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Assessing the Association of the Intersection of Gender, Race, and Trauma Type with the Diagnosis of PTSD in U.S. Veterans

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ASSESSING THE ASSOCIATION OF THE INTERSECTION OF GENDER, RACE, AND TRAUMA TYPE WITH THE DIAGNOSIS OF PTSD IN U.S. VETERANS

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2020

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An abstract of
A Thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Behavioral, Social, and Health Education
2023

Abstract

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Veterans identifying as women and of color have been understudied in research due to the primary demographic previously consisting of men and White veterans. A predicted shift in demographics is expected to occur within the next decade, predicting an increase veterans identifying as women and people of color and a decrease in non-Hispanic White veterans. It is necessary for research to investigate whether PTSD measurement tools work for previously understudied veterans to ensure all veterans are being accurately diagnosed. This secondary data analysis utilized data from the Emory Healthcare Veterans Program to investigate the association of the intersection of gender, race, and trauma type with a positive PTSD diagnosis using the PCL-5 and CAPS-5. Looking at race, gender, and trauma type, a chi-square analysis found trauma type to be significantly associated with a positive PTSD score on the PCL-5 and a logistic regression found the odds of receiving a PTSD diagnosis to be 0.27 lower if veterans experienced MST compared to MCT ($p=0.05$). Gender was found to be nearly significant ($p=0.08$). No association was found between intersecting identities and trauma types. This study adds to the growing field of intersectionality in veteran research, emphasizing identities are not mutually exclusive.

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Chapter 1. Introduction

Military populations experience traumatic events at higher rates, with more severity and diversity in symptoms than those discovered in civilian populations (Straud et al., 2019). Posttraumatic stress disorder (PTSD) is one of the most prevalent mental health disorders seen among veterans (Wisco et al., 2022). There is a recent shift in demographics among veterans expected to continue over the next several decades in the United States (U.S.; U.S. Department of Veterans Affairs, 2020; Yano et al., 2010). With this change in demographics, it is important to investigate whether or not diagnostic tools for mental disorders among this population are up-to-date and culturally sensitive. Without culturally sensitive tools, diagnoses are skewed towards meeting the diagnostic criteria of those who research has primarily focused on throughout history (e.g., white, men veterans). Furthermore, the reported prevalence rates may underreport PTSD for women and people from historically understudied racial/ethnic groups where most of the change in demographics seen among military members has occurred.

In order to track actual prevalence of PTSD, it is important to have accurate measurement tools. The Diagnostic Statistic Manual, currently in its fifth edition (DSM-5), is the gold standard for diagnosing PTSD (American Psychological Association, 2013). There are both clinician-based assessments, the Clinician-Administered PTSD Scale for DSM-5 (CAPS-5), and self-report assessments, the PTSD Checklist for DSM-5 (PCL-5), that are used to screen and diagnose PTSD. While these tools are commonly used, research regarding understudied subpopulations in the military has been underdeveloped, leading to biases in veteran research, programming, and policy (Eichler, 2021). Without research including understudied military subpopulations, it is

unclear whether diagnostic tools are correctly identifying symptoms relevant to those being presented by varying racial and ethnic as well as gender backgrounds, leading to possible biases in the diagnosis of PTSD. A diagnosis is a critical step needed to provide treatment to reduce the impacts of PTSD. It is important for there to be an accurate reflection of PTSD diagnosis among veterans to establish effective treatment methods. If biases are present within the diagnostic process, an individual could receive no treatment, and their symptoms could worsen.

Identities interact at a micro- and macro-level to maintain health inequities. Identities at a micro level, such as race and gender, intersect with macro level social-structural systems, such as racism and sexism to cause differences in one's experiences. Racism has negative health consequences on both one's physical and mental health (Williams et al., 2019). Racism and sexism can perpetuate harms and inequities for groups, and these may account for why certain groups receive a PTSD diagnosis at different rates. Intersectionality further explains that social identities are multidimensional and not mutually exclusive, they interact with one another and there is not a singular identity that can alone explain health disparities (Bowleg, 2012), demonstrating that these identities cannot be fully separated, and it is important to consider how they intersect with one another to produce health outcomes. Little research has highlighted the importance of intersectionality in veteran research. By conducting more research using an intersectional approach, researchers can further assess how identities affect the presentation of PTSD symptoms which ultimately determines whether one receives a PTSD diagnosis.

Another important consideration is trauma type. Military populations are more likely to develop PTSD compared to civilian populations (Straud et al., 2019). Two common types of

traumas found in the military population are military combat trauma (MCT) and military sexual trauma (MST); these both frequently lead to the diagnosis of PTSD in veterans (Sexton et al., 2017). Women specifically experience high rates of MST and are two times as likely to be diagnosed with PSTD (Cowden Hindash et al., 2019). Furthermore, women who have experienced both MCT and MST are more likely to be diagnosed with PTSD compared to those who have experienced a singular trauma (Scott et al. 2014). Further understanding the interrelationship between trauma type exposure among varying identities and their contribution to symptom presentation of PTSD can lead to improvements in clinical protocols to better meet the needs of those underrepresented in research.

This study emphasizes the importance of examining multiple understudied identities in veteran research. Using diagnostic tools such as the CAPS-5 and PCL-5, researchers in this study investigate whether discrepancies exist between self-report and clinician administered scores. This prompts the question: how does the intersection of gender, race, and trauma type work together to influence the presentation of symptoms and ultimately the diagnosis of PTSD? This research will contribute to the growing evidence assessing whether diagnostic tools are correctly meeting the diagnostic needs of veterans who have historically been understudied in research. It is hypothesized that Women and black veterans will have higher self report and lower clinician administered diagnostic rates compared to white male veterans who will show similar scores across assessment modalities.

Chapter 2. Literature Review

Shift in Demographics

Throughout the history of veteran research, minority groups have been historically understudied in research despite the known predicted shift in demographics. Traditionally, White men have represented a majority of the veteran demographics and therefore have been the primary focus within prior research (Eichler, 2021). This has led to development of mental health diagnostic tools skewed towards the diagnosis of white men rather than exploring the difference in symptom presentation of women and people of color (POC; Gray et al., 2020; Kline et al., 2020). The Department of Labor estimated in 2022 that women accounted for 10% of veterans (Women Veterans Research, n.d.), and the United States Department of Veterans Affairs (VA) estimates that women veterans will comprise 14.3% of the veteran population by 2033, making women the fastest growing subpopulation in the military (Yano et al., 2010). Additionally, from 2019 to 2045, the racial and ethnic composition of veteran subpopulations is predicted to shift; it is predicted that veterans who identify as non-Hispanic White will decrease from 74% to 61%, Black veterans are predicted to increase from 12% of the veteran population to 15%, and Hispanic veterans from 8% to 12% (U.S. Department of Veterans Affairs, 2020). With this changing population, it is imperative to have diagnostic tools and mental health treatments in place that are culturally sensitive and grasp the needs of the people with understudied demographics being assessed for a diagnosis. There is a greater need to focus on improving measurement to be adept to the diverse needs and demographics of the changing veteran population. Without measurement tools that investigate the underlying symptom presentation similarities and differences between men and women as well as racial and ethnic groups, health inequities will continue to persist within the mental health care system for veterans.

PTSD

Among the most prevalent mental health diagnoses seen among veterans is PTSD (Trivedi et al., 2015). PTSD is a complex psychiatric disorder prevalent among U.S. military veterans and civilians that poses a public health burden in the US. Data suggests more than 1.7 million veterans could be affect by PTSD in their lifetimes (Wisco et al., 2022). In order to be diagnosed with PTSD, one must have experienced a traumatic event (e.g., exposure to death, threatened death, actual or threatened sexual violence, etc.) and have recurrent symptoms that meet diagnostic criteria (e.g., nightmares, flashbacks, avoidances, emotional negativity and numbing, and hyperarousal and irritability; Koenig et al., 2019).

This disorder causes greater significant occupational and social impairment compared to other psychiatric disorders (Wisco et al., 2022). Trauma-related symptomology and social functioning have been found to be co-occurring with one another, particularly among women veterans (Bauer et al., 2021). Meaning, symptoms of PTSD contribute to impaired social functioning and impaired social functioning contributes to risk of recurrence of depression and need for further PTSD treatment (Fontana & Rosenheck, 2010; Vittengl, Clark, & Jarrett, 2009).

PTSD is a complex disorder to diagnose due to the unique symptom presentation among those affected. One must meet a certain number of symptoms within varying clusters to meet the diagnostic criteria. Galatzer-Levy and Bryant (2013) found that there are over 636,120 ways to have PTSD. Due to the complex nature of the disorder, it is essential to investigate the various ways in which PTSD manifests in subgroups of individuals, especially those who have been historically understudied in clinical research pertaining to PTSD. It is important to study PTSD among veteran populations given its impact on psychological and social impairment. Those

diagnosed with PTSD post-trauma have been linked with having a less impairment and greater quality of life compared to those who experience a traumatic experience and are not diagnosed with PTSD (Geier et al., 2019). However, receiving a diagnosis is imperative to beginning appropriate treatment, which ultimately reduces the impacts of PTSD. Those left undiagnosed and therefore untreated may be at risk for their symptoms to worsen, leading to greater social impairment.

History of Military/Demographics of Veterans

While there are tools known to diagnose PTSD, emphasis must be placed on whether these diagnostic tools work for those who have been historically understudied from research. Without the inclusion of understudied genders and races, it is not clear whether identification and treatment of PTSD is reliable and valid for these groups. Research suggests that there is lower treatment initiation and retention among Black, Latino, and Hispanic individuals (McClendon et al., 2020). It is important to examine modernized prevalence rates and what, and how, this affects treatment. It is vital to see who is and is not being diagnosed with PTSD.

When stratified by sex, age, and race, data shows there is a significantly higher prevalence rate of lifetime PTSD among non-male and non-white veterans and that the conditional probability of PTSD potentially varies by trauma type (Wisco et al., 2022). White, Black, and Afro-Caribbean women were found to have higher odds of PTSD diagnosis, compared to men whereas within Latino and Asian groups no gender differences were found (Valentine et al., 2019). Understanding who has PTSD, by using modernized prevalence rates, there is an opportunity to intervene early, preventing an escalation of symptoms, and to improve culturally responsive treatment modes and outcomes for those diagnosed.

Race

There is an underrepresentation of Black and other non-white races in clinical research and practice, from both a patient and clinician perspective. This proposes the question of whether there are diagnostic tools that are effective and culturally-sensitive for these populations (Kline et al., 2020). For example, Black men are overdiagnosed with schizophrenia but underdiagnosed with PTSD (Perzichilli, 2020). Furthermore, most mental health treatment providers in the U.S. identify as White. This can lead to biases and stereotyping that can be found in various health disparities (Perzichilli, 2020).

One's ethnic identity is important because one's ethnic norms and beliefs could affect the validity of a psychiatric diagnoses and response to evidence-based treatments, which overall affects the development of culturally competent care (American Psychological Association, 2003; Onoye, 2017). It is also important to consider the level of trust people of color have in the medical system and how this influences one's decision to seek treatment, as POC groups have historically maltreated within medical practices and research (Perzichilli, 2020).

Gender

In addition to racial and ethnic underrepresentation in research there is also underrepresentation in clinical access, with many differences found among women versus men. Women veterans are one of the fastest growing subpopulations in the military (Women's Health Evaluation Initiative, 2018; Meade, 2020). Despite this, women have had trouble navigating a system that has historically served a primary male demographic and new treatments targeting this subpopulation are needed (Gray et al., 2020). In one sample of women, less than half

(48.8%) reported that their mental health needs were completely met, with gender related experiences accounting for increased odds of perceived access to care. These include availability of female providers and women-only treatment settings and treatment groups (Kimerling et al., 2015).

The roles of women in the military and knowledge surrounding mental health effects in women veterans is becoming more visible and recognized. The effect of heterosexism, racism, and sexual discrimination, harassment, and violence on power structures and women veteran's health within military is understudied (Meade, 2020), but with the expansions of non-white and non-male military members, more research is emphasizing an intersectional approach to military research. The effects of racism have been well studied and documented; however, sparse research has focused on racism within the U.S. military (Coughlin, 2021). It is important to investigate how trauma exposure and systemic factors influence the development of PTSD for women, as they are approximately twice as likely as men to develop PTSD (Cowden Hindash et al., 2019) and display increased rates of PTSD severity (Oakley, Ketcheson, & Richardson, 2020).

Intersectionality

It is crucial to understand how multiple social identities at a micro-level (e.g., race, ethnicity, gender, sexual orientation, and socioeconomic status) intersect with macro, social-structural systems (e.g., racism, sexism, heterosexism, and classism) to maintain health disparities. Social identities are multidimensional and intersect with one another, and one identity alone cannot explain poor health outcomes without considering other identities (Bowleg, 2012). Few articles have discussed the intersectionality of identities among veterans. While women are the fastest growing populations of veterans, within this population are

increasing identities of those from racial/ethnic groups other than White (Barroso, 2019; Meade 2020). Varying systems and organizations that work with women, such as the VA, have created a difficult setting for women veterans to further develop their identity as a veteran. For example, Washington et al. (2015) found that women who have relied exclusively on VA care have had worse health outcomes and less socio-economic resources compared to their male counterparts; additionally, women were dissatisfied with the lack of sex-sensitivity of healthcare personnel. Women are not the only group affected by their identity/identities. Experiences of trauma and rates of PTSD are higher among individuals who identify as lesbian, gay, or bisexual (LGB) compared to non-LGB veterans, and mental health consequences have been found be exacerbated by the concealment of one's identity (Cochran et al., 2013).

An overrepresentation of racial/ethnic and sexual minorities are found among women veterans; using an intersectional lens, researchers can investigate how multiple social identities intersect to influence health outcomes and disparities (Lehavot et al., 2019; Rosenthal, 2016). Lehavot et al. (2019) found that out of the intersection of race, gender, and sexual orientation among women, white heterosexual women were found to have fewer negative health and social outcomes compared to their counterparts. Furthermore, systems of oppression such as sexism, racism, and heterosexism have been evident within the military, an example being the Don't Ask Don't Tell Policy, and little research has highlighted the consequences such systems have had on the health of marginalized veterans (Meade, 2021). Systems of oppression are also present in the lack of representation found in research including diverse populations, representing systemic discrimination. This has created a conundrum within the development of tools that may not be helpful for women and/or POC.

Trauma Type

Military combat trauma (MCT) and military sexual trauma (MST) are significant risk factors for PTSD (Sexton et al., 2017). Veterans experience higher rates of potentially traumatic events (PTE) before, during, and after military service, with the top three PTEs reported as sudden death of a loved one, witnessing death or injury, and natural disasters or fires (Wisco et al., 2020); however, women are up to 20 times higher than their male counterparts to report MST (Sexton et al., 2017). Women veterans who reported experiencing both MCT and MST had significantly higher rates of posttraumatic stress compared to female veterans with MST (Scott et al., 2014). Moreover, many studies have not taken into consideration that many MST survivors often continue working alongside their perpetrator, which can prolong stress and trauma recovery (Sexton et al., 2017; Hunter, 2007). Understanding the interrelationship between MCT and MST exposure, gender, and race of those with PTSD can offer improvements to clinical protocols to address PTSD and serve the needs of understudied veterans.

Diagnostic Criteria (DMS-5) and Biases

The Diagnostic Statistic Manual has been the gold standard for diagnosing PTSD since its third edition published in 1980 and now on its fifth edition published in 2013 (DSM-5; American Psychological Association, 2013; Galatzer & Levy, 2013). The official diagnosis was sought due to political pressure to recognize the psychological toll that was noted among veterans returning from Vietnam (Galatzer & Levy, 2013; Helzer, Robins, & McEvoy, 1987). Various checklists to screen for and diagnose PTSD are based on the diagnostic criteria presented by the DSM-5, such as the Posttraumatic Stress Disorder Checklist (PCL-5; Blevins et al., 2015) and the Clinician-

Administered PTSD Scale for DSM-5 (CAPS-5; Weathers et al., 2018). Despite its necessity and wide-use, biases have been found within the diagnosis of psychological disorders.

The expansion of culturally responsive tools and interventions is important because of differences at treatment initiation when one decides to pursue treatment. Minimal research has focused on the gender and racial differences regarding the detection of PTSD (Koo et al., 2016) and the American Psychological Association has acknowledged the need to expand on culturally competent interventions, including the diagnosis of PTSD for racial/ethnic minorities (Whaley & Davis, 2007; APA Presidential Task Force on Evidence-Based Practice, 2006). For example, women in general and Black men specifically were more likely to receive a positive screen for PTSD (Koo et al., 2016). Evidence suggests that to minimize bias among the diagnosis of PTSD, it is important to use screening and self-report measures as well as promote training in cultural diversity (Garb, 2021). Women, relative to men, reported higher rates of several PTSD symptoms found on the DSM-5. By identifying gender differences in symptom presentation, treatments can be appropriately modified to include symptom reduction among women (Carragher, 2016).

PCL-5 and CAP-5

Two commonly utilized assessment tools are the PTSD Checklist for DSM-5 (PCL) and the Clinician-Administered PTSD Scale for DSM-5 (CAPS). The PCL is a 20-item self-rating scale in which individuals rate DSM-5 symptoms for the past week or month that meet DSM Criteria B-E on a Likert scale of 1-5, ranging from not at all to extremely. The CAPS is a 30-item structured interview conducted by trained professionals to assign a PTSD diagnosis and rate symptom severity throughout the past month (Marx et al., 2021). The PCL requires individuals to rate

their symptoms and report the extent to which they feel bothered by each symptom whereas the CAPS requires clinicians to assess the frequency and intensity of PTSD symptoms (Gradus et al., 2008). Despite the high utilization of self-rated measures, clinician-rated measures are considered the gold standard for a diagnosis (Kramer, 2019).

Evidence suggests that there may be discrepancies between clinicians and patients about the degree of change of PTSD symptoms following treatment, CAPS scores have been shown to improve at greater rates at 12-months post-treatment compared to PCL scores (Lee et al., 2022). Although self-rating of symptoms and clinical assessment are often simultaneously evaluated, less emphasis is placed on self-rated outcomes (Gradus et al., 2008). It has been suggested that the PCL questionnaire could be used as a screening tool and the CAPS could be used as a diagnostic tool. However, a drawback with the CAPS diagnostic tool is that it is time consuming and requires a trained professional to complete the assessment. (Geier et al., 2019). Meanwhile, a disadvantage to the PCL is that it does not directly link symptoms to the traumatic event. Both have different optimal cut-off scores for different studies which can influence the varying results. This presents problems because symptoms of PTSD can overlap with other disorders like depressive and anxiety disorders (Kramer, 2019). Further research must be conducted to compare these two tools for researchers and clinicians to use the best standard of practice. Research has not focused on intersectionality in measurement studies involving the PCL and CAPS; however, research has looked at how intersectional dynamics influence PTSD trajectories (McClendon et al., 2021).

The current study reviews data from the Emory Health Veterans Program to investigate the intersection between race, gender, and trauma type on the outcome of reported PTSD

symptoms using two different assessment tools. Using veterans self-reported symptoms (PCL) and clinician-based assessments (CAPS) for PTSD, the intersection of race and gender will be examined. Current research highlights the need to explore the gaps in research found among veterans. Since white and men veterans have traditionally been the focus of most military-based mental health research, this study aims to research the intersection of race/ethnicity, gender, and trauma type on the presentation and diagnosis of PTSD symptoms. It will consider the diagnostic tools used by both clinicians and veterans to see if any discrepancies are found between self-reports and clinician reports of PTSD diagnosis.

Chapter 3. Methods

Study Design

This secondary = analysis used data provided by the Emory Health Veterans Program's (EHVP) Intensive Outpatient Program (IOP). Data was analyzed from two EHVP datasets, with data collected from 2015-2020. The analyses explored intersectionality by assessing the associations between race, gender, and trauma type with a positive PTSD diagnosis in veterans. Two outcome measures assessing PTSD were used, these included a self-report PTSD measurement tool (PCL) and a clinician-administered PTSD measurement tool (CAPS). These outcomes were measured among veterans who have experienced military combat trauma (MCT) and/or military sexual trauma (MST), as assessed using the Life Event Checklist for DSM-5 (LEC-5). Chi-square and logistic regression were used to assess the association between gender, race, and trauma type on PTSD diagnosis outcomes. Additionally, chi-square and logistic regression were used to investigate the association between race, gender, and trauma type with

a matched PTSD diagnosis (i.e., veterans received matching diagnosis on both PCL and CAPS measurement tools).

Population and Sample

The study population included a sample of veterans (N=3,456) who were recruited to the EHVP to complete the IOP from 2015-2020. Veterans admitted into the program completed a series of assessments, prior to IOP intake and treatment, to confirm trauma and record the types of traumatic experiences experienced by veterans (LEC), record the diagnosis of PTSD using a self-report measurement tool (PCL), and record a clinician-administered interview measurement tool (CAPS). Due to limitations in sample size, and the complex nature of quantitative intersectional research, only three trauma types were included in the analyses, these include military combat trauma (MCT, N=475), military sexual trauma (MST, N=107), or both (MCT and MST, N=171).

Eligibility

To be eligible for this analysis, veterans must have completed all intake assessments (PCL, CAPS, and LEC). All data of interest for this study had to be recorded in the dataset to be considered for analysis, including gender, race, MCT and/or MST trauma types, and PCL and CAPS assessment scores. Veterans with missing race, gender, and trauma type as well as an incomplete PCL and CAPS were excluded. Due to limitations surrounding the sample size of other races who have completed the intake assessment, only those who identified as Black (N=299), or White (N=457) veterans were included in the analysis. Only two genders were included for this study, men (N=522) and women (N=234). This led to a study sample size of 753 veterans.

Measures

Exposures

Demographics. For this study, demographic information was taken from the dataset to obtain the race and gender of each veteran included. The data for gender and race were each dichotomized into “man” or “woman”, and “Black” or “White”.

Trauma Type. The LEC (Gray et al., 2004) was used to determine whether veterans experienced MCT and/or MST. On the LEC, 17 events are listed, and veterans are asked to check a box next to the traumatic event experienced and how they experienced the traumatic event (i.e., “happened to me”, “witnessed it”, “learned about it”, etc.). To be considered for this study, veterans had to experience MCT or/and MST, measured by the LEC.

To receive a label of MCT, a check had to be put next to the intersection of traumatic event labeled “10. Combat or exposure to a war-zone (in the military or as a civilian)” and “Happened to me”. To receive a trauma type labeled as “sexual trauma”, veterans had to answer check next to the intersection of the traumatic event labeled “8. Sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm)” and “Happened to me”. If a veteran answered checked both MCT and sexual trauma as well as “Happened to me” for these events, the trauma type was classified as “MCT/MST”.

Outcome Measures

PTSD Diagnosis from PCL-5. The PLC (Belvins et al., 2015) is a self-administrated PTSD measurement tool and was used to assess PTSD. The PCL consists of 20 questions, veterans are instructed: “Below is a list of problems and complaints that veterans sometimes have in response to stressful military experiences. Please read each one carefully, and then circle one of

the numbers to the right to indicate how much you have been bothered by that problem in the PAST MONTH. Make sure to base your answers on problems that started or got worse after the event.". Veterans are given a question, for example, "1) In the past month, how much were you bothered by: Repeated, disturbing, and unwanted memories of the stressful experience?" and are asked to respond on a Likert scale using "Not at all", "A little bit", "Moderately", "Quite a bit", and "Extremely". Veterans had to receive a score of 33 or higher to obtain a positive PTSD diagnosis for this tool, scores that were 32 or lower received a negative PTSD diagnosis. Scores were determined by totaling each item in the PCL-5.

PTSD Diagnosis from CAPS-5. The CAPS (Weathers et al., 2018) was the PTSD measurement tool used by clinicians to interview veterans to determine whether a veteran had a positive or negative PTSD diagnosis. In order to receive a positive PTSD diagnosis, veterans had to have reported at least one Criteria A trauma, at least one Criterion B symptom, at least one Criterion C symptom, at least two Criterion D symptoms, at least two Criterion E symptoms, meet Criterion F (disturbance has lasted one month), and meet Criterion G (disturbances causes clinically significant distress or functional impairment).

Data Analysis Methodology

All data were analyzed using SAS 9.4 (SAS Institute Inc., 2013). Descriptive statistics were used to assess the frequencies of veterans' gender, race, trauma type, and PTSD diagnoses. Chi-square was used to determine the association between each independent variable (race, gender, and trauma type) and positive PTSD diagnosis on the CAPS and PCL.

Following a chi-square analysis, logistic regression was used to assess the association between gender, race, and trauma type and a positive PTSD diagnosis on the PCL and CAPS.

Since trauma type was not binary and contained three levels, dummy variables for trauma type were created to establish a reference group (White, men, MCT). Race, gender, and trauma type were used in the logistic regression procedures to assess if there were first any associations with multiple identity and trauma type exposures.

Descriptive statistics, such as frequency of diagnoses for each PTSD measurement tool were collected. This determined the number of veterans who were diagnosed by the PCL only, CAPS only, and on both the CAPS and PCL. This output was used to run a Chi-Square analysis to see if there was an individual association between race, gender, and trauma type with matched PTSD diagnoses. Following this, logistic regression was used to see the association between a variable that included intersecting identities (i.e., gender and race) and then a variable that included all three exposures (i.e., gender, race, and trauma type). This allowed researchers to assess whether specific aggregated groups receive higher rates of diagnoses and matched diagnoses on the CAPS and PCL.

Chapter 4. Results

Baseline values

A total of 3,456 veterans were identified in the datasets from 2015-2020. For the analysis, only 753 veterans were included due to missing data and eligibility inclusion. Baseline characteristics are displayed in Table 1. The participants come from two racial backgrounds including White (N=454, 60%) and Black (N=299, 40%). The majority of participants identified as men (N=520, 69%) while the minority identified as women (N=233, 31%). Three trauma types were accounted for in the analysis MCT (N=475. 63%), MST (N=107, 14%), and both MCT and MST (N=171, 23%).

Intersectionality

Veterans had a diverse background and intersection of identities and trauma type. Figure 1 shows the flow of the various combinations of intersecting identities (i.e., gender and race) and trauma type experienced (i.e., MCT, MST, and MCT & MST). The frequency and percentages of the intersection of identities and trauma type can be found in Table 2.

CAPS and PCL and Positive PTSD Score

Gender, race, and PTSD diagnosis were dichotomized, whereas trauma type contained three levels. A chi-square test was conducted to determine whether there was relationship between gender, race, or trauma type with a positive PTSD diagnosis on the CAPS and PCL, results are shown in Table 3. On the PCL, trauma type was found to be significant, χ^2 (2) = 5.85, p=0.05. Of those who received a positive PTSD diagnosis on the PCL, 91.81% experienced both MCT and MST, 88.42% experienced MCT, 82.24% experienced MST. It is important to note that the association between gender with a positive PTSD diagnosis on the CAPS was nearly significant (p=0.06). Among those diagnosed with a positive PTSD score on the CAPS, 83.82% of men were diagnosis with PTSD while only 78.11% of women were diagnosed with PTSD. These variables were then included for a logistic regression model.

CAPS

Logistic regression was carried out to examine the association between gender, race, and trauma type with a positive PTSD diagnosis on the CAPS. The only statistically significant variable was MST. For MST, the likelihood ratio of the model was $\chi^2(2)= 6.46$, p=0.05. The odds of receiving a positive PTSD diagnosis was 0.27 times lower if veterans experienced MST compared to MCT. Close, but not statistically significant, was gender. The likelihood ratio of the

model was $\chi^2(2)= 6.46$, p=0.08, making the odds of receiving a positive PTSD diagnosis on the CAPS 1.47 times higher if the veterans identified as a man. The results of the full logistic regression model are shown in Table 4.

PCL

Additionally, logistic regression was carried out to examine the relationship between gender, race, and trauma type with a positive PTSD diagnosis on the PCL. A full model including all the covariates was analyzed, there was no significant association between any of the covariates and a positive PTSD diagnosis on the PCL. Results of the full logistic regression model for PCL are shown in Table 4.

Intersectionality Analysis

A chi-square analysis was conducted to see if there was an association between a variable that included intersecting identities of gender and race (i.e., White man, Black man, White woman, and Black woman) on the PCL and CAPS. There was no association found between this variable on the CAPS (p=0.43) or the PCL (p=0.73). Additionally, a logistic regression showed no association between the exposures and a positive PTSD score on the CAPS or PCL. A final variable was created that merged gender, race, and trauma type together (i.e., White man MCT, Black Man MST, White woman MCT/MST, Black woman MST, etc.). A chi-square analysis showed no association between the exposures and a positive PTSD diagnosis on the CAPS (p=0.51) or on the PCL (p=0.52). While there was no significant association found when a logistic regression analysis was conducted, Black men who experienced MST had a close significant association on the CAPS (p=0.07, OR=4.457). This shows that it is nearly significant

that Black men who experience MST are nearly 4.457 times as likely to be diagnosed with PTSD on the CAPS compared to Black men who don't experience MST.

Matched Diagnoses

Out of the 753 veterans, 608 (81%) received a matching diagnosis on the CAPS and PCL. The 608 matching diagnoses included both those who received a positive diagnosis (N= 569, 76%) and negative diagnosis (N=39, 5%) on both the CAPS and PCL. Sixty-nine (6%) veterans were diagnosed by the CAPS only while 96 (13%) were diagnosed using only the PCL. When broken down into gender, race, and trauma type. For gender, men accounted for 68% (N=415) and women accounted for 32% (N=193) of the matched diagnoses. Among the two different races, White veterans accounted for 61% (N=371) and Black veterans accounted for 39% (N=237) of those who received a matched diagnosis. For trauma type, MCT made up 63% (N=384), MST 13% (N=81), and MCT and MCT 24% (N=143). See table 5. The rates of gender and matched diagnoses were not different from the baseline percentages, going against the hypothesis that men would experience higher rates of matched diagnoses. The rates of race and matched diagnoses were also not different from the baseline percentages, going against the hypotheses of this study.

Chapter 5. Discussion, Implications, Recommendations, and Conclusion

Introduction and Summary of Study

This study investigated the association of the intersection of gender, race, and trauma type with a positive PTSD diagnosis on the CAPS and PCL in U.S. veterans. This analysis utilized chi-square and logistic regression analyses. Each exposure was used in a chi-square analysis to see if there was an individual association, and then a logistic regression was performed to see if

multiple exposures had an association with a positive PTSD score. Chi-square analyses showed there was a significant association between trauma type and a positive PTSD diagnosis on the PCL, with those experiencing MCT and MST receiving the highest rate of diagnosis, followed MCT, then MST. The logistic regression analysis showed there was a significant association between experiencing MST and receiving positive PTSD score on the CAPS.

Discussion of Key Results

Baseline Values and Intersectionality Frequencies

This sample provided a larger sample for both women (31%) and Black (40%) individuals compared to the national average among veterans (10% and 12%, Women Veterans Research, n.d.; U.S. Department of Veteran Affairs, 2020). Although, it is important to consider that other races were not included from the EHVP dataset.

Figure 1 displays the distribution of intersecting identities and trauma type. Among women, it is noticeable that Black women comprise a higher sample than White women, this can be reflective of the increasing racial composition of veteran subpopulations (Yano et al., 2010). With the most common type of trauma type found among White and Black men being MCT, then MCT and MST, followed by MST. This result was not surprising, as men have a lower likelihood of reporting MST (O'Brien, 2015). The results were different for women as a whole. MCT and MST being is the most commonly experienced trauma, followed by MST, then MCT. Given that MCT is a more commonly experienced trauma type in the military overall compared to MST (Wisco et al., 2014), it is and is not surprising that women report higher rates of MST than MCT, particularly since women are 20 times as likely to than men to report MST (Sexton et al., 2017), this held true when data was aggregated into specific races. This result shows that for

both White and Black women, women are at a high risk for experiencing MST, especially when compared to experiencing MST.

Women were more likely to experience both MCT and MCT as their primary trauma(s). Women also experienced MST at higher reported rates than men, following previous research (Sexton et al., 2017). However, it is possible that there could've been underreporting for both men and women who experienced MST (Monteith et al., 2023; O'Brien et al., 2015). This could be due to the stigma associated with MST as well as the possibility that the veteran/survivor needed to continue, or may continue working, alongside their perpetrator. Congruent with Scott et al. (2014), women veterans who reported experiencing both MCT and MST had higher rates of PTSD than women veterans who reported a singular trauma.

Positive PTSD Score

The chi-square analysis showed a positive association between a positive PTSD score on the PCL and trauma type. This result highlighted that MCT and MST were the most commonly experienced trauma type, followed by MCT, then MST. This is important to address due the increased likelihood of receiving a PTSD diagnosis after being exposed to multiple traumas. Given that this is a self-report tool, it shows that greater numbers of veterans self-reported more PTSD symptoms associated with experiencing both MCT and MST. Close, but not statistically significant enough to warrant correlation, is the association between gender and a positive PTSD diagnosis on the CAPS. Of those who received a positive PTSD diagnosis on the CAPS, 84% of men were diagnosed with PTSD compared to 78% of women. While not statistically significant enough to prove a correlation, it seems there is a trend that men receive a higher rate of a positive PTSD diagnosis on the CAPS compared to women ($p=0.08$). This is

important to note because the CAPS is a clinician administered diagnostic tool, considered the gold standard. If there is an unequal distribution of diagnoses found between men and women, it is important to further investigate potential biases, on both the tool and among clinicians, that may lead to this discrepancy.

Logistic regression found that those who experienced MST had a higher rate of a positive PTSD diagnosis on the CAPS than those who did not experience MST. Carragher (2016) reported women are more likely to report higher rates of PTSD, this may be due to traumatic effects and high rates of MST among women. Given this is a clinician administered diagnosis, it is important to understand what is causing MST to overall receive significantly higher rates of PTSD compared to MCT despite being reported less by men. It could be beneficial to look at social factors, such as continuing to work alongside perpetrator and therefore increasing distress (Sexton et al., 2017; Hunter, 2007). This may be due to stigma associated with MST and the need to uncover trauma-specific experiences in order to diagnosis one with PTSD on the CAPS. Furthermore, close but not statistically significant, was the association between gender and a positive PTSD diagnosis on the CAPS. It was found that men were 1.471 times as likely to receive a positive PSTD diagnosis compared to women ($p=0.08$). While this finding was not statistically significant enough to warrant a clear association between gender and a positive PTSD diagnosis on the CAPS, this result, combined with the similar finding with the chi-square analysis, shows that the CAPS may be skewed towards diagnosing men at higher rates than women. Given this is a clinician-administered diagnostic tool, further research should investigate where these biases may come from, whether it is the tool itself, a clinician bias, or men truly experience PTSD at higher rates.

Logistic regression shows that there is a close, but not statistically significant enough to establish correlation, association between Black men who experience MST and receiving a positive PTSD score on the CAPS. This is congruent with prior findings that experiencing MST leads to a higher rate of diagnosis of PTSD on the CAPS. This can prompt future research to investigate why this particular group (Black men) are receiving higher rates of PTSD diagnoses, specifically compared to White men.

Matched Diagnosis

Given that rates of matched diagnoses was reflective of the baseline statistics for each broad group studied in this analysis, it shows that there is not a difference in gender or race in receiving a matched diagnosis on the CAPS and PCL. However, among those who did not receive a matched diagnosis on the CAPS and PCL, 13% received a positive score on the PCL only compared to 6% who received a positive PTSD diagnosis on the CAPS only. This demonstrates that more veterans are receiving a positive PTSD screen/diagnosis on the PCL compared to the CAPS. People are reported signs of distress related to traumatic events but not being diagnosed on by a clinician. It is important to investigate whether this is due to biases within the tools and/or clinicians or promote the fact that CAPS is the gold standard for diagnosing PTSD. Similarly, 6% of people are being missed by the PCL but diagnosed by the CAPS. It is important to understand why this may be happening. This is similar to findings by Lee et al. (2022) that suggest a lower diagnosis among clinician measurement tools compared to self-report tools. Furthermore, less emphasis is typically placed on self-rated outcomes and may not be considered by clinicians when diagnosing PTSD (Gradus et al., 2008).

When aggregated into specific identities (i.e., White men, Black men, White women, Black women), White men have a lower matched diagnosis rate when they experienced MCT only; however, Black men who experienced MCT only have lower rates of a matched diagnosis. Additionally, Black women who experienced MST have a lower matched diagnosis rates compared to their White counterparts. It is important to highlight here that not all people who experience a traumatic event will go on to develop PTSD. Since the PCL is commonly used as a screening tool, and MCT is commonly experienced among men, it may be likely that the PCL is working as a screening tool properly for White men. The results show that both Black men who experience MCT and Black women who experience MST are more likely to not receive a matched diagnosis, receiving higher positive scores on the CAPS compared to the PCL. Future research should investigate why there are lower rates of self-reporting among Black individuals, as this may be due to stigma related to mental health (Ward et al., 2013).

While the CAPS is a more intensive and time consuming, the PCL does indicate that an individual may be experiencing distress but are not receiving a clinical diagnosis. White women who experienced MST received more positive PTSD diagnoses on the CAPS compared to the PCL. This may be due to the CAPS being trauma-specific and clinicians are able to ask further questions about the trauma experienced; however, it is interesting to note that White women received higher CAPS PTSD diagnoses compared to Black women given Black women experienced higher rates of MST.

Due to the CAPS being the gold standard, the data shows that 6% are not receiving a matched diagnosis on the CAPS. Additionally, 13% of those who are self-reporting distress due

to a traumatic experience may not be receiving a clinical diagnosis on the CAPS. In the entire sample of the data, which was 3,456 before data cleaning, 207 may have received a CAPS diagnosis only and not a diagnosis on the PCL while 449 may be diagnosed using the PCL but not the CAPS, missing a large number of veterans who may need treatment.

Strengths and Limitations

Several strengths and limitations have been identified in this study. The primary strength of this study is the sample size from the dataset and the high quantity of traditionally understudied populations. The EHVP dataset has high number of veterans' information to extract data, and the sample population includes a large sample of Black men, Black women, and White women veterans' data used in this analysis. This provides rich data to gain insight into the rate of PTSD diagnosis among intersecting identities and trauma types. Although there was a large sample to pull the study population from, only 753 (21%) of the 3,456 veterans in the EHVP dataset were used for this analysis. This is due to missing data from the dataset (i.e., missing gender, race, and PCL and CAPS scores). Due to sample size after data cleaning, other races besides Black and White were excluded. This means that data from other races was not captured in this analysis and did not fill this gap in research. Future research should highlight the importance of recording demographic information for practice and research. Additionally, due to limited time and resources, only two types of traumas were used. This limited insight into the other traumas experienced by veterans which should be considered in future research.

Another strength is the recording of CAPS and PCL scores. This dataset provides plentiful data that records both positive and negative scores of PTSD on both the CAPS and PCL. This allows researchers to investigate who is screening positive on a self-report measurement tool

(PCL) but not a clinician-administered measurement tool (CAPS) and vice versa. It also allows researchers to investigate who is receiving a matched diagnosis on the CAPS and PCL. While there was a large sample that included both positive and negative scores on the CAPS and PCL, one limitation is missing scores for both measurement tools. This means that some of the scores were never recorded, or assessments were not conducted for one or both tools. Considering that clinical settings may use the PCL as a screening tool rather than a diagnostic tool like the CAPS, when one receives a negative PTSD score on the PCL clinicians may decide to not conduct a CAPS assessment. Due to missing CAPS in this situation, some data may not have been captured. Future recommendations may include recording situations in which CAPS was not conducted due to a negative PCL score.

While there were strengths and limitations to this study, this is one of the first analyses investigating the intersection of multiple identities and trauma types among U.S. veterans, and their correlation with a positive PTSD diagnosis. This study adds evidence to the growing field of intersectionality research and emphasizes its importance in research and practice.

Public Health Implications

This study provides evidence to contribute to the growing field of intersectionality research in healthcare and among veterans, providing further evidence that identities are not mutually exclusive and must be considered when treating mental health conditions among veterans. Military populations experience traumatic events at higher rates than civilian populations (Straud et al., 2019) and have high rates of PTSD, highlighting the importance of this research. Because these tools have been primarily tested on veterans who are White and identify as a man but are used to screen and diagnose PTSD in all veterans, this study is

important because researchers need to ensure these tools are accurately screening and diagnosing those who have been traditionally understudied during the development of these tools, specifically those from races other than White and genders other than men. This is particularly important since there it is predicted that there will be a shift in the demographic profile of veterans in the next decade.

While it is not significant enough to establish a clear correlation, a trend that men are diagnosed with PTSD at a higher rate than women on the CAPS was noticed. Because the CAPS has been traditionally tested on men rather than women, is clinician-administered, and considered the gold standard, it must be further investigated whether biases exist within the tool itself and/or are present among clinicians. This prompts further inquiry into the investigation of biases that exist within the tool itself.

White men who experience MCT and Black men who experience MCT are seen to have higher self-report diagnoses (PCL) than clinician-administered diagnoses (CAPS). Again, given that these tools have traditionally been studied on men, and MCT is the most common trauma experienced, this may mean that the PCL is screening for those who are experiencing distress but do not have enough symptoms to warrant a clinician-administered PTSD diagnosis that is trauma-specific to MCT. Public health implications of this finding suggest that a CAPS interview may be necessary to rule out a diagnosis of PTSD among men who experience MCT.

For veterans who have experienced MST, they are more likely to receive a PTSD diagnosis on the CAPS than those who did not experience MST; this is congruent with previous research that shows veterans who report MST are more likely to be diagnosed with PTSD. MST is equally identified on both the CAPS and PCL among those who experience PTSD. This raises

the question of why are people who experience MST being diagnosed with higher rates of PTSD compared to those who experience other types of trauma? This is particularly interesting since MCT is a more common trauma experienced among veterans but is diagnosed at lower rates compared to those who experience MST and it may be beneficial to see if severity of different traumas play a role in the rate of diagnosis.

It is important to understand where these biases are coming from, whether it is the tools themselves and/or clinicians who are administering the CAPS. Biases in research can lead to biases in mental health programming and policy (Eichler, 2021). This is important because if there are biases in the tools, those from understudied backgrounds may not receive the correct diagnosis. If those from understudied racial and gender backgrounds are not being diagnosed accurately in order to treat their PTSD, their symptoms could worsen. This can lead to greater social impairment and functioning and increases the risk of depression and need for further PTSD treatment (Fontana & Rosenheck, 2010; Vittengl, Clark, & Jarrett, 2009). In agreement with this study, evidence suggests that to minimize bias among the diagnosis of PTSD, it is important to use screen and self-report measures (Garb, 2021). Training in cultural diversity can also decrease biases in the screening and diagnosis of PTSD (Garb, 2021).

Understanding the importance of intersecting identities and the importance of social structures (i.e., sexism and racism) in the military is imperative to understanding how veterans experience, express, and report symptoms of PTSD. It is important for clinicians to be aware of these social structures at a macro- and micro level as well as potential biases they may carry into the diagnostic processes. This proposed future research to investigate who are our tools

accurately measuring and diagnosing and why these differences exist. Research and practice cannot continue without adapting an intersectionality lens.

Recommendations

This study, in addition to previous research, prompts future analysis of intersecting identities and trauma type among U.S. veterans. Research surrounding PTSD and practice surrounding the diagnosis of PTSD cannot continue without adopting an intersectional approach. This study prompts recommendations for both research and practice.

First, more quantitative research is needed to numerically support intersectionality research; however, it should be used in combination with qualitative research consisting of interviews of veterans who have experienced a traumatic event and clinicians who are diagnosing veterans with PTSD. Qualitative research can help researchers and practitioners to further understand what biases exist within the tools themselves as well as biases that exist among clinicians.

Second, it is essential to record and not overlook the importance of veterans' identities, such as gender and race. Additionally, future research should investigate other aspects of veterans' identities, such as sexual orientation, socio-economic status, etc. It is also important to note differences found between intersecting identities when it comes to trauma type, as rates of PTSD differ based on the trauma experienced by veterans.

Third, it is important to have detail-oriented notes and data collection to ensure quality of research. This includes reporting when a veteran is diagnosed with PTSD on the PCL and/or CAPS. If a veteran is declared PTSD negative on the PCL and the clinician decides to not conduct a CAPS assessment, this should be recorded properly. Fields should not be left blank. Alongside

this recommendation, it is important to consider even if a veteran does not screen positive for PTSD on the PCL, what is the score threshold that prevents clinicians from conducting a CAPS assessment.

Finally, if future research finds biases are present in PTSD assessment tools, it is important to make culturally sensitive adaptations. If future research finds there are biases in clinician-assessments, future research should focus on designing and implementing culturally-sensitive trainings for clinicians, improving their cultural humility. This goes in-hand with the need to diversify the clinical mental health workforce to include clinicians from diverse backgrounds.

Conclusion

This research provides evidence to the growing field of intersectionality in veteran mental health care research, as minimal research has focused on racial and gender differences regarding the diagnosis of PTSD in veterans. Because it is one of the first studies to analyze intersecting identities and trauma types in veterans, this study prompts more questions to guide future research than it provides direct answers. Aligning with previous research, those who experienced multiple traumatic experienced had higher rates of PTSD, on the PCL, and MST was found to be associated with a positive PTSD score on the CAPS. Although not significant enough to establish a clear correlation, a trend was identified that men are diagnosed at higher rates with PTSD than women on the CAPS.

These findings highlight the importance of intersectionality research among veterans and provides evidence to suggest there are biases in the diagnostic tools and/or the clinicians assessing veterans for PTSD. This provides supporting evidence that identities are

multidimensional and not mutually exclusive; a singular identity cannot alone explain PTSD health outcomes. Research must investigate how intersecting identities work alongside trauma type to inform PTSD diagnosis outcomes. Given the predicted shift in veteran demographics, this research proves to be timely and important. If those from understudied racial and gender backgrounds are not being accurately diagnosed with PTSD, their symptoms can worsen which can increase social impairment and functioning, leading to the need for further PTSD treatment. Mental health research and practice for veterans with PTSD cannot continue sustainably without the adoption of an intersectional lens.

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Tables

Table 1.

Baseline Characteristics

Variable	Dichotomized Variables	Frequency (%)
Gender	Men	520 (69)
	Women	233 (31)
Race	White	454 (60)
	Black	299 (40)
Trauma Type	MCT	475 (63)
	MST	107 (14)
	MCT & MST	171 (23)

Table 2

Intersecting Identities and Trauma Type

	Frequency (%)
White man	352 (47)
Black man	168 (22)
White woman	102 (14)
Black woman	131 (17)
White man MCT	306 (41)
White man MST	7 (1)
White man MCT & MST	39 (5)
Black man MCT	136 (18)
Black man MST	8 (1)
Black men MCT &MST	24 (3)
White woman MCT	13 (2)
White woman MST	40 (5)
White woman MCT & MST	49 (6)
Black woman MCT	20 (3)
Black woman MST	52 (7)
Black woman MCT & MST	59 (8)

Table 3

Chi-Square Analysis of CAPS and PCL

Variable	Diagnostic Tool	Chi-Square value	Significance
Race	CAPS	0. 0059	0.94
	PCL	0. 0478	0.83
Gender	CAPS	3.5514	0.06*
	PCL	0. 0556	0.81
Trauma Type	CAPS	0.9558	0.62
	PCL	5.8547	0.05*

Table 4

Full Model Logistic Regression for CAPS and PCL

		OR	CI		Significance
			Lower	Upper	
CAPS					
	Gender (women)	1.471	0.952	2.274	0.08*
	Race (Black)	0.884	0.597	1.310	0.53
	MST	0.605	0.364	1.006	0.05*
	MCT & MST	0.935	0.588	1.487	0.78
PCL					
	Gender (women)	1.197	0.736	1.947	0.47
	Race (Black)	0.944	0.588	1.516	0.81
	MST	1.250	0.685	2.281	0.47
	MCT & MST	0.597	0.318	1.120	0.11

Table 5

*Tool Diagnosed Stratified by Gender, Race, and Trauma Type and Matched Diagnosis**

		CAPS only	PLC only	Non-Matched Diagnosis (%)	CAPS & PCL (PTSD+, %)	CAPS & PCL (PTSD-, %)	Matched Diagnosis (%)
Gender	Man	31 (4)	74 (10)	105 (14)	388 (52)	27 (3)	415 (55)
	Woman	18 (2)	22 (3)	40 (5)	181 (24)	12 (2)	193 (26)
Race	White	28 (4)	55 (7)	83 (11)	345 (46)	26 (3)	371 (49)
	Black	21 (3)	41 (5)	62 (8)	224 (30)	13 (2)	237 (32)
Trauma Type	MCT	28 (4)	63 (8)	91 (12)	357 (47)	27 (4)	384 (51)
	MST	12 (2)	12 (2)	24 (3)	76 (10)	6 (1)	82 (11)
	MCT & MST	8 (1)	21 (3)	29 (4)	136 (18)	6 (1)	142 (19)
White man		22 (3)	47 (6)	69 (9)	263 (35)	20 (3)	283 (38)
Black man		9 (1)	27 (4)	36 (5)	125 (17)	7 (1)	132 (17)
White woman		6 (1)	8 (1)	14 (2)	82 (11)	6 (1)	88 (12)
Black woman		12 (2)	14 (2)	26 (3)	99 (13)	6 (1)	105 (14)
White man MCT		19 (3)	40 (5)	59 (8)	229 (30)	18 (2)	247 (32)
White man MST		1 (0)	0 (0)	1 (0)	6 (1)	0 (0)	6 (1)
White man MCT & MST		2 (0)	7 (1)	9 (1)	28 (4)	2 (0)	30 (4)
Black man MCT		8 (1)	21 (3)	29 (4)	100 (13)	7 (1)	107 (14)
Black man MST		1 (0)	3 (0)	4 (1)	4 (1)	0 (0)	4 (1)
Black man MCT & MST		0 (0)	3 (0)	3 (0)	21 (3)	0 (0)	21 (3)
White women MCT		1 (0)	1 (0)	2 (0)	10 (1)	1 (0)	11 (1)
White women MST		4 (1)	1 (0)	5 (1)	32 (4)	3 (1)	35 (5)
White women MCT & MST		1 (0)	6 (1)	7 (1)	40 (5)	2 (0)	42 (6)
Black women MCT		0 (0)	1 (0)	1 (0)	18 (2)	1 (0)	19 (3)
Black women MST		7 (1)	8 (1)	15 (2)	34 (5)	3 (0)	37 (5)
Black women MCT & MST		5 (1)	5 (1)	10 (1)	47 (6)	2 (0)	49 (7)

Sample size = 753

*Some percentage do not add to 100% due to rounding

Figures

Figure 1

Intersecting Identities and Trauma Type