", "U.S.C.A.", "38 C.F.R.", "C.L.", "PTSD", "PTSD."]

  newLines = []

  removeLines = []

  lines = lines_original[1:]

  for l in range(len(lines)): #For each line in "lines" array
    tempParagraph = lines[l] #Temporary variable to hold each line in "lines" array
    tempParagraphArray = tempParagraph.split("\n") #Splits the "tempParagraph" variable by \n' character
    tempParagraph = [] #Resets tempParagraph variable
    count = 0
    for l2 in range(len(tempParagraphArray)):
      tempLine = tempParagraphArray[l2]
      tempLine = removeCharacters(tempLine)
      if ("DATE" not in tempLine and tempLine != ""):
        if (l2 < (len(tempParagraphArray) - 1)):
          nextLine = tempParagraphArray[l2 + 1]
          nextLine = removeCharacters(nextLine)
          if (nextLine in strings[:11]):
            newLines.append(tempLine)
            newLines.append(nextLine)
```

```
95          if (tempLine.isupper() == True and tempLine not in upperLines):
96            check = tempParagraphArray[l2 - (count + 1)]
97            if (check in tempParagraph):
98              tempParagraph.remove(check)
99              check += "."
100           newLines.append(check)
101           newLines.append(tempLine)
102         if (tempLine not in newLines and tempLine not in removeLines):
103           tempParagraph.append(tempLine)
104         count += 1
105
106       if (type(tempParagraph) == list and len(tempParagraph) >= 1):
107         newTempParagraph = ""
108         for a in range(len(tempParagraph)):
109           newTempParagraph += tempParagraph[a]
110           if (a < len(tempParagraph)):
111             newTempParagraph += " "
112         newLines.append(newTempParagraph)
113       elif(len(tempParagraph) >= 1):
114         newLines.append(tempParagraph)
115
116     lines = newLines
117
118     newLines = []
119
120     for l4 in range(len(lines)):
121
122       tempParagraph = lines[l4]
123       paragraphArray = tempParagraph.split()
124       if (len(paragraphArray) > 1):
125         newSentence = ""
126         for l5 in range(len(paragraphArray)):
127           tempWord = paragraphArray[l5]
128           newWord = removeCharacters(tempWord)
129           if (len(newWord) > 0):
130             newSentence += newWord
131             if (l5 < len(paragraphArray) - 1):
132               newSentence += " "
133         if (len(newSentence) >= 1):
134           newLines.append(newSentence)
135       if (len(paragraphArray) == 1 and len(paragraphArray[0]) >= 3):
136         tempSectionArray = removeCharacters(paragraphArray[0])
137         newLines.append(tempParagraphArray)
138
139     lines = newLines
140     return lines
141
142   def getEncodingType(name):
143
144     path = "C:/Users/Owner/Desktop/Evan Seamone/Case Files/{}".format(name) #File path
145
146     rawdata = open(path, 'rb').read() #Reads data from file
147     result = chardet.detect(rawdata) #Detects encoding type and stores in an array
148     encodingType = result['encoding'] #String varaible of encoding type
149
150     if (encodingType == "ISO-8859-1" or encodingType == "Windows-1252" or encodingType == "CP949" or encodingType == "Windows-1254"): #Checks enocding types
151       encodingType = "ansi"
152     if (encodingType == "UTF-8"):
153       encodingType = "utf-8"
154
155     return encodingType #Return encoding type as a string
156
157   def getCaseNo(lines):
158
159     initialLine = lines[0] #Variable that stores 1st line in file with the case number
160
161     caseNo = "" #Empty string to store case number
162
163     for i in range(13, len(initialLine)): #Starts at index 13 because of "Citation Nr: " before case number
164       if (initialLine[i] != " " and initialLine[i] != "\n" and initialLine[i] != "\t"): #Checks character to make sure it is not a space
165         caseNo += initialLine[i] #Adds the number as a string to caseNo string
166       else:
167         break
168
169     return caseNo #Return case number as a string
170
171   def getDocketNo(lines):
172
173     initialLine = lines[1] #Variable that stores 3rd line in file with the docket number
174
175     docketNo = "" #Empty string to store docket number
176
177     for i in range(len(initialLine)): #Starts at index 13 because of "Docket NO: " before docket number
178       if (initialLine[i].isalpha() == False and i != 17): #Checks character to make sure it is not a space
179         docketNo += initialLine[i] #Adds the number as a string to docketNo string
180       if (i == 17):
181         docketNo += initialLine[i]
182
183     docketNo = docketNo[0:9]
184
185     return docketNo #Return docket number as a string
186
187   def getClaimDate(lines):
188
189     initialLine = lines[0] #Variable that stores 2nd line in file with the claim date
190     claimDate = "" #Empty string to store case number
191     for i in range(37, len(initialLine)): #Starts at index 13 because of "Decision Date: " before claim date
192       if (initialLine[i].isalpha() == False and i <= 57 and initialLine[i] != " " and initialLine[i] != ":"): #Checks character to make sure it is not a space or ":"
193         claimDate += initialLine[i] #Adds the number as a string to claimDate string
194
195     return claimDate #Return case number as a string
196
197   def dictionary(lines):
198
199     case_dictionary = []
200     case_dictionary2 = []
201     case_sentences = []
```

```
    case_sentences = []
    indexChar = 0

    case_text = ""
    #case_sentences = [word.lower() for word in case_sentences]

    for i in range(len(lines)): #For each line in "lines" array...
      tempLine = lines[i] #Variable to store the nth line in "lines" array
      if (type(tempLine) == list):
        tempString = ""
        for w in range(len(tempLine)):
          tempString += tempLine[w]
          tempString += " "
        tempLine = tempString
      case_text += tempLine #adds each line to overall "case_text" string
      case_text += " " #Adds a space to "case_text" in order to seperate lines
      tempLineDict = tempLine.split() #Variable to store line as a dictionary seperated by word
      for i2 in range(len(tempLineDict)): #For each word in "tempLineDict"...
        tempWord = tempLineDict[i2] #Variable to store ith word in tempLineDict
        if (len(tempWord) >= 1 and tempWord not in stop_words): #Checks to make sure tempWord isn't 1 character and makes sure it isn't a stopword
          case_dictionary.append(tempWord) #If above returns true, append the word to the "case_dictionary"

    return (case_dictionary) #Returns array of words from file

  def fixDictionary(dictionary):

    updatedDictionary = [] #Initialize empty array for updated dictionary

    for i in range(0, len(dictionary)): #Loops through dictionary
      tempWord = dictionary[i] #Holds temporary word from dictionary
      if (tempWord not in stop_words):
        if (tempWord[0] != " "): #Checks 0th index of tempWord to see if it's a space
          updatedDictionary.append(tempWord) #Appends word if above returns false
        if (tempWord[0] == " "): #If tempWord[0] == " "
          updatedDictionary.append(tempWord[1:]) #Append the word without the first character

    return updatedDictionary #Returns array that has updated words

  def getKeywordIndexes(lines, words):

    string1 = "racial"
    string2 = "Racial"
    string3 = "race"
    string4 = "Race"
    string5 = "harass"
    string6 = "Harass"
    string7 = "discriminat"
    string8 = "Discriminat"
    string9 = "trauma"
    string10 = "Trauma"
    string11 = "hazing"
    string12 = "Hazing"
    string13 = "abused"

    string14 = "Abused"
    string15 = "slur"
    string16 = "Slur"
    string17 = "KKK"
    string18 = "homosexual"
    string19 = "Homosexual"
    string20 = "heterosexual"
    string21 = "Heterosexual"
    string22 = "queer"
    string23 = "Queer"
    string24 = "bisexual"
    string25 = "Bisexual"
    string26 = "sissy"
    string27 = "Sissy"
    string28 = "skinheads"
    string29 = "Skinheads"
    string30 = "Jew"
    string31 = "jew"
    string32 = "neo-Nazi"
    string33 = "nigger"
    string34 = "Nigger"
    string35 = "epithet"
    string36 = "Epithet"
    string37 = "faggot"
    string38 = "Faggot"
    string39 = "pussy"
    string40 = "Pussy"
    string41 = "cracker"
    string42 = "Cracker"
    string43 = "suicide"
    string44 = "Suicide"
    string45 = "expose"
    string46 = "Expose"
    string47 = "molest"
    string48 = "Molest"
    string49 = "rape"
    string50 = "Rape"
    string51 = "sexual"
    string52 = "Sexual"
    string53 = "savage"
    string54 = "Savage"
    string55 = "sex"
    string56 = "Sex"
    string57 = "bath"
    string58 = "Bath"
    string59 = "same-sex"
    string60 = "Same-sex"
    string61 = "interrogate"
    string62 = "Interrogate"
    string63 = "std"
    string64 = "STD"
    string65 = "homoerotic"
    string66 = "Homoerotic"
    string67 = "sissy"
    string68 = "Sissy"
```

```
string69 = "feminine"
string70 = "Feminine"
string71 = "homo"
string72 = "Homo"
string73 = "gay"
string74 = "Gay"
string75 = "lesbian"
string76 = "Lesbian"
string77 = "sexuality"
string78 = "Sexuality"
string79 = "transexual"
string80 = "Transexual"

string81 = "sexual abuse"
string82 = "Sexual abuse"
string83 = "sexual assault"
string84 = "Sexual Assault"
string85 = "sexual harassment"
string86 = "Sexual harassment"
string87 = "attempted rape"
string88 = "Attempted rape"
string89 = "sexually transmitted disease"
string90 = "Sexually transmitted disease"
string91 = "sexual orientation"
string92 = "Sexual Orientation"
string93 = "sexual encounter"
string94 = "Sexual encounter"
string95 = "same sex"
string96 = "Same sex"
string97 = "picked on"
string98 = "Picked on"
string99 = "sexual preference"
string100 = "Sexual preference"
string101 = "cross dress"
string102 = "Cross dress"
string103 = "military environment"
string104 = "Military environment"


keywords = [string1, string2, string3, string4, string5, string6, string7, string8, string9, string10,
        string11, string12, string13, string14, string15, string16, string17, string18, string19,
        string20, string21, string22, string23, string24, string25, string26, string27, string28,
        string29, string30, string31, string32, string33, string34, string35, string36, string37,
        string38, string39, string40, string41, string42, string43, string44, string45, string46,
        string47, string48, string49, string50, string51, string52, string53, string54, string55,
        string56, string57, string58, string59, string60, string61, string62, string63, string64,
        string65, string66, string67, string68, string69, string70, string71, string72, string73,
        string74, string75, string76, string77, string78, string79, string80]

keyphrases = [string81, string82, string83, string84, string85, string86, string87, string88, string89,
        string90, string91, string92, string93, string94, string95, string96]

foundWords = [] #Array to store keywords found in the file
keywordIndexes = [] #Array that stores indexes of the first character of each keyword in the file

for i in range(0, len(words)): #Loops through "words" array
  tempWord = words[i] #Temporary varaible to store the ith word in words
  for i2 in range(0, len(keywords)): #Loops through tempWord
    if tempWord[:len(keywords[i2])] == keywords[i2]: #Checks to see if tempWord matches any word in keywords
      keywordIndexes.append(i) #Appends index to keywordIndexes if above returns true
      foundWords.append(keywords[i2]) #Appends word to foundWords

keyphraseWords = [[0] * 3] * len(keyphrases) #Empty matrix with 3 rows and len(keywords) columns

for i3 in range(len(keyphrases)): #Loops through "keyphrases" array
  tempKeyphrase = keyphrases[i3] #Variable that stores a temporary keyphrase from "keyphrases" array
  tempWord = "" #Temporary variable that holds a temp word
  tempArray = [] #Temporary array to store each word of tempKeyphrase
  tempIndex = 0 #indexes position in tempKeyphrase
  for i4 in range(len(tempKeyphrase)): #Loops through tempKeyphrase
    if (tempKeyphrase[i4] == " " or i4 == (len(tempKeyphrase) - 1)): #Checks first character of tempKeyphrase and makes sure end of phrase isn't reached
      if (i4 != len(tempKeyphrase) - 1): #Checks to see if end of tempKeyphrase has been reached
        tempWord = tempKeyphrase[tempIndex:i4] #If above returns true, tempWord is stored as tempKeyphrase starting at tempIndex and ending at value of i4
        tempArray.append(tempWord) #Appends tempWord to tempArray variable
        tempIndex = i4 + 1 #Sets tempIndex to index of last character from tempWord plus one to skip "space" character
      if (i4 == len(tempKeyphrase) - 1): #Checks to see if end of tempKeyphrase has been reached
        tempWord = tempKeyphrase[tempIndex:i4 + 1] #If above returns true, tempWord is stored as tempKeyphrase starting at tempIndex and ending at value of i4 plus one to skip whitespace character
        tempArray.append(tempWord) #Appends tempWord to tempArray variable
        tempIndex = i4 #Sets tempIndex to index of last character from tempWord
        keyphraseWords[i3] = tempArray #Stores tempArray in nth row of "keyphraseWords" matrix


for i5 in range(len(words)): #Loops through "words" array
  tempWord = words[i5] #Variable to store a temporary word from "words" array
  for i6 in range(len(keyphraseWords)): #Loops through "keyphraseWords" array
    tempArray = keyphraseWords[i6] #Variable that stores a temporary array
    for i7 in range(len(tempArray)): #Loops through temporary array
      if (tempWord[:len(tempArray[i7])] == tempArray[i7]): #Checks to see if tempWord equals nth word of tempArray
        if (i7 != len(tempArray) - 1): #Checks value of i7 to make sure it doesn't reach end of keyphrase
          previousWord = words[i5 - 1] #Variable that stores word before tempWord from case file
          afterWord = words[i5 + 1] #Variable that stores word after tempWord from case file
          previousKeyphrase = tempArray[i7 - 1] #Variable that stores keyphrase before tempWord from case file
          afterKeyphrase = tempArray[i7 + 1] #Variable that stores keyphrase after tempWord from case file
          if (previousWord[:len(previousKeyphrase)] == previousKeyphrase and afterWord[:len(afterKeyphrase)] == afterKeyphrase):
            keywordIndexes.append(i5) #Appends index of where keyword in tempKeyphrase was found
            foundWords.append(tempArray) #Appends tempArray as a phrase to dictionary of important words found in case file
        if (i7 != len(tempArray)): #Checks to make sure i7 doesn't equal length of tempArray
          previousWord = words[i5 - 1] #Variable that stores word before tempWord from case file
          previousKeyphrase = tempArray[i7 - 1] #Variable that stores keyphrase before tempWord from case file
          if (previousWord[:len(previousKeyphrase)] == previousKeyphrase): #Checks to see if previousWord and previousKeyphrase are equal
            keywordIndexes.append(i5) #Appends index of keyword from tempKeyphrase to "keywordIndexes" array
            foundWords.append(tempArray) #Appends tempArray as a phrase to dictionary of important words found in case file
return (keywordIndexes, foundWords) #Returns an array of starting indexes for each keyword found and returns array of found keywords

#Function that takes an array of lines from the document, an array of words from the document, an array of the indexes of each keyword found in the document, and the ith number word in the keywordIndex
#Function returns index of starting sentence of paragraph and index of ith keyword
def getNewIndex(lines, words, keywordIndexes, tempIndex):
```

```
def getNewIndex(lines, words, keywordIndexes, tempIndex):

 i = keywordIndexes[tempIndex]  #Variable that stores the nth (tempIndex) index from keywordIndexes
 indexChar = 0 #Index of Character in tempWord
 startIndex = 0 #Index of starting sentence
 keywordIndex = 0 #Stores index of keyword

 for r in range(len(lines)): #For each line in "lines"
  tempSentence = lines[r] #Variable to store nth line in "lines" array
  wordDict = tempSentence.split() #Creates dictionary of words in "tempSentence"
  for r2 in range(len(wordDict)): #For each word in "wordDict" array
   tempWord = wordDict[r2] #Variable to store nth word in "wordDict" array
   if (len(tempWord) > 1 and tempWord not in stop_words): #Checks to make sure tempWord is not 1 character and makes sure tempWord is not in stopwords
    indexChar += 1 #Increase index by one
   if (indexChar == i): #If index equals tempIndex passed to function
    startIndex = r #If above returns true, set "startIndex" variable to r
    keywordIndex = indexChar #Sets "keywordIndex" variable to indexChar

 return (startIndex, keywordIndex) #Return starting index of two sentences before keyword and index of keyword

def getParagraphs(lines, words, startIndexes, keywords, keywordIndexes):

 allParagraphs = [] #Array to store all Paragraphs
 updatedKeywords = [] #Array to store updatedKeywords
 updatedKeywordIndexes = [] #Array to store updatedKeywordIndexes

 count = 0 #Count variable

 for i in range(0, len(startIndexes)): #For each index in "startIndexes" array
  if (count < len(startIndexes)): #Makes sure count less than the length of "startIndexes" array
   paragraph = "" #Creates empty paragraph string
   num = startIndexes[count] #num variable to store nth index in "startIndexes"
   paragraph += lines[num - 1] #Adds one line before current line to paragraph
   paragraph += " " #Adds a space to paragraph string
   paragraph += lines[num] #Adds current line to paragraph string
   paragraph += " " #Adds a space to paragraph string
   paragraph += lines[num + 1] #Adds the next line to the "paragraph" string
   tempDict = paragraph.split() #Creates temporary dictionary of words in "paragraph" string
   x, x1 = getKeywordIndexes(paragraph, tempDict) #Gets new keywordIndexes and keywords put into an Array
   if (paragraph not in allParagraphs and paragraph not in bannedLines): #Checks to make sure paragraph is not in "allParagraphs" array and makes sure paragraph isn't in "bannedLines"
    allParagraphs.append(paragraph) #If above returns true, appends paragraph to "allParagraphs" array
    updatedKeywords.append(x1) #appends keywords array (x1) to updatedKeywords array
    updatedKeywordIndexes.append(num - 1) #Appends (num minus 1) which is index of the first line in paragraph
   count += len(x1) #count variable increases by the length of x1 (keyword indexes)
  count += 1 #Count increases by one to make sure no repeat indexes occur

 return (allParagraphs, updatedKeywords, updatedKeywordIndexes) #Returns paragraph with two sentences before and after keyword as a string

def getIssues(lines, words):

 startString = "THE ISSUE" #String that indicates start of "Issues" section in case file

 string2 = "REPRESENTA"
 string3 = "ATTORNEY FOR THE BOARD"
 string4 = "WITNESS AT HEARING ON APPEAL"

 endLines = [string2, string3, string4] #Array of lines that indicate end of "Issues" section

 startIndex = 0 #Variable to store index of starting line
 endIndex = 0 #Variable to store index of ending line

 for i in range(0, len(lines)): #Loops through the "lines" array
  tempLine = lines[i] #Variable to hold temporary line in "lines" array
  if tempLine[0:len(startString)] == startString: #Checks to see if tempLine is equal to startString
   startIndex = i + 1 #Saves index plus in order to skip over "THE ISSUE(S)" line in case file

 for i2 in range(0, len(lines)): #Loops through the "lines" array
  if (endIndex == 0): #Checks to make sure endIndex is 0
   tempLine = lines[i2] #Variable to hold temporary line in "lines" array
   for i3 in range(len(endLines)): #Loops through "endLines" array
    if (tempLine[0: len(endLines[i3])] == endLines[i3] or tempLine == endLines[i3]): #Checks to see if tempLine matches any lines that indicate the end of the section
     endIndex = i2 #If above returns "True", index of last line in "Issues" section is stored in endIndex variable

 issues = [] #Array variable that stores each line from "Issues" section seperate
 updatedIssues = [] #Array variable that stores updatedIssues with combined sentences that are more than 1 line in length
 tempSentence = "" #Variable to store temporary sentence

 for i4 in range(startIndex, endIndex): #Loops through "Issues" section starting at startIndex and ending at endIndex
  tempLine = lines[i4] #Variable that stores temporary line from "lines" array
  if (tempLine[-1:] == " " and tempLine[-2:] != "  " and tempLine[-3:] != "   "): #Checks for white space or "space" character at end of tempLine
   issues.append(tempLine[:len(tempLine) - 1]) #If above returns "True", Appends line minus last character to "issues" array
  if (tempLine[-2:] == "  "): #Checks for white space or "space" character at 2nd to last character of tempLine
   issues.append(tempLine[:len(tempLine) - 2]) #If above returns "True", Appends line minus last two characters to "issues" array
  if (tempLine[-3:] == "   "): #Checks for white space or "space" character at 3rd to last character of tempLine
   issues.append(tempLine[:len(tempLine) - 3]) #If above returns "True", Appends line minus last three characters to "issues" array
  if (tempLine[-1:] != " "): #Checks to make sure no white space or "space" character is at end of tempLine
   issues.append(tempLine) #If above returns "True", appends tempLine to "issues" array

 for i5 in range(len(issues)): #Loops through "issues" array
  tempLine = issues[i5] #Variable that stores temporary line from "issues" array
  if (tempLine[-1:] != "."): #Checks last character of tempLine for "." period to see if tempLine is the end of a sentence or not
   tempSentence += tempLine #If above returns "True", tempLine is then added to tempSentence
   tempSentence += " " #Space added after tempLine to make sure the last word of the first line and first word of the second line don't combine
  if (tempLine[-1:] == "."): #Checks last character of tempLine for "." period which indicated end of sentence
   tempSentence += tempLine #Appends tempLine to tempSentence and since there is a period at the end of the line it's the end of the sentence
   updatedIssues.append(tempSentence) #Appends the tempSentence to the "updatedIssues" array as one complete sentence
   tempSentence = "" #Resets tempSentence to an empty string once previous sentence is added/appended to "updatedIssues" array

 return updatedIssues #Returns array of issues seperated by each issues

def getDecisionSectionIndexes(lines):

 startString = "ORDER"
 startString2 = "INTRODUCTION"

 string2 = "Member, Board of Veterans' Appeals"
 string3 = "Member, Board of Veterans' Appeals"
```

```
530   string3 = "Member Board of Veterans' Appeals"
531   string4 = "Member, Board of Veterans Appeals"
532   string5 = "Member Board of Veterans Appeals"
533   string6 = "Acting Member, Board of Veterans' Appeals"
534   string7 = "Acting Member Board of Veterans' Appeals"
535   string8 = "Acting Member, Board of Veterans Appeals"
536   string9 = "Acting Member Board of Veterans Appeals"
537   string10 = "Veterans Law Judge"
538   string11 = "Department of Veterans Affairs"
539   string12 = "_____"
540   string13 = "_____"
541   string14 = "  _____"
542   string15 = "REMAND"
543   string16 = "_____"
544   string17 = "+"
545   string18 = "_____"
546   string19 = "_____"
547
548   strings = [string2, string3, string4, string5, string6, string7, string8, string9, string10, string11, string12, string13, string14, string15, string16, string17, string18, string19]
549
550   startIndex = 0 #Variable that stores starting index of decisions
551   endIndex = 0 #Variable that stores ending index of decisions
552
553
554   for i in range(0, len(lines)): #Loops through all lines in the file
555     tempLine = lines[i]
556     tempDict = tempLine.split()
557     for w2 in range(len(tempDict)):
558       tempWord = tempDict[w2]
559       if (tempWord[:len(startString)] == startString or tempWord[:len(startString2)] == startString2): #Checks to see if tempWord equals "ORDER" to find start index
560         #print(tempWord)
561         startIndex = i + 1 #Stores startIndex as index plus 1 to get index of line after "ORDER"
562
563   for i2 in range(startIndex, len(lines)): #Loops through all lines in file starting at the starting index
564     tempLine = lines[i2]
565     for w in range(0, len(strings)): #Loops through "strings" array
566       if (tempLine[:len(strings[w])] == strings[w] and endIndex == 0): #Checks to see if tempLine equals the wth string in "strings" array
567         endIndex = i2 - 1#If end string is located, stores ending index in variable endIndex
568         break
569
570   if (endIndex == 0):
571     endIndex = len(lines) - 1
572
573   return (startIndex, endIndex, lines) #Returns startIndex and endIndex as ints
574
575 def getDecisionArray(startIndex, endIndex, lines):
576
577   tempDecisions = "" #Variable that stores all lines from startIndex to endIndex in a string
578
579   for i3 in range(startIndex, endIndex): #Loops through lines in file from startIndex to endIndex
580     if (lines[i3] != "" and len(lines[i3]) > 0):
581       tempDecisions += lines[i3] #Adds nth line to tempDecisions
582       if (i3 < endIndex - 1): #Checks to make sure i3 is less than the endIndex minus 1
583         tempDecisions += " " #Adds space to "tempDecisions" string
584
585   decisionArray = tempDecisions.split(".") #Variable that stores tempDecisions seperated by sentences
586   updatedDecisionArray = [] #Variable to store updated decisions
587
588   for a in range(len(decisionArray)): #For each decision in "decisionArray"
589     if (decisionArray[a] != "" or len(decisionArray[a]) > 0): #If decision is not an empty string and longer than 0 characters
590       updatedDecisionArray.append(decisionArray[a]) #Appends decisionArray[a] to updatedDecisionArray
591   decisionArray = updatedDecisionArray #Sets decisionArray to updatedDecisionArray
592
593   return decisionArray #Returns decisionArray as an array of sentence strings from "ORDER" section in case file
594
595
596
597 def getDecisionDictionary(decisionArray):
598
599   decisionDictionary = [] #Variable that stores all words from decision section of case file
600
601   for i in range(len(decisionArray)): #For each decision in decisionArray
602     tempLine = decisionArray[i] #Variable to store ith line in "decisionArray"
603     tempWords = tempLine.split() #Variable to store array of tempLine seperated by words
604     for i2 in range(len(tempWords)): #For each word in tempWords array...
605       tempWord = tempWords[i2] #Variable to store nth word in "tempWords" array
606       if (len(tempWord) >= 1 and tempWord != "ORDER"): #Checks to see if tempWord is greater than 1 and doesn't equal "ORDER"
607         if ("." in tempWord): #Checks to make sure a period isn't in tempWord
608           splitWords = tempWord.split(".") #Splits the tempWord array at each "." (period)
609           for i3 in range(len(splitWords)): #For each word in "splitWords" array
610             tempSplitWord = splitWords[i3] #Variable to store temporary word from "splitWords" array
611             if (i3 % 2 == 0): #Checks to see if i3 % 2 returns remainder of 0
612               tempSplitWord += "." #Adds space to "tempSplitWord" variable
613             decisionDictionary.append(tempSplitWord) #Appends "tempSplitWord" to "decisionDictionary" array
614         if ("." not in tempWord): #Checks to see if there is a period in "tempWord" variable
615           decisionDictionary.append(tempWords[i2]) #Appends "tempWords[i2]" to "decisionDictionary" array
616
617   return decisionDictionary #Returns dictionary of words from decision section as an array
618
619
620 def getDecisionLine(decisionDictionary):
621
622   mentalIssues = ["ptsd", "PTSD", "Ptsd", "psychiat", "Psychiat", "post-trauma", "Post-trauma", "psychotic", "Psychotic", "MOD"] #Array that stores keywords to detect mental issue(s) and not physical
623   endDecisionIndex = 0 #Variable that stores ending index of decision section in case file
624   decisionDictionaryIndex = 0
625   checkMentalIssues = False #Boolean variable to check if mental issue was mentioned in decision section
626
627   for i in range(len(decisionDictionary)): #Loops through decisionDictionary
628     tempWord = decisionDictionary[i] #Variable that stores a temporary word from decisionDictionary
629     if (checkMentalIssues == False): #Checks to see if checkMentalIllness variable is False
630       for i2 in range(len(mentalIssues)): #If above returns true, loops through array of mental illnesses
631         tempMentalIssue = mentalIssues[i2] #Stores nth mental issue from "mentalIssues" array
632         if (tempWord[:len(tempMentalIssue)] == mentalIssues[i2] and decisionDictionaryIndex == 0): #Cheks to see if tempWord and tempMentalIssue match
633           checkMentalIssues = True #If above returns true, change checkMentalIssues boolean variable to True
634           decisionDictionaryIndex = i2
635     if (checkMentalIssues == True and tempWord[-1] == "."): #Checks to see if checkMentalIssues boolean variable is "True" and checks last character of tempWord
636       endDecisionIndex = i #Saves ending index of sentence with mental issue keyword
```

```
    break

  endDecisionIndexCopy = endDecisionIndex #Copy of endDecisionIndex variable in order to keep actual index integer
  startDecisionIndex = 0 #Initialize variable that stores start of sentence with mental issue keyword
  countPeriods = 0

  while (endDecisionIndexCopy >= 0): #While ending index is greater then zero to not loop past start of dictionary
    tempWord = decisionDictionary[endDecisionIndexCopy] #Stores tempWord from decisionDictionary
    if (endDecisionIndexCopy != 0 and len(tempWord) > 0):
      if (tempWord[-1] == "." and countPeriods <= 1): #Checks last character of tempWord to find ending index of sentence prior to sentence with mental issue keyword
        startDecisionIndex = endDecisionIndexCopy #Store start index of mental issue sentence once ending word of previous sentence is found
        countPeriods += 1
    endDecisionIndexCopy -= 1 #Decreases copy of index in order to find start of sentence


  decisionLine = [] #Variable that stores all words from decision section sentence with mental illness
  if (checkMentalIssues == False):
    endDecisionIndex = len(decisionDictionary)
  if (startDecisionIndex == endDecisionIndex):
    startDecisionIndex = 0
  for i3 in range(startDecisionIndex, endDecisionIndex + 1): #Loops through Decision section starting at variable startDecisionIndex to endDecisionIndex
    decisionLine.append(decisionDictionary[i3]) #Appends each word within indexes from decisionDictionary to "decisionLine" array

  return (decisionLine, decisionDictionaryIndex) #Return sentence with mental issue as an array sperated by each word

def getDecision(decisionDictionary, decisionLine, decisionDictionaryIndex):

  class decisionEnum(enum.Enum): #Enumeration class that stores decision types and their abbreviations
    A = ["granted", "approved", "grounded"]
    D = "denie"
    RE = "remand"
    RO = "reopen"
    NRO = "not reopened"


  decision = "" #Variable that stores final decision as a string
  reopenedCheck = False #Boolean variable to check if case decision was reopened
  reopenedIndex = 0 #Variable to store index of 'reopened' word if it's present
  notReopenedCheck = False #Boolean variable to check if decision is "NRO"
  reopenedEndCheck = False #Boolean variable to check if there is another decision after 'Reopened'

  for i in range(0, len(decisionLine)): #Loops through decisionLine
    if (decision == "" and reopenedCheck == False): #Checks to see if decision is an empty string and reopenedCheck boolean variable is "False"
      tempWord = decisionLine[i] #Stores temporary word from decisionLine
      for i2 in decisionEnum: #Loops through Enumeration class
        tempArray = i2.value
        if (isinstance(tempArray, list) == True):
          for x in range(len(tempArray)):
            if (tempWord[:len(tempArray[x])] == tempArray[x]):
              decision = i2.name
        if (isinstance(tempArray, list) == False and tempWord[:len(i2.value)] == i2.value): #Checks to see if tempWord from decisionLine matches any Enumeration class variable
          decision = i2.name #If above returns "True" the variable name (abbreviation) is stored in the "decision" string
          if (decision == "RO"): #Checks to see if decision equals "reopened"
            reopenedCheck = True #If above returns true, changes reopenedCheck variable to "True"
            break #breaks out of both for loops


  if (decision != "" and reopenedCheck == True): #Checks to make sure "decision" string ISN'T empty and "reopenedCheck" variable is "True"
    for r in range(len(decisionDictionary)): #Loops through decisionDictionary
      tempWord = decisionDictionary[r] #Variable that stores temporary word from "decisionDictionary" array
      if (tempWord[:len(decisionEnum.RO.value)] == decisionEnum.RO.value): #Checks to see if tempWord is equal to 'reopen'
        reopenedIndex = r #Stores index of where 'reopen' was found in decisionDictionary
    if (decisionDictionary[reopenedIndex - 1] == "not" and (decisionDictionary[reopenedIndex])[:len(decisionEnum.RO.value)] == decisionEnum.RO.value): #Checks word before 'reopen' to see if it's 'not reop
      decision = decisionEnum.NRO.name #If above returns true, store decision as not reopened
      notReopenedCheck = True #Changes notReopenedCheck to "True"
    if (notReopenedCheck == False): #Checks to make sure the word 'not' WASN'T in front of 'reopen'
      for i3 in range(decisionDictionaryIndex, len(decisionDictionary)): #loops through decisionDictionary starting at 'reopen' index
        tempWord = decisionDictionary[i3] #Variable that stores temporary word from "decisionDictionary" array
        for i4 in decisionEnum: #Loops through decisionEnum
          if (tempWord[:len(i4.value)] == i4.value and i4.name == "D"): #Checks to see if tempWord matches any other decision outcome type
            decision = decisionEnum.NRO.name #If above returns true, decision gets resaved
            reopenedEndCheck = True #Changes reopenedEndCheck variable to "True"
        if (reopenedEndCheck == False): #Checks to see if reopenedEndCheck variable is "False"
          decision = decisionEnum.RO.name #If above returns true, decision is resaved as RO (reopened)


  return decision #Returns decision abbreviation as a string


def getIssues(lines, words): #lines is also original case_text untokenized

  startString = "THE ISSUE" #String that indicates start of "Issues" section in case file

  string2 = "REPRESENTA"
  string3 = "ATTORNEY FOR THE BOARD"
  string4 = "WITNESS AT HEARING ON APPEAL"

  endLines = [string2, string3, string4] #Array of lines that indicate end of "Issues" section

  startIndex = 0 #Variable to store index of starting line
  endIndex = 0 #Variable to store index of ending line

  split_lines = lines.split("\n")


  for i in range(0, len(split_lines)): #Loops through the "lines" array
    tempLine = split_lines[i] #Variable to hold temporary line in "lines" array
    if tempLine[:len(startString)] == startString: #Checks to see if tempLine is equal to startString
      startIndex = i + 1 #Saves index plus in order to skip over "THE ISSUE(S)" line in case file

  for i2 in range(0, len(split_lines)): #Loops through the "lines" array
    if (endIndex == 0): #Checks to make sure endIndex is 0
      tempLine = split_lines[i2] #Variable to hold temporary line in "lines" array
      for i3 in range(len(endLines)): #Loops through "endLines" array
        if (tempLine[0: len(endLines[i3])] == endLines[i3] or tempLine == endLines[i3]): #Checks to see if tempLine matches any lines that indicate the end of the section
          endIndex = i2 #If above returns "True", index of last line in "issues" section is stored in endIndex variable
```

```
        endIndex = i2 #If above returns "True", index of last line in "issues" section is stored in endIndex variable

  issues = [] #Array variable that stores each line from "issues" section seperate"""
  updatedIssues = [] #Array variable that stores updatedIssues with combined sentences that are more than 1 line in length
  tempSentence = "" #Variable to store temporary sentence

  for i4 in range(startIndex, endIndex): #Loops through "issues" section starting at startIndex and ending at endIndex
    tempLine = split_lines[i4] #Variable that stores temporary line from "lines" array
    if (tempLine[-1:] == " " and tempLine[-2:] != "  " and tempLine[-3:] != "   "): #Checks for white space or "space" character at end of tempLine
      issues.append(tempLine[:len(tempLine) - 1]) #If above returns "True", Appends line minus last character to "issues" array
    if (tempLine[-2:] == "  "): #Checks for white space or "space" character at 2nd to last character of tempLine
      issues.append(tempLine[:len(tempLine) - 2]) #If above returns "True", Appends line minus last two characters to "issues" array
    if (tempLine[-3:] == "   "): #Checks for white space or "space" character at 3rd to last character of tempLine
      issues.append(tempLine[:len(tempLine) - 3]) #If above returns "True", Appends line minus last three characters to "issues" array
    if (tempLine[-1:] != " "): #Checks to make sure no white space or "space" character is at end of tempLine
      issues.append(tempLine) #If above returns "True", appends tempLine to "issues" array

  for i5 in range(len(issues)): #Loops through "issues" array
    tempLine = issues[i5] #Variable that stores temporary line from "issues" array
    if (tempLine[-1:] != "."): #Checks last character of tempLine for "." period to see if tempLine is the end of a sentence or not
      tempSentence += tempLine #If above returns "True", tempLine is then added to tempSentence
      tempSentence += " " #Space added after tempLine to make sure the last word of the first line and first word of the second line don't combine
    if (tempLine[-1:] == "."): #Checks last character of tempLine for "." period which indicated end of sentence
      tempSentence += tempLine #Appends tempLine to tempSentence and since there is a period at the end of the line it's the end of the sentence
      updatedIssues.append(tempSentence) #Appends the tempSentence to the "updatedIssues" array as one complete sentence
      tempSentence = "" #Resets tempSentence to an empty string once previous sentence is added/appended to "updatedIssues" array


  return updatedIssues #Returns array of issues seperated by each issues


def sort(allParagraphs, keywords, keywordIndexes):

  sortedParagraphs = []
  sortedKeywords = []
  sortedIndexes = []

  tempSortedParagraphs = []
  tempSortedKeywords = []
  tempSortedIndexes = []

  for i in range(len(allParagraphs)): #For each paragraph in "allParagraphs"
    tempKeyword = keywords[i] #Variable to store nth keyword in "keywords" array
    if (len(tempKeyword) == 1): #Checks to make sure length of "tempKeyword" is greater than 1
      tempSortedKeywords.append(tempKeyword) #Appends "tempKeyword" to "tempSortedKeywords" array
      tempSortedParagraphs.append(allParagraphs[i]) #Appends "allParagraphs[i]" to "tempSortedParagraphs" array
      tempSortedIndexes.append(keywordIndexes[i]) #Appends "keywordIndexes[i]" to "tempSortedIndexes" array
    if (len(tempKeyword) > 1): #Checks to make sure "tempKeyword" is longer than 1
      tempArray = [] #Initializes empty array
      for i2 in range(len(tempKeyword)): #For each keyword in "tempKeyword" array
        if (type(tempKeyword[i2]) == list): #Checks to see if "tempKeyword[i2]" is of type 'list'
          newTempKeyword = tempKeyword[i2] #If above returns true, stores the nth "tempKeyword" as "newTempKeyword"
          combinedWord = "" #Initialize empty string to store combinedWord
          for i3 in range(len(newTempKeyword)): #For each keyword in "newTempKeyword" array
            combinedWord += newTempKeyword[i3] #Adds "newTempKeyword[i3]" to "combineWord" string
            if (i3 < len(newTempKeyword) - 1): #Checks to see if i3 is less than the length of "newTempKeyword" minus 1
              combinedWord += " " #Adds a space to "combineWord" variable
          if (combinedWord not in tempArray): #Checks to make sure "combineWord" isn't in tempArray
            tempArray.append(combinedWord) #If above returns true, appends "combineWord" variable to tempArray
        else:
          if (tempKeyword[i2] not in tempArray): #Checks to see if "tempKeyword[i2]" is not in tempArray
            tempArray.append(tempKeyword[i2]) #If above returns true, appends "tempKeyword[i2]" to tempArray
      tempArray.sort() #Sorts tempArray alphabetically
      tempSortedKeywords.append(tempArray)  #Appends tempArray to tempSortedKeywords
      tempSortedParagraphs.append(allParagraphs[i]) #Appends "allParagraphs[i]" to tempSortedParagraphs
      tempSortedIndexes.append(keywordIndexes[i]) #Appends "keywordIndexes[i]" to tempSortedIndexes

  sortedKeywords, sortedParagraphs, sortedIndexes = zip(*sorted(zip(tempSortedKeywords, tempSortedParagraphs, tempSortedIndexes)))

  return (sortedParagraphs, sortedKeywords, sortedIndexes) #Returns "sortedArrayParagraphs", "sortedKeywords", and "sortedIndexes"

def add_data(caseNo, decision, keywords, decisionArray, decisionLine, decisionIndex, issues, r):


  for i in range(0, len(issues)): #Loops through length of "issues" array
    if (i == 0): #Checks to see if i variable is 0
      print("\n=======================================ISSUES=======================================\n\n")
    tempIssue = issues[i] #Variable that stores temporary line from "issues" array
    print(tempIssue, "\n") #Prints tempIssues

  for w in range(len(decisionArray)): #Loops through "decisionArray" that stores each line from "decision" section
    tempLine = decisionArray[w] #Decision that stores temporary line from "decisionArray" array
    #print(decisionLine)
    if (w == 0): #Checks to see if w equals 0
      print("\n=======================================DECISIONS=======================================\n\n")
    if (len(tempLine) > 1 and tempLine != "ORDER" and tempLine != "order"):
      if (tempLine[0] == " " and tempLine[1] != " "): #Checks first and second character of tempLine to make sure first character is a space and second character is not a "space" character
        print("{}. {}\n".format(w + 1, tempLine[1:])) #Prints tempLine starting at 2nd index
      if (tempLine[0] == " " and tempLine[1] == " "): #Checks first two characters to make sure they are spaces
        print("{}. {}\n".format(w + 1, tempLine[2:])) #Prints tempLine starting at 3rd index
      if (tempLine[0] != " "):
        print("{}. {}\n".format(w + 1, tempLine)) #Prints tempLine

  startIndex = 0
  endIndex = 0
  countf = 0

  for f in range(len(decisionLine)): #Loops through "decisionLine" array
    tempWord = decisionLine[f]
    if (f == decisionIndex):
      countf = f
      while ((decisionLine[countf][-1] != "." and countf < len(decisionArray) - 1):
        countf += 1
    endIndex = countf

  tempEndIndex = endIndex
```

```
857
858
859   while ((decisionArray[tempEndIndex - 1])[-1] != "." and tempEndIndex > 0):
860     tempEndIndex -= 1
861   startIndex = tempEndIndex
862
863   tempDecisionLine = "" #Variable to hold combined sentence from "decisionLine"
864
865   for s in range(startIndex, endIndex + 1):
866     tempDecisionLine += decisionArray[s]
867     tempDecisionLine += " "
868
869
870   decisionLine = tempDecisionLine #Resaves variable
871   if (len(decisionLine) > 1): #Checks length of decisionLine to make sure it is greater than 0
872     print("\n====================================TEST DECISION====================================\n")
873     print("1.", decisionLine)
874
875
876   print("\n====================================CHECK DECISION====================================\n")
877
878   checkDecision = 0
879
880   if (decision != ""): #Checks to make sure decision string isn't empty
881     print("DECISION: {}".format(decision))
882     print("\nIs Decision Correct?\n")
883     print("1. Yes")
884     print("2. No\n")
885     checkDecision = input("Answer: ") #Variable that stores integer response from question above
886     checkDecision = int(checkDecision) #Converts above variable from string to integer
887
888   if (checkDecision == 2 or decision == ""): #Checks to see if "checkDecision" variable equals 2
889     print("\nPlease Specify Decision\n")
890     print("A (Approved")
891     print("RO (Reopened")
892     print("NRO (Not Reopened")
893     print("RE (Remanded)")
894     print("D (Denied)")
895     print("U (Unknown)")
896     decision = input("\nType Answer: ")
897   if(checkDecision == 1): #Checks to see if "checkDecision" variable equals 1
898     decision = decision
899
900
901   if (sheet.cell_value(r, 3) == "None" or sheet.cell_value(r, 3) == ""): #Checks to see if cell (r, 3) is "None" or empty
902     copySheet.write(r, 0, caseNo) #Copies sheet
903     copySheet.write(r, 3, decision) #Writes over the decision onto the copied sheet in the correct cell
904     copyBook.save("C:/Users/Owner/Desktop/Evan Searmone/Data/Temporary Data.xls") #Saves the copied sheet
905
906 def add_discrim(caseNo, keywordParagraphs, keywords, r): #Adds discrimination type to excel file
907
908   print("====================================KEYWORD PARAGRAPHS====================================\n")
909
910   for i in range(0, len(keywordParagraphs)): #For each paragraph in "keywordParagraphs"
911     print("KeyWord: {}\n".format(keywords[i]))
912     print(keywordParagraphs[i])
913     print("\n")
914
915
916   print("\n===============CHECK RO===============\n")
917   print("\nIs There Evidence of Racial Discrimination?\n")
918   print("1. Yes")
919   print("2. No")
920   print("3. Unspecified")
921   print("4. Check Later\n")
922
923   checkRoDecision = input("Answer: ") #Asks for user input on if the file had racial discrimination
924   checkRoDecision = int(checkRoDecision) #Casts variable to an integer
925
926   responseRo = ""
927
928   if checkRoDecision == 1:
929     responseRo = "Yes"
930   if checkRoDecision == 2:
931     responseRo = "No"
932   if checkRoDecision == 3:
933     responseRo = "U"
934   if checkRoDecision == 4:
935     responseRo = "CL"
936
937
938   if (sheet.cell_value(r, 4) == "None" or sheet.cell_value(r, 4) == ""): #Checks cell (r, 4) to see if it's empty
939     copySheet.write(r, 0, caseNo) #Writes caseNo into copied excel sheet
940     copySheet.write(r, 4, responseRo) #Writes response to racial discrimination in case to copied excel file
941     copyBook.save("C:/Users/Owner/Desktop/Evan Searmone/Data/Temporary Data.xls") #Saves file
942
943   print("\n===============CHECK SO===============\n")
944   print("\nIs There Evidence of Sexual Discrimination?\n")
945   print("1. Yes")
946   print("2. No")
947   print("3. Unspecified")
948   print("4. Check Later\n")
949
950   checkSoDecision = input("Answer: ") #Asks for user input on if the file had sexual discrimination
951   checkSoDecision = int(checkSoDecision) #Casts variable to an integer
952
953   responseSo = ""
954
955   if checkSoDecision == 1:
956     responseSo = "Yes"
957   if checkSoDecision == 2:
958     responseSo = "No"
959   if checkSoDecision == 3:
      responseSo = "U"
    if checkSoDecision == 4:
```

```
    responseSo = "CL"


if (sheet.cell_value(r, 3) == "None" or sheet.cell_value(r, 3) == ""): #Checks cell (r, 3) to see if it's empty
    copySheet.write(r, 0, caseNo) #Writes caseNo into copied excel sheet
    copySheet.write(r, 3, responseSo) #Writes response to racial discrimination in case to copied excel file
    copyBook.save("C:/Users/Owner/Desktop/Evan Seamone/Data/Temporary Data.xls") #Saves file
```

Appendix C

Race Discrimination Classifier Code


```
# -*- coding: utf-8 -*-
# Racial discrimination identification


import os
import re
import pandas as pd
import numpy as np
import gensim
import nltk
from sklearn.model_selection import train_test_split
from sklearn import linear_model
from sklearn.feature_extraction.text import CountVectorizer,
TfidfVectorizer
from sklearn.metrics import accuracy_score, confusion_matrix
from sklearn.metrics import precision_recall_fscore_support
import matplotlib.pyplot as plt
from gensim.models import Word2Vec
from sklearn.neighbors import KNeighborsClassifier
from sklearn import linear_model
from nltk.corpus import stopwords

def get_relevant_section(case_text):
    regex_to_find_relevant_section1 =
r"\n\s*REASONS\sAND\sBASES\sFOR\sFINDINGS?\sAND\sCONCLUSIONS??\s*\n\s*
(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+Board\sof\sVeterans[’’]\
sAppeals)|(?:_____)|(?:[A-Z\ \.\:]{3,}?\s*\n))"
    regex_to_find_relevant_section2 =
r"\n\s*REMAND??\s*\n\s*(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+B
oard\sof\sVeterans[’’]\sAppeals)|(?:_____)|(?:[A-Z\
\.\:]{3,}?\s*\n))"

    relevant_section1 = re.findall(regex_to_find_relevant_section1,
case_text, re.DOTALL)
    relevant_section2 = re.findall(regex_to_find_relevant_section2,
case_text, re.DOTALL)

    regex_to_find_relevant_sentences =  '[^.]* (?:racial|racism|race-
based|trauma|ptsd|harass|slur|mistreat|maltreat|oppress|discriminat)[^
.]*\.'
    relevant_sentences1=re.findall(regex_to_find_relevant_sentences,
''.join(relevant_section1), re.DOTALL)
    relevant_sentences2=re.findall(regex_to_find_relevant_sentences,
''.join(relevant_section2), re.DOTALL)
    relevant_sentences= relevant_sentences1+relevant_sentences2
    return ''.join(relevant_sentences)

def create_dataset_RD(dataset_ids):
    case_files_directory=os.path.join('\\02 case files converted to
utf-8\\')
    #
    for index, row in dataset_ids.iterrows():
```

```
        filename=str(row['case_id'])+".txt";
        path_to_order_section = os.path.join(case_files_directory,
filename)
        with open(path_to_order_section, 'r', encoding='utf-8') as
infile:
            case_text = infile.read()
        case_text_relevant=get_relevant_section(case_text)
        filt1=case_text_relevant.lower()
        filt2=re.sub('[^a-z ]+', '', filt1)
        dataset_ids.at[index, 'case_text']=filt2

    dataset_ids.loc[dataset_ids['case_text']=='', 'rd']='No'
    train_data, test_data = train_test_split(dataset_ids,
test_size=0.25, random_state=22)#22
    return train_data, test_data

def create_prediction_dataset_RD():
    case_files_directory= os.path.join('\\02 case files converted to
utf-8\\')
    #
    list_of_cases=[]
    list_of_case_ids=[]
    #
    for index, filename in
enumerate(os.listdir(case_files_directory)):
        if index % 1000 == 0:
            print(index)
        #if index > 10000:
        #    break

        path_to_file = os.path.join(case_files_directory, filename)
        with open(path_to_file, 'r', encoding='utf-8') as infile:
            case_text = infile.read()
        case_text_relevant=get_relevant_section(case_text)
        filt1=case_text_relevant.lower()
        filt2=re.sub('[^a-z ]+', '', filt1)

        list_of_cases.append(filt2)
        list_of_case_ids.append(int(filename.split('.')[0]))

    dict_data={'case_id':list_of_case_ids, 'case_text':list_of_cases}
    return pd.DataFrame(dict_data)



def plot_confusion_matrix(cm, title='Confusion matrix',
cmap=plt.cm.Blues):
    plt.imshow(cm, interpolation='nearest', cmap=cmap)
    plt.title(title)
    plt.colorbar()
    tick_marks = np.arange(len(DV))
    target_names = DV
```

```
    plt.xticks(tick_marks, target_names, rotation=45)
    plt.yticks(tick_marks, target_names)
    plt.tight_layout()
    plt.ylabel('True label')
    plt.xlabel('Predicted label')

def evaluate_prediction_RD(predictions, target, title="Confusion
matrix"):
    print('accuracy %s' % accuracy_score(target, predictions))
    cm = confusion_matrix(target, predictions, labels=DV)
    print('confusion matrix\n %s' % cm)
    print('(row=expected, col=predicted)')
    cm_normalized = cm.astype('float') / cm.sum(axis=1)[:, np.newaxis]
    plot_confusion_matrix(cm_normalized, title + ' Normalized')
    return precision_recall_fscore_support(target, predictions,
average=None, labels=['No', 'Yes'])

def predict_RD(vectorizer, classifier, data):
    data_features = vectorizer.transform(data['case_text'])
    predictions = classifier.predict(data_features)
    target = data['rd']
    return evaluate_prediction_RD(predictions, target)

def predict_no_evaluation_RD(vectorizer, classifier,
data_only_order_section):
    data_features =
vectorizer.transform(data_only_order_section['case_text'])
    predictions = classifier.predict(data_features)
    return predictions

def train_BOW_RD(train_data):
    count_vectorizer = CountVectorizer(analyzer="word",
tokenizer=nltk.word_tokenize,
                                       preprocessor=None,
stop_words='english', max_features=10000)
    train_data_features =
count_vectorizer.fit_transform(train_data['case_text'])

    #logreg = linear_model.LogisticRegression(n_jobs=1, C=1e1)
    logreg = linear_model.SGDClassifier(n_jobs=1,
learning_rate='constant', eta0=0.01, max_iter=1000)

    logreg = logreg.fit(train_data_features, train_data['rd'])
    return count_vectorizer, logreg

def train_RD(train_data):
    tf_idfvect = TfidfVectorizer(min_df=2,
tokenizer=nltk.word_tokenize, #min_df=2
    preprocessor=None, stop_words='english')

    train_data_features =
tf_idfvect.fit_transform(train_data['case_text'])
```

```
    #logreg = linear_model.LogisticRegression(n_jobs=1, C=1e1)
    logreg = linear_model.SGDClassifier(n_jobs=1,
learning_rate='constant', eta0=0.001, max_iter=10000)

    # tol=0.001 ; tolerance for stopping
    # max_iter=100
    # , class_weight='balanced' ??

    logreg = logreg.fit(train_data_features, train_data['rd'])
    return tf_idfvect, logreg

def trainw2v(text_tokenized):
    model_wv = gensim.models.Word2Vec(
        text_tokenized,
        size=160,
        window=10,
        min_count=2,
        workers=10,
        iter=10)
    return model_wv
    #model.wv.most_similar(positive="worddd", topn=6);

def train_embedded(X_train_word_average, train_data):
    logreg = linear_model.LogisticRegression(n_jobs=1, C=1e5)
    logreg = logreg.fit(X_train_word_average, train_data['case_text'])
    return logreg

def w2v_tokenize_text(text):
    tokens = []
    for sent in nltk.sent_tokenize(text, language='english'):
        for word in nltk.word_tokenize(sent, language='english'):
            if len(word) < 2:
                continue
            tokens.append(word)
    tokenized_filt_f=[w for w in tokens if not w in stop_words]
    return tokenized_filt_f

def word_averaging(wv, words):
    all_words, mean = set(), []
    for word in words:
        if isinstance(word, np.ndarray):
            mean.append(word)
        elif word in wv.vocab:
            mean.append(wv.syn0norm[wv.vocab[word].index])
            all_words.add(wv.vocab[word].index)

    if not mean:
        return np.zeros(wv.layer1_size,)
```

```
    mean =
gensim.matutils.unitvec(np.array(mean).mean(axis=0)).astype(np.float32
)
    return mean

def word_averaging_list(wv, text_list):
    return np.vstack([word_averaging(wv, review) for review in
text_list ])


def word2vec_RD(train_data):
    train_tokenized = traindata.apply(lambda r:
w2v_tokenize_text(r['case_text']), axis=1).values
    model_w2v=trainw2v(train_tokenized)
    #test_tokenized = testdata.apply(lambda r:
w2v_tokenize_text(r['order_section']), axis=1).values
    X_train_word_average =
word_averaging_list(model_w2v,train_tokenized)
    #X_test_word_average =
word_averaging_list(model_w2v,test_tokenized)
    logreg=train_embedded(X_train_word_average, traindata)

    return model_w2v, logreg

#
#
#
stop_words=stopwords.words('english')
stop_words.extend(['january', 'february', 'march', 'april', 'may',
'june', 'july', 'august', 'september', 'october', 'november',
'december'])
stop_words.extend(['va', 'form'])
#
#
dataset_filepath=os.path.join('20200207_RD.csv')

df=pd.read_csv(dataset_filepath)
df["case_text"]=""
#Filter 'No' and 'Yes'
dataset_ids = df.loc[(df['rd']=='Yes') | (df['rd']=='No')] # |
(df['sod']=='U')
DV=dataset_ids.rd.unique()

#Split train and test data
print("\nCreating datasets...")
traindata, testdata = create_dataset_RD(dataset_ids)
#model training
print("\nTraining...")
vectorizer, clasfr = train_RD(traindata)
#model testing
print("\nTesting...\n")
```

```
precision, recall, fscore, support=predict_RD(vectorizer, clasfr,
testdata)
print('precision', precision)
print('recall', recall)
print('fscore', fscore)

print("\nCreating prediction dataset...\n")
dff= create_prediction_dataset_RD()

print("\nPredicting...\n")
predictions = predict_no_evaluation_RD(vectorizer, clasfr, dff)
dff['predicted_RD']=predictions
print("\nComplete!\n")
dff_yes=dff.loc[dff['predicted_RD']=='Yes']

dff_yes.to_csv('predicted_rds.csv')

#### END ##########
####################
####################
```

Appendix D

Sexual-Orientation Discrimination Classifier Code


```
# -*- coding: utf-8 -*-
# Sexual orientation discrimination
#

import os
import re
import pandas as pd
import numpy as np
import gensim
import nltk
from sklearn.model_selection import train_test_split
from sklearn import linear_model
from sklearn.feature_extraction.text import CountVectorizer,
TfidfVectorizer
from sklearn.metrics import accuracy_score, confusion_matrix
from sklearn.metrics import precision_recall_fscore_support
import matplotlib.pyplot as plt
from gensim.models import Word2Vec
from sklearn.neighbors import KNeighborsClassifier
from sklearn import linear_model
from nltk.corpus import stopwords

def get_relevant_section(case_text):
    regex_to_find_relevant_section1 =
r"\n\s*REASONS\sAND\sBASES\sFOR\sFINDINGS?\sAND\sCONCLUSIONS??\s*\n\s*
(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+Board\sof\sVeterans['']\
sAppeals)|(?:_____)|(?:[A-Z\ \.\:]{3,}?\s*\n))"
    regex_to_find_relevant_section2 =
r"\n\s*REMAND??\s*\n\s*(.+?)\s*\n\s*(?:(?:(?:[^\n]+\n)?[^\n]+\n[^\n]+B
oard\sof\sVeterans['']\sAppeals)|(?:_____)|(?:[A-Z\
\.\:]{3,}?\s*\n))"

    relevant_section1 = re.findall(regex_to_find_relevant_section1,
case_text, re.DOTALL)
    relevant_section2 = re.findall(regex_to_find_relevant_section2,
case_text, re.DOTALL)

    regex_to_find_relevant_sentences =  '[^.]*
(?:trauma|ptsd|harass|slur|mistreat|maltreat|oppress|discriminat|sex|h
omo|lesbian|fag|gay|sodom|dyke)[^.]*\.'
    relevant_sentences1=re.findall(regex_to_find_relevant_sentences,
''.join(relevant_section1), re.DOTALL)
    relevant_sentences2=re.findall(regex_to_find_relevant_sentences,
''.join(relevant_section2), re.DOTALL)
    relevant_sentences= relevant_sentences1+relevant_sentences2
    return ''.join(relevant_sentences)

def create_dataset_SOD(dataset_ids):
    case_files_directory=os.path.join('C:\\')
    #
    for index, row in dataset_ids.iterrows():
       filename=str(row['case_id'])+".txt";
```

```
        path_to_order_section = os.path.join(case_files_directory,
filename)
        with open(path_to_order_section, 'r', encoding='utf-8') as
infile:
            case_text = infile.read()
        case_text_relevant=get_relevant_section(case_text)
        filt1=case_text_relevant.lower()
        filt2=re.sub('[^a-z ]+', '', filt1)
        dataset_ids.at[index, 'case_text']=filt2

    dataset_ids.loc[dataset_ids['case_text']=='', 'sod']='No'
    train_data, test_data = train_test_split(dataset_ids,
test_size=0.25, random_state=24)#25#23
    return train_data, test_data

def create_prediction_dataset_SOD():
    case_files_directory=os.path.join('C:\\')
    #
    list_of_cases=[]
    list_of_case_ids=[]
    #
    for index, filename in
enumerate(os.listdir(case_files_directory)):
        path_to_file = os.path.join(case_files_directory, filename)
        with open(path_to_file, 'r', encoding='utf-8') as infile:
            case_text = infile.read()
        case_text_relevant=get_relevant_section(case_text)
        filt1=case_text_relevant.lower()
        filt2=re.sub('[^a-z ]+', '', filt1)

        list_of_cases.append(filt2)
        list_of_case_ids.append(int(filename.split('.')[0]))

    dict_data={'case_id':list_of_case_ids, 'case_text':list_of_cases}
    return pd.DataFrame(dict_data)


def evaluate_prediction_SOD(predictions, target, title="Confusion
matrix"):
    print('accuracy %s' % accuracy_score(target, predictions))
    print('(row=expected, col=predicted)')
    return precision_recall_fscore_support(target, predictions,
average=None, labels=['No', 'Yes'])

def predict_SOD(vectorizer, classifier, data):
    data_features = vectorizer.transform(data['case_text'])
    predictions = classifier.predict(data_features)
    target = data['sod']
    return evaluate_prediction_SOD(predictions, target)

def predict_no_evaluation_SOD(vectorizer, classifier,
data_only_order_section):
```

```
    data_features =
vectorizer.transform(data_only_order_section['case_text'])
    predictions = classifier.predict(data_features)
    return predictions

def train_BOW_SOD(train_data):
    count_vectorizer = CountVectorizer(analyzer="word",
tokenizer=nltk.word_tokenize,
                                       preprocessor=None,
stop_words='english', max_features=10000)
    train_data_features =
count_vectorizer.fit_transform(train_data['case_text'])

    logreg = linear_model.LogisticRegression(n_jobs=1, C=1e1)
    #logreg = linear_model.SGDClassifier(n_jobs=1,
learning_rate='constant', eta0=0.01, max_iter=1000)

    logreg = logreg.fit(train_data_features, train_data['sod'])
    return count_vectorizer, logreg

def train_SOD(train_data):
    tf_idfvect = TfidfVectorizer(min_df=2,
tokenizer=nltk.word_tokenize, #min_df=2
    preprocessor=None, stop_words='english')
    train_data_features =
tf_idfvect.fit_transform(train_data['case_text'])
    #logreg = linear_model.LogisticRegression(n_jobs=1, C=1e1)
    logreg = linear_model.SGDClassifier(n_jobs=1,
learning_rate='constant', eta0=0.001, max_iter=10000)
    # tol=0.001 ; tolerance for stopping
    # max_iter=100

    logreg = logreg.fit(train_data_features, train_data['sod'])
    return tf_idfvect, logreg

def trainw2v(text_tokenized):
    model_wv = gensim.models.Word2Vec(
        text_tokenized,
        size=160,
        window=10,
        min_count=2,
        workers=10,
        iter=10)
    return model_wv
    #model.wv.most_similar(positive="worddd", topn=6);

def train_embedded(X_train_word_average, train_data):
    logreg = linear_model.LogisticRegression(n_jobs=1, C=1e5)
    logreg = logreg.fit(X_train_word_average, train_data['case_text'])
    return logreg

def w2v_tokenize_text(text):
```

```
    tokens = []
    for sent in nltk.sent_tokenize(text, language='english'):
        for word in nltk.word_tokenize(sent, language='english'):
            if len(word) < 2:
                continue
            tokens.append(word)
    tokenized_filt_f=[w for w in tokens if not w in stop_words]
    return tokenized_filt_f

def word_averaging(wv, words):
    all_words, mean = set(), []
    for word in words:
        if isinstance(word, np.ndarray):
            mean.append(word)
        elif word in wv.vocab:
            mean.append(wv.syn0norm[wv.vocab[word].index])
            all_words.add(wv.vocab[word].index)

    if not mean:
        return np.zeros(wv.layer1_size,)

    mean =
gensim.matutils.unitvec(np.array(mean).mean(axis=0)).astype(np.float32
)
    return mean

def word_averaging_list(wv, text_list):
    return np.vstack([word_averaging(wv, review) for review in
text_list ])


def word2vec_SOD(train_data):
    train_tokenized = traindata.apply(lambda r:
w2v_tokenize_text(r['case_text']), axis=1).values
    model_w2v=trainw2v(train_tokenized)
    #test_tokenized = testdata.apply(lambda r:
w2v_tokenize_text(r['order_section']), axis=1).values
    X_train_word_average =
word_averaging_list(model_w2v,train_tokenized)
    #X_test_word_average =
word_averaging_list(model_w2v,test_tokenized)
    logreg=train_embedded(X_train_word_average, traindata)
    return model_w2v, logreg

#
#
#
stop_words=stopwords.words('english')
stop_words.extend(['january', 'february', 'march', 'april', 'may',
'june', 'july', 'august', 'september', 'october', 'november',
'december'])
stop_words.extend(['va', 'form'])
```

```
#
#
dataset_filepath=os.path.join('C:\\Users\\sivav\\Projects\\va_nlp\\cas
eoutcome_classfication\\traintestdata\\20200207_SOD_postmanrevw.csv')

df=pd.read_csv(dataset_filepath)
df["case_text"]=""
#Filter 'No' and 'Yes'
dataset_ids = df.loc[(df['sod']=='Yes') | (df['sod']=='No')] # |
(df['sod']=='U')
DV=dataset_ids.sod.unique()

#Split train and test data
print("\nCreating datasets...")
traindata, testdata = create_dataset_SOD(dataset_ids)
#model training
print("\nTraining...")
vectorizer, clasfr = train_SOD(traindata)
#model testing
print("\nTesting...\n")
precision, recall, fscore, support=predict_SOD(vectorizer, clasfr,
testdata)
print('precision', precision)
print('recall', recall)
print('fscore', fscore)

print("\nCreating prediction dataset...\n")
dff= create_prediction_dataset_SOD()

print("\nPredicting...\n")
predictions = predict_no_evaluation_SOD(vectorizer, clasfr, dff)
dff['predicted_SOD']=predictions
print("\nComplete!\n")
dff_yes=dff.loc[dff['predicted_SOD']=='Yes']
dff_no=dff.loc[dff['predicted_SOD']=='No']

dff_yes.to_csv('C:\\predicted_sod_yes.csv')
dff_no.to_csv('C:\\predicted_sod_no.csv')

#### END #########
###################
###################
```

Appendix E

Data Dictionary for Coding of Case Content

Variable	Description	Variable Labels	Limitations/Notes
Case_Outcome	character variable indicating case outcome	A = approved; D = denied	
Outcome	numeric variable indicating case outcome	0 = denied; 1 = approved	
Discrimination_Type	type of identified discrimination in claim	R = racial discrimination SO = sexual-orientation discrimination R/SO = combination of racial and sexual-orientation discrimination	
Type	recoded discrimination type	1 = racial discrimination 2 = sexual-orientation and combination claims	
DADT	"Don't Ask, Don't Tell" policy; repealed September 2011	1=pre-repeal 2=post-repeal	Status based on the decision date of the appeal
DSM_Version	Version of the DSM used in the diagnoses of the veteran and evaluation of claim	3=version 3 4=version 4 5=version 5	Most frequently identified in the opinion; in cases that did not explicitly identify the DSM version, the date of appeal was utilized as a proxy
Draft_Era	flag to identify pre- and post-draft veterans	1=draft era 2=post-draft era	Calculated based on veteran's first and last year of service
Region	One of four regions, identifying the originating regional office	West South Midwest Northeast	
Representation	Legal counsel of appellant	String	Taken directly from the opinion
Representation_Flag	Dummy variable for represented or pro se	1=represented 2=pro se 3=unknown	
Race	racial or ethnic designation identified or reasonably inferred from the opinion text	Asian	LOTS of missing data; even in racial discrimination cases, race is rarely identified
		African-American	
		Hispanic	
		Native American	

		Native Hawaiian/Pacific Islander	
		Other Minority	
		White	
Gender		1=male	
		2=female	
		3=transgender/transsexual	
Variable	**Description**	**Variable Labels**	**Limitations/Notes**
Sexual_Orientation	derived from opinion context	Presumed Heterosexual	not a sexual orientation case; sexual orientation not specifically mentioned
		Heterosexual	mention of relations with opposite sex, such as spouse, gf/bf, etc AND absence of mention of bisexuality
		Presumed Homosexual	sexual orientation can be deduced from context but is not explicitly stated
		Homosexual	sexual orientation is explicitly mentioned by veteran in supporting evidence
		Bisexual	sexual orientation is explicitly mentioned by veteran in supporting evidence
		Transgender	sexual orientation is explicitly mentioned by veteran in supporting evidence or context blatantly infers transgenderism
SO_Recode	Recoded categories of sexual orientation	1=presumed heterosexual and heterosexual	
		2=presumed homosexual and homosexual	
		3=bisexual/transsexual	
Branch_of_Service		Air Force Army Coast Guard Marines Navy Unreported	In the rare event of two branches of service, the active duty branch and/or the longest tenure was coded
Begin_Service	First year of service	4-digit year	
End_Service	Last year of service	4-digit year	
Years_of_Service	calculated variable	End_Service - Begin_Service	this calculation may include service gaps, not always identified by the opinion

Medals_Awards	raw number of medals / awards / honors / ribbons / badges, if mentioned in the opinion		not consistently documented
Awards_Flag	dummy variable to distinguish those with a record of honors and those without	0=no honors 1=honors (regardless of number) documented	
Service_Era		World War II = December 7, 1941, to December 31, 1946	
		Korean conflict = June 27, 1950, to January 31, 1955	
		Vietnam War era = February 28, 1961, to May 7, 1975, for Veterans who served in the Republic of Vietnam during that period. August 5, 1964, to May 7, 1975, for Veterans who served outside the Republic of Vietnam	
		Gulf War = August 2, 1990, through a future date to be set by law or presidential proclamation	
		Peacetime era = service period does not span one of the war eras	
		Multiple = service spanning more than one war or peace era	
Num_MH_Claimed	Calculated variable	Sum of mental health conditions being adjudicated as part of current claim	If Acquired Psychiatric Disorder is the only condition listed, that's reflected in the dataset. If APD is accompanied by the formal DSM conditions, APD is not coded but the formal diagnoses are.
Administrative_Discrimination	Dummy variable	0=no 1=yes	discrimination in areas such as discharge, promotion, rank, work conditions, treatment by superiors
Interrogation	Dummy variable	0=no 1=yes	formal interrogation/investigation of one's sexual orientation
Harassment	Dummy variable	0=no 1=yes	Name-calling, demeaning behavior, intimidation, threats

Physical_Assault	Dummy variable	0=no 1=yes	Physically violent altercation
Combat	Dummy variable	0=no 1=yes	evidence of combat trauma/exposure
Sexual_Assault	Dummy variable	0=no 1=yes	includes attempted assault and sexual harassment
Preservice_Trauma	Dummy variable	0=no 1=yes	opinion contains information about pre-service traumatic events
Num_Trauma_Types	Calculated variable	Sum of traumatic events (administrative discrimination, interrogation, harassment, combat, and preservice trauma)	
MST_Flag	Dummy variable	0=no 1=yes	MST explicitly claimed
Childhood_Phy_Sex_Abuse	Dummy variable	0=no 1=yes	childhood physical and/or sexual abuse noted in supporting evidedence; all records in this category were included in pre-service trauma; this category identifies preservice trauma that was physically or sexually abusive in nature
Claimed_MH_Disorder	claimed mental health disorder/condition	name of claimed disorder	
Claimed_MH_Disorder_2		additional mental health disorders claimed	
Claimed_MH_Disorder_3		additional mental health disorders claimed	
Claimed_MH_Disorder_4		additional mental health disorders claimed	
Category_1		diagnosis in Claimed_MH_Disorder rolled up to the DSM main grouping	
Category_2		diagnosis in Claimed_MH_Disorder_2 rolled up to the DSM main grouping	
Category_3		diagnosis in Claimed_MH_Disorder_3 rolled up to the DSM main grouping	
Category_4		diagnosis in Claimed_MH_Disorder_4 rolled up to the DSM main grouping	
Granted		mental health condition claimed granted on	
Granted_2		additional mental health conditions granted	

Granted_3		additional mental health conditions granted	
Granted_Cat		diagnosis in Granted rolled up to the DSM main grouping	Null for all denied claims
Granted_Cat_2		diagnosis in Granted_2 rolled up to the DSM main grouping	
Granted_Cat_3		diagnosis in Granted_3 rolled up to the DSM main grouping	
Reason		summary of rationale for denial	
Notes		unique details of the case/opinion; brief summary of opinion	

Appendix F

IRB Exemption Approval

Northeastern

NOTIFICATION OF IRB ACTION

Date: November 12, 2019 IRB #: CPS19-10-11

Principal Investigator(s):	Carlos Cuevas Evan Seamone
Department:	Doctor of Law & Policy College of Professional Studies
Address:	20 Belvidere Northeastern University
Title of Project:	Stigma-in-Arms: A Qualitative, "Big Data" Examination of How VA Judges Decide Disablity Claims for the Impact of Sexual Orientation and Race Discrimination During Military Service
Participating Sites:	N/A
Approval Status:	Approved
DHHS Review Category:	**EXEMPT, CATEGORY #4** **Revised Common Rule 45CFR46.104(d)(4)(iii)**

Human Subject Research Protection
Mail Stop 560-177
360 Huntington Avenue
Boston, MA 02115
617.373.7570
fax 617.373.4595
northeastern.edu/hsrp

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Nan C. Regina, Director
Human Subject Research Protection

This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

No further action or IRB oversight is required, as long as the project remains the same. However, you must inform this office of any changes in procedures involving human subjects. Changes to the current research protocol could result in a reclassification of the study and further review by the IRB.