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## Associations Between Justice Involvement and PTSD and Depressive Symptoms, Suicidal Ideation, and Suicide Attempt Among Post-9/11 Veterans

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### Abstract

**Objective:** Justice-involved veteran research remains largely limited to men and those using Veterans Health Administration (VHA) services. Research inclusive of women and those not using VHA care is critical to understanding mental health and suicide risk among justice-involved veterans. This study examined whether lifetime justice involvement was associated with symptoms of posttraumatic stress disorder (PTSD) and depression, recent suicidal ideation, and lifetime suicide attempt.

**Method:** We conducted a secondary analysis of 812 post-9/11 male and female veterans. The sample included veterans eligible and not eligible for VHA care. Participants were administered the PTSD Checklist for DSM-IV, the Patient Health Questionnaire-8, and the Columbia-Suicide Severity Rating Scale. Additional questions assessed justice involvement, military characteristics, demographics, and recent use of VHA mental health care.

**Results:** History of justice involvement was associated with more severe PTSD and depression symptoms as well as suicidal ideation and suicide attempt. Associations were maintained after adjusting for sex, combat exposure, service branch, recent use of VHA mental health care, and education. Sex-stratified exploratory analyses revealed consistent findings among males; justice involvement was associated with suicide attempt among females. Current probation or parole was particularly related to depressive symptoms, suicidal ideation, and suicide attempt.

**Conclusions:** Justice-involved veterans appear to be a vulnerable population experiencing heightened psychiatric symptoms and increased risk for recent suicidal ideation and lifetime

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suicide attempt. Programs within VHA and the community are important for connecting justice-involved veterans to mental health services and mitigating suicide risk.

### Keywords

justice involvement; veteran; posttraumatic stress disorder; depression; suicidal ideation; suicide attempt

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### Introduction

In 2011-2012, veterans comprised approximately 8% of the population of currently incarcerated individuals within the United States, with over 180,000 veterans estimated to be in prisons or jails nationally (Bronson et al., 2015). In addition, a far greater number of veterans are currently on parole or probation, suggesting the total number of veterans with a history of criminal justice involvement is much higher (Glaze, 2011). Notably, among justice-involved veterans (i.e., those with a lifetime history of criminal justice system involvement), those who served following 9/11 appear to be especially heightened risk, with some researchers noting increased risk for criminal justice involvement (Pajak, 2020), as well as higher rates of psychiatric diagnosis (e.g., posttraumatic stress disorder [PTSD]; Tsai et al., 2013).

In general, justice-involved veterans differ from justice-involved non-veterans in several notable ways. Justice-involved veterans experience a number of adverse experiences across their lifespan (Blodgett et al., 2015; Holliday et al., 2020). The overwhelming majority report a history of trauma exposure (Blodgett et al., 2015). These experiences are often an amalgamation of stressors and trauma occurring during military service (e.g., combat) and outside of it (e.g., childhood abuse, sexual or physical assault during prison; Blodgett et al., 2015; Bronson et al., 2015; Finlay et al., 2019; Marshal et al., 2005; Tanielian, & Jaycox, 2008). In addition to these experiences, justice-involved veterans have higher documented rates of violent offenses (e.g., domestic/intimate partner violence, sexual assault), relative to non-veterans involved with the criminal justice system (Marshall & Panuzio, 2005; Mumola, 2000; Noonan & Mumola, 2007). These offenses can result in lengthy prison sentences and societal stigma (Tewksbury & Lees, 2006; Travis et al., 2014).

Consequently, justice-involved veterans may be incarcerated for significant periods of time. As a result, justice-involved veterans can experience substantial detriment to their interpersonal relationships during and following these periods, which can impact their mental health (Canada et al., 2020). The experience of incarceration itself and the accompanying difficulties that ensue also can impede justice-involved veterans from securing stable housing and employment after release. Indeed, justice-involved veterans experience heightened rates of psychosocial challenges, including homelessness and difficulties with employment (Blue-Howells et al., 2018; McDonough et al., 2015; Tsai et al., 2014).

These experiences, in turn, likely adversely affect justice-involved veterans' mental health. Initial research suggests that, relative to the general population, those involved with the criminal justice system are at increased risk for psychiatric symptoms (Fazel & Baillargeon,

2011). In a systematic review on the prevalence of mental health disorders among justice-involved veterans, Blodgett and colleagues (2015) found notably high rates of several psychiatric diagnoses, including depression, PTSD, psychotic disorders, and substance use disorders. However, Blodgett et al. noted that a portion of these studies lacked a comparison group of non-justice-involved veterans, precluding understanding of group-based differences. Further, samples were often specific to circumscribed subsets of the justice-involved veteran population, such as those currently incarcerated or accessing mental health care.

Some research that has involved a comparison group of non-justice-involved veterans has demonstrated that risk for PTSD may be especially pronounced among justice-involved veterans (Elbogen et al., 2012; Taylor et al., 2020). For instance, in a recent meta-analysis, Taylor and colleagues (2020) reported that despite substantial heterogeneity, across a number of studies, veterans with PTSD had significantly higher odds of a history of criminal justice involvement (OR = 1.61). Based on this, the authors concluded there was a significant link between justice involvement and PTSD. However, they noted that the overall number of studies remained limited ( $n = 10$ ) and that additional research examining this association among females and based on timing of criminal justice involvement is warranted.

Similar associations were noted for depression. In particular, a review of the literature by Blodgett and colleagues (2015) noted that some research has found rates of depression to be twice as likely among justice-involved veterans compared to those without a history of justice involvement. However, as previously noted, samples largely were comprised of males, with females comprising approximately 2% of the included studies in the systematic review.

In addition, risk for suicide may be compounded among justice-involved veterans relative to veterans without a history of justice involvement, as discussed in reviews by Finlay et al. (2019) and Holliday et al. (2020). Yet research examining this association remains fairly limited. Palframan and colleagues (2020) examined whether rates of suicidal self-directed violence differed between veterans accessing and not accessing Health Care for Re-entry Veterans (HCRV) and Veterans Justice Outreach (VJO) programming, which are VHA services for justice-involved veterans. After adjusting for a number of correlates of suicide risk, veterans accessing HCRV services were more likely to attempt suicide (HR: 1.42 [1.24, 1.62 95% CI]), while those accessing VJO services were more likely to die by suicide (HR: 1.25 [1.02, 1.53 95% CI]), compared to veterans not accessing these services. Similarly, Barry and colleagues (2018) noted an association between justice involvement and suicide attempt, but not suicide, among older veterans transitioning from prison to the community. Other studies have reported high unadjusted rates of suicidal ideation and self-directed violence among veterans with a history of justice involvement (Brown & Jones, 2015; Holliday et al., 2020). However, some studies have not found significant relationships between justice involvement and suicidal self-directed violence among veterans upon adjustment for factors such as psychiatric comorbidity and sociodemographic characteristics (Edwards et al., 2020; Wortzel et al., 2012). Despite this, many of these studies relied upon VA databases, and studies examining whether justice involvement is associated with specific

aspects of suicide risk (e.g., suicidal ideation) are unfortunately rare. Additional research is necessary to further elucidate the relationship between justice involvement and suicidal self-directed violence among veterans.

To better understand factors associated with justice involvement in the veteran population, addressing the limitations of prior studies is essential. As previously noted, a limitation of prior work examining mental health and suicide risk among justice-involved veterans is that these studies have largely focused on those using VHA services (e.g., Palframan et al., 2020). However, a significant number of justice-involved veterans do not qualify for VHA care (Bronson et al., 2015). In addition, a portion of eligible veterans likely underuse VHA justice-involved veteran services (Finlay et al., 2016). As a result, there is a dearth of research on justice-involved veterans who are not eligible for or using VHA services. This is disconcerting given the substantial increases in suicide among veterans not using VHA care (Department of Veterans Affairs [VA], 2020). For example, rates of suicide from 2017 to 2018 decreased 2.4% among veterans using VHA care, while increasing 2.5% among veterans not using VHA services (VA, 2020). Veterans unable to access or use VHA services also experience exacerbated psychiatric symptoms and suicide risk (Holliday & Pedersen, 2017). Thus, justice-involved veterans not using VHA care may not have access to critical mental health services necessary to treat mental health disorders and prevent suicide. Understanding risk for suicide and adverse mental health experiences among the broader justice-involved veteran population, including but not limited to those accessing VHA care, remains essential.

Further, prior research on justice-involved veterans has largely focused on males (see reviews by Finlay et al., 2019; Taylor et al., 2020). While informative, this focus limits understanding of risk for mental health symptoms and suicide risk among justice-involved females. This is disconcerting given rising rates of suicide and notable mental health concerns among female veterans (Maguen et al., 2010), especially among female veterans not using VHA care (VA, 2020). According to the latest VA suicide data report, in 2018, the age-adjusted suicide rate among women veterans was 2.1 times greater than that of non-veteran women, relative to being 1.3 times greater among veteran men than non-veteran men (VA, 2020). Additionally, research has demonstrated gender differences in the prevalence of suicidal ideation and attempt among post-9/11 veterans (Hoffmire et al., 2021); yet it is unknown if these differences extend to justice-involved veterans. Therefore, additional research specific to female justice-involved veterans remains needed.

In light of these important knowledge gaps, the current study aimed to examine whether lifetime justice involvement was associated with recent psychiatric symptoms (i.e., PTSD, depression), suicidal ideation (past three months), and suicide attempt (lifetime) among post-9/11 veterans. Building upon limitations of prior work, we included veterans with and without histories of criminal justice system involvement, as well as veterans who were not eligible to receive VHA care. Given prior research, we hypothesized that justice involvement would be associated with more severe psychiatric symptoms, as well as increased risk for suicidal ideation and attempt. Additionally, an exploratory aim was to examine associations by sex (i.e., separately among male and female veterans), as well to understand whether specific aspects of justice involvement (e.g., current probation/parole, recency of criminal

justice involvement) were associated with mental health symptoms, suicidal ideation, and suicide attempt. Given the dearth of prior research, no a priori hypotheses were posited for these exploratory aims.

## Method

### Participants and Procedure

Study aims were addressed through a secondary analysis of data from the *Survey of Experiences of Returning Veterans* (SERV; Smith et al., 2014). SERV is a longitudinal cohort study focused on understanding the post-deployment experiences of post-9/11 male and female veterans. For the current analysis, only cross-sectional baseline data were used.

Eligibility criteria were as follows: (1) separated or discharged from the U.S. military; (2) served in Operation Enduring Freedom, Operation Iraqi Freedom, and/or Operation New Dawn; (3) age 18 or older; (4) English-speaking; and (5) currently residing in the United States. Participants completed an interview after providing informed consent. SERV was approved by the local Institutional Review Board. For more detailed information regarding study procedures, see Smith et al. (2014).

In total, baseline data were available for 826 veterans. Fourteen participants (1.69%) who lacked data regarding lifetime justice involvement were excluded from the current analysis, resulting in a final analytic sample of 812 veterans.

### Measures

Lifetime criminal justice system involvement (yes/no; dichotomous) was determined by an affirmative response regarding lifetime involvement in a violent (e.g., assault, rape, homicide), alcohol or drug-related (e.g., DUI, disturbing the peace), domestic violence-related, or “other” (e.g., destruction of property, theft) crime. These items have been used to classify criminal justice involvement in prior research (Kraus et al., 2017). Additional information assessed for justice-involved veterans included perpetration of these crimes in the past 12 months, lifetime incarceration in a jail or prison, and current probation or parole. These data were used to characterize the justice-involved veteran subsample and to facilitate exploratory analyses.

Symptoms of PTSD were assessed using the PTSD Checklist for DSM-IV, Civilian version (PCL; Weathers et al., 1993). The PCL assessed 17 symptoms of PTSD based on *Diagnostic and Statistical Manual of Mental Disorders-IV* criteria (American Psychiatric Association [APA], 2000). Items were scored from 1 (“Not at all”) to 5 (“Extremely”), with a total score generated by summing the items. The PCL has strong psychometric properties, including convergent validity to semi-structured interviews of PTSD (Blanchard et al., 1996).

Depressive symptoms were measured using the Patient Health Questionnaire-8 (PHQ-8; Kroenke et al., 2009). Based on the design of the survey, the PHQ-8 was modified to reflect the past month, with dichotomous (yes = 1/no = 0) response options (c.f. Smith et al., 2014). Symptoms endorsed were summed, resulting in a continuous score ranging from 0-8, with higher scores indicating more severe depressive symptoms. The PHQ-8

has demonstrated sufficient psychometric performance, including convergent validity to semi-structured interviews of depression (Smith et al., 2010).

Recent (i.e., past 3-month) suicidal ideation and lifetime suicide attempt were assessed using a modified version of the Columbia-Suicide Severity Rating Scale (C-SSRS; Posner et al., 2011). Recent suicidal ideation severity was assessed using dichotomous items (yes/no). The most severe suicidal ideation item endorsed was used to determine the suicidal ideation severity level (0 = no suicidal ideation, 1 = wish to be dead, 2 = nonspecific active suicidal ideation, 3 = active suicidal ideation with plan, 4 = active suicidal ideation with intent but no plan, and 5 = active suicidal ideation with plan and intent). This scoring approach and analysis as a continuous variable is consistent with research by Monteith et al. (2018) and Conway et al. (2017). Lifetime suicide attempt was assessed using a single item: "Have you ever in your life made a suicide attempt?" (yes/no). The C-SSRS has acceptable psychometric properties, including convergent validity to other commonly used scales of suicidal ideation and behavior (Posner et al., 2011).

VHA eligibility, use of VHA mental health care in past 3 months, demographics (i.e., age, race, ethnicity, sex, education), and military service characteristics (i.e., service branch; combat exposure per the Deployment Risk and Resilience Inventory-2 Combat Experiences Scale; Vogt et al., 2012) were also assessed to describe the sample and as potential covariates.

## Analysis

All analyses were conducted using SPSS version 26.0 (IBM Corp., 2019). Descriptives for demographic and military-related characteristics were calculated for the full sample and by lifetime justice involvement (i.e., justice-involved veterans vs. non-justice-involved veterans). Given cell sizes for the race variable, we considered analyzing Black/African American race independently, as well as collapsed into a non-White race variable inclusive of Black/African American, American Indian, Alaskan Native, Asian, Native Hawaiian, Pacific Islander, or multi-racial identification. As Black/African American race was not associated with justice involvement in our sample, we elected to utilize a collapsed race variable to ensure model parsimony. Similarly, given cell sizes, we condensed the following categories: some High School and High School diploma equivalent (i.e., diploma, General Educational Development); some college and Associate's degree; and Masters and Doctorate degrees.

Given noted associations between demographic (i.e., age, sex, education, race, ethnicity), VHA (eligibility, use of VHA mental health care), and military-related (i.e., combat exposure and service branch) characteristics with the outcome variables of interest (i.e., PTSD symptoms, depressive symptoms, recent suicidal ideation, and lifetime suicide attempt) in prior research, we elected to examine the associations between demographic and military-related characteristics with our primary predictor variable (i.e., lifetime history of justice involvement). Characteristics found to differ between justice-involved and non-justice-involved veteran groups were included as covariates in the multivariate analyses (described below). *T*-tests (for continuous variables; age, combat exposure) and chi-square analyses (for categorical variables; sex, education, race, ethnicity, service branch, VHA

eligibility, use of VHA mental health care) were used to test for significant differences based on justice involvement.

Crude associations were calculated based on lifetime history of justice involvement using linear (PTSD symptoms, depression symptoms, recent suicidal ideation) and logistic (lifetime suicide attempt; yes/no) regression. The recent suicidal ideation variable was non-normally distributed; as a result, a square root transformation was conducted to improve fit, mirroring methodology by Monteith et al. (2018). All significant crude associations were then analyzed using multivariate linear and logistic regression, as appropriate, adjusting for demographic and military-related characteristics found to significantly differ between justice-involved and non-justice-involved veterans.

Finally, exploratory analyses were conducted to assess the impact of sex and characteristics of justice involvement (i.e., past 12-month justice involvement, current probation or parole) on study findings. Specifically, the sample was stratified by sex, and the series of regressions described above were conducted separately by sex. Additionally, using the full sample, the association between justice involvement with study outcomes was evaluated based on recent history of justice involvement (i.e., past 12-months). Finally, using the full sample, we also examined if those currently on probation or parole differed from those not currently on probation or parole with respect to our outcomes of interest. Given the exploratory nature of these analyses and limited cell sizes, these analyses were crude in nature and included no covariates.

All regression models were assessed for collinearity and overall model significance. A  $p < .05$  was used to denote statistical significance for all analyses.

## Results

### Demographic, Military Service, VHA, and Justice Involvement Characteristics

Sample demographics can be found in Table 1. Overall, significant differences were found between those with and without a lifetime history of justice involvement based on combat exposure, sex, education, and service branch ( $p < .05$ ). These factors were included as covariates in the multivariate analyses. Conversely, significant differences were not observed for age, ethnicity, or race ( $p > .05$ ).

Rates of VHA eligibility did not significantly differ based on lifetime history of justice involvement ( $p > .05$ ): 20.1% of justice-involved veterans, relative to 22.6% of non-justice-involved veterans, reported not being eligible for VHA care. However, justice-involved veterans were significantly more likely to report using VHA services for mental health care in the past 3 months (43.1% of justice-involved veterans vs. 30.9% of non-justice-involved veterans;  $p < .05$ ). As such, use of VHA mental health care in the past 3 months was also included as a covariate.

In total, 160 (19.7%) veterans reported a lifetime history of justice involvement. Characteristics of justice involvement among the justice-involved veteran subsample can be found in Table 2.

### Psychiatric Symptoms, Suicidal Ideation, and Suicide Attempt based on Lifetime Justice Involvement (Table 3)

**Unadjusted.**—All crude regression models examining lifetime justice involvement were significant ( $p < .05$ ). In particular, veterans with a lifetime history of justice involvement reported more severe PTSD symptoms ( $\beta = .16, p < .0009, 95\% \text{ CI } [4.05, 10.19]$ ), depressive symptoms ( $\beta = .15, p < .0009, 95\% \text{ CI } [.66, 1.74]$ ), and recent suicidal ideation ( $\beta = .10, p = .005, 95\% \text{ CI } [.04, .24]$ ) than veterans reporting no lifetime justice involvement. Further, justice-involved veterans were nearly three times more likely to report a lifetime history of suicide attempt ( $\text{OR} = 2.98, p < .0009, 95\% \text{ CI } [1.95, 4.56]$ ) than non-justice-involved veterans.

**Adjusted.**—Similarly, all adjusted models examining the role of lifetime justice involvement were significant ( $p < .05$ ). After adjusting for education, service branch, sex, combat exposure, and use of VHA mental health care in the past 3 months, veterans with a lifetime history of justice involvement continued to report more severe PTSD symptoms ( $\beta = .08, p = .01, 95\% \text{ CI } [.86, 6.21]$ ), depressive symptoms ( $\beta = .08, p = .015, 95\% \text{ CI } [.12, 1.14]$ ), and recent suicidal ideation ( $\beta = .08, p = .027, 95\% \text{ CI } [.01, .21]$ ) than non-justice-involved veterans. Additionally, in the adjusted analyses, justice-involved veterans were again almost three times more likely to endorse a lifetime suicide attempt than non-justice-involved veterans ( $\text{OR} = 2.90, p < .0009, 95\% \text{ CI } [1.83, 4.59]$ ).

#### Exploratory Sex-Stratified Analyses

**Males.**—Among male veterans, a history of justice involvement was associated with significantly more severe PTSD symptoms ( $\beta = .18, p < .009, 95\% \text{ CI } [3.68, 11.00]$ ), depression symptoms ( $\beta = .18, p < .009, 95\% \text{ CI } [.64, 1.93]$ ), and recent suicidal ideation ( $\beta = .11, p = .014, 95\% \text{ CI } [.03, .28]$ ). Additionally, male justice-involved veterans were over 3 times more likely to have attempted suicide in their lifetime relative to veterans without a history of justice involvement ( $\text{OR} = 3.37, p < .0009, 95\% \text{ CI } [1.95, 5.81]$ ).

**Females.**—Lifetime justice involvement approached significance as it related to PTSD symptoms ( $\beta = .10, p = .072, 95\% \text{ CI } [-.48, 11.11]$ ) among female veterans, but was not significant. Justice involvement was not significantly associated with depression symptoms ( $\beta = .09, p = .114, 95\% \text{ CI } [-.20, 1.86]$ ) or recent suicidal ideation severity ( $\beta = .01, p = .220, 95\% \text{ CI } [-.07, .29]$ ) among female veterans in our sample. However, female justice-involved veterans were 3 times more likely to report a lifetime suicide attempt compared to female veterans without a history of justice involvement ( $\text{OR} = 3.00, p = .003, 95\% \text{ CI } [1.46, 6.17]$ ). All directions of associations among female justice-involved veterans remained the same regardless of significance.

#### Exploratory Analyses Based on Justice-Involved Characteristics

Past 12-month justice involvement was significantly associated with suicidal ideation severity ( $\beta = .07, p = .045, 95\% \text{ CI } [.01, .50]$ ), with non-significant trends identified for PTSD symptoms ( $\beta = .06, p = .074, 95\% \text{ CI } [-.69, 14.87]$ ) and lifetime suicide attempt ( $\text{OR} = 2.43, p = .072, 95\% \text{ CI } [.92, 6.40]$ ). A significant association was not found between past



12-month justice involvement and depression symptoms ( $\beta = .05$ ,  $p = .132$ , 95% CI [-.32, 2.41]).

When current probation or parole was examined, a number of significant associations were identified. Specifically, veterans currently on parole or probation reported more severe depression symptoms ( $\beta = .08$ ,  $p = .035$ , 95% CI [.11, 2.97]) and suicidal ideation ( $\beta = .09$ ,  $p = .011$ , 95% CI [.08, .60]), but not more severe PTSD symptoms ( $\beta = .05$ ,  $p = .160$ , 95% CI [-2.32, 14.04]), than justice-involved veterans not on probation or parole. Additionally, veterans currently on probation or parole were more than 4 times more likely to report a lifetime suicide attempt (OR = 4.53,  $p = .002$ , 95% CI [1.78, 11.52]).

## Discussion

Building upon prior work (Blodgett et al., 2015; Holliday et al., 2020; Palframan et al., 2020; Taylor et al., 2020), this study underscores that justice-involved veterans are an at-risk, vulnerable population with elevated mental health symptoms and suicidal ideation severity. This is among the first studies to examine whether veterans with and without a lifetime history of justice involvement differ regarding the severity and presence of various mental health sequelae, including depression and suicidal ideation. Specifically, relative to veterans with no history of justice involvement, post-9/11 justice-involved veterans had more severe symptoms of PTSD and depression, even after accounting for a number of potential confounders (i.e., combat exposure, education, branch, sex, and recent use of VHA mental health care). Similar findings were obtained for recent suicidal ideation and lifetime suicide attempt.

Given that SERV recruited veterans regardless of VHA eligibility or use, these findings lend continued support to initiatives and research focused on targeted mental health care and suicide prevention efforts for justice-involved veterans (e.g., VJO; Blue-Howells et al., 2013), both in the general community and VHA. Irrespective of the setting, our results suggest it is important for mental health providers to assess for psychiatric symptoms and suicide risk among justice-involved veterans. While justice-involved veterans may experience stigma and distrust of providers (Desai et al., 2021), in offering mental health and suicide risk assessment, healthcare providers can serve as critical intercepts for connecting these veterans to health (e.g., pharmaco- or psychotherapy) and social (e.g., vocational rehabilitation, transitional housing) services to facilitate rehabilitation (Blue-Howells et al., 2013).

While the current study did not explicitly examine drivers of psychiatric symptoms or suicide risk, several factors can be posited to explain our findings, based on extant research. In general, access to health care among justice-involved adults remains limited, with some authors suggesting that specific aspects of justice involvement (e.g., incarceration) independently contribute to disparities in care (Kulkarni et al., 2010). Thus, justice-involved veterans may not receive comprehensive assessment of mental health symptoms and suicidal thoughts and behaviors, which is likely especially true for justice-involved veterans who are not eligible for comprehensive VHA services. This, in turn, may lead to decreased access to psychosocial resources (e.g., housing, employment) which can buffer against psychiatric

symptoms and suicide risk (Finlay et al., 2019). Because of this, continued focus on health care policy to facilitate access to care among justice-involved veterans (e.g., programs to facilitate transition post-incarceration; programs to provide education regarding insurance and available care) remains paramount.

Despite this, justice-involved veterans in our sample were *more* likely to report recently accessing VHA mental health care than non-justice-involved veterans. While it is unclear why this occurred within our sample, high mental health care utilization has been noted in prior examinations of VHA-using justice-involved veterans (Finlay et al., 2016). One possible explanation is that justice-involved veterans may access mental health treatment with greater propensity given increased rates of psychiatric symptoms, suicidal ideation, and suicide attempt in this population. Conversely, our findings may have been skewed given that sizable recruitment occurred within VA medical facilities, and a large portion of the sample was VHA eligible (Smith et al., 2014).

Given the heightened mental health symptomatology, connecting justice-involved veterans to evidence-based mental health care is vital. VHA and community services focused on connecting justice-involved veterans to mental health care, especially during periods of current justice involvement (e.g., probation) and transition following incarceration (e.g., VJO, HCRV), are likely important and may be related to high rates of utilization in our sample. As it stands, VHA programs (e.g., VJO) and community-based organizations have strived to connect veterans currently involved with the criminal justice system or transitioning from incarceration to appropriate services to address mental health symptoms and suicide risk (Finlay et al., 2014). While VHA programming, such as VJO, has been successful at connecting VHA eligible justice-involved veterans to care (Finlay et al., 2016), examination of retention in evidence-based care, as well as investigation of methods of connecting justice-involved veterans ineligible for VHA services, remains necessary. Additional research is thus needed to confirm factors serving as barriers and facilitators to mental health care among justice-involved veterans, especially as veterans continue to experience the effects of justice involvement (e.g., difficulty finding housing or work) but are more distally connected with the criminal justice system.

Additionally, trauma exposure appears to be particularly salient among this subset of the veteran population. Indeed, many justice-involved veterans are exposed to traumatic events across multiple contexts of their lives (e.g., childhood, deployment, incarceration; Blodgett et al., 2015; Bronson et al., 2015; Finlay et al., 2019; Marshall et al., 2005; Tanielian & Jaycox, 2008). These experiences may partially explain why justice-involved veterans within our sample had more severe PTSD symptoms than veterans without a history of justice involvement. These prior traumatic experiences may lead justice-involved veterans to be hesitant to disclose exacerbations in psychiatric symptoms or suicide risk to those working with them in rehabilitative settings (Desai et al., 2021). For these reasons, it remains important for those working within such settings (e.g., correctional facilities, services specific to justice-involved veterans, outpatient mental health) to utilize a trauma-informed lens (Desai et al., 2021; Miller & Najavits, 2012). In particular, it is crucial to utilize a non-judgmental empathetic lens to understand justice-involved veterans' lived experiences, rather than judging prior behaviors. This approach also may address potential behaviors

which could complicate recovery and increase the potential for recidivism (e.g., relapse, PTSD-related irritability resulting in physical altercations).

Our findings also suggest that providers and service organizations may want to consider assessment and conceptualization of the impact of criminal justice involvement, even if justice involvement was more distal. Indeed, inclusion of justice involvement in biopsychosocial conceptualizations may facilitate understanding of mental health sequelae, including suicide risk (Howarth et al., 2020; Holliday et al., 2020). Because of this, assessment of lifetime justice involvement and its impact may be an integral component to understanding mental health functioning. To this accord, providers can better understand the impact of criminal justice involvement and provide appropriate interventions based upon the clinical needs of the veteran.

The inclusion of female justice-involved veterans in the current study is especially important given the dearth of prior research on justice-involved veterans that has included females (Finlay et al., 2019; Taylor et al., 2020). This is understandable given that 99% of veterans in prisons and 97% of veterans in jail are male (Bronson et al., 2015). While our sample did not explicitly focus on veterans in prisons or jails, and comprehensive understanding of rates of justice involvement among female veterans remains limited, the rate of justice involvement among females within our sample was notable. Though lower than rates for males (24.0% of male veterans), among female veterans, 13.2% reported a lifetime history of justice involvement.

Moreover, in the general adult population, incarcerated women have rates of lifetime and current mental illness which exceed those obtained in the National Comorbidity Survey-Replication (Karlsson & Zielinski, 2020). In particular, in a review by Karlsson and Zielinski, rates of depression, PTSD, and substance use disorders were notably high among incarcerated women. Despite this, research specific to female justice-involved veterans remains substantially more limited. Unfortunately, despite the fact that the current study included a greater number of female justice-involved veterans than many prior studies, the current analyses were not powered to perform robust sex-stratified or moderation (i.e., interaction) analyses due to the low sample size of female justice-involved veterans and the need to include covariates. Therefore, we conducted exploratory crude associations stratified by sex. In these analyses, justice involvement was significantly associated with the same outcome variables among males (relative to findings with the full sample), but only significantly associated with suicide attempt among females. This lack of significance may be due to the small sample size of female justice-involved veterans. Findings support continued research efforts specific to both male and female justice-involved veterans. Additionally, further research is needed to understand factors germane to male and female justice-involved veterans, especially as it relates to suicide attempts.

Exploratory analyses were also conducted based on characteristics of justice involvement, including past 12-month justice involvement and current probation and parole. While significant associations were noted for both characteristics, current probation and parole was significantly associated with all outcome variables except for PTSD symptoms. This finding of a significant association between current probation and parole with depression

symptoms, suicidal ideation, and suicide attempt may potentially be explained by the burden of probation and parole on psychosocial functioning (e.g., financial and occupational difficulties, interpersonal strain). Mental health diagnoses appear grossly overrepresented among those on probation or parole (Skeem & Loudon, 2006). Stressful life events, such as probation and parole, are notable drivers of mental health sequelae. Howarth and colleagues (2020) noted that stressful life events can indeed increase risk for subsequent suicidal ideation and behaviors. This may be explained, in part, by stressful life events impacting beliefs of self, the world, future, and others, as well as by impeding functioning and coping during times of elevated distress (Howarth et al., 2020). This reinforces the import of connecting veterans who are currently on probation or parole to evidence-based care to facilitate cognitive reframing, problem-solving strategies, and coping skills training. Despite this, given our sample size and the lack of inclusion of covariates for these exploratory analyses, our findings regarding parole and probation should be interpreted with caution, as they are in need of additional research and replication.

While our findings are important to the justice-involved veteran mental health literature as a whole, the current study had a number of limitations. First, as this study was a secondary analysis of a larger project, justice involvement was analyzed as a dichotomous lifetime experience. This approach was chosen based on sample size and method of assessment in the parent study. While study findings are informative, additional work remains necessary to further understand how chronicity, type of crime, sentencing, prison environment (e.g., programming available, level of security), and timing of criminal justice involvement (e.g., during childhood, during transition following military separation) may relate to mental health outcomes. Indeed, in fixed-effect models, number of times incarcerated, as well as length of incarceration, were associated with more severe mental health symptoms (Porter & DeMarco, 2019). Furthermore, contextual factors specific to criminal justice involvement may be similarly important to study – for example, how the experience and perception of criminal justice involvement, as well as perceptions of those within justice-involved veterans' social networks and communities (e.g., stigma, social isolation, perceived burdensomeness; Desai et al., 2021; Holliday et al., 2020), may impact mental health outcomes and risk for suicide.

Given that the current study was a secondary analysis, results were also limited to PTSD symptoms and depressive symptoms, rather than formal psychiatric diagnoses. PTSD symptoms were measured using the PCL for DSM-IV; as such, understanding of associations between justice involvement and symptoms of PTSD according to the *Diagnostic and Statistical Manual of Mental Disorders-5* (APA, 2013) remains warranted. Similarly, the PCL was not anchored to a specific index trauma; as such, it is not possible to determine if reported symptoms were tied to a specific traumatic event or if they are more indicative of general distress. Measurement of suicide risk was also limited to recent suicidal ideation and lifetime suicide attempt. As suicide attempts were not assessed in relation to justice involvement, it is unclear if the suicide attempts preceded justice involvement. Additional research examining temporal precedence of justice involvement in relation to suicidal self-directed violence among veterans remains necessary. Research is also needed to understand additional facets of mental health which may be exacerbated among justice-

involved veterans (e.g., substance use, non-suicidal self-directed violence, serious mental illness, moral injury).

Finally, examination of VHA use was limited to VHA mental health care in the past 3 months. While results are interesting in that justice-involved veterans in our sample appeared to use VHA mental health care with greater propensity than non-justice-involved veterans, frequency of use (e.g., number of mental health appointments) was not assessed. Additionally, mental health care outside of the 3-month timespan, as well as use of non-mental health VHA services, was not assessed. As such, further investigation of types of VHA care justice-involved veterans do access (e.g., vocational rehabilitation, transitional housing, emergency services) and their engagement in this care (e.g., receipt of a minimally adequate dose of evidence-based psychotherapy), as well as factors which motivate use of VHA care among justice-involved veterans, remain necessary.

Overall, this study expands understanding of mental health, suicidal ideation, and suicide attempt among male and female justice-involved veterans. Findings suggest that justice-involved veterans are an at-risk subset of the veteran population in need of continued mental health care and suicide prevention initiatives. Further research is necessary to delineate drivers of this risk, as well as evidence-based methods of attenuating these risk factors.

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### Clinical Impact Statement

Justice-involved veterans reported more severe symptoms of PTSD and depression and were more likely to report lifetime suicide attempt and recent suicidal ideation, relative to veterans without a history of justice involvement. Exploratory analyses revealed similar results among males, and an association between justice involvement and suicide attempt among females. Veterans currently on probation or parole reported more severe depressive symptoms, suicidal ideation, and suicide attempt. As justice-involved veterans appear to be an at-risk population, Department of Veterans Affairs and community-based initiatives to connect justice-involved veterans to mental health care are especially important.

**Table 1.**

Sample Demographic and Military-Related Characteristics Based on Lifetime History of Justice Involvement

Variable	Lifetime history of justice involvement (n = 160)		No lifetime history of justice involvement (n = 652)		t	d
	M	SD	M	SD		
Age	34.52	7.90	35.37	9.06	1.18	.10
PCL	53.09	16.97	45.97	17.93	-4.55***	.18
C-SSRS suicidal ideation	.36	.65	.22	.55	-2.46*	.23
PHQ-8	4.04	3.02	2.84	3.13	-4.33	.39
DRRI-2 Combat Experiences Scale	22.77	16.73	17.67	16.05	-3.51***	.31
	<i>n</i>	%	<i>n</i>	%	$\chi^2$	$\phi$
Sex					14.34***	.13
Male	117	73.1	370	56.7		
Female	43	26.9	282	43.3		
Ethnicity					.80	.03
Hispanic	133	84.2	564	86.9		
Non-Hispanic	25	15.8	85	13.1		
Race					< .01	<.01
White	117	75.5	477	75.2		
Non-White or multi-racial <sup>a</sup>	38	24.5	157	24.8		
Education					16.64**	.14
Some high school, diploma, or GED	27	16.9	67	10.3		
Some college or Associate's degree	89	55.6	295	45.3		
Bachelor's degree	27	16.9	182	28.0		
Graduate degree	17	10.6	107	16.4		
Branch					8.36*	.10
Army	106	66.3	395	60.6		
Air Force	11	6.9	102	15.6		
Marines	22	13.8	83	12.7		
Navy	21	13.1	72	11.0		
Eligible for VHA care					.44	.02
Yes	127	79.9	501	77.4		
No	32	20.1	146	22.6		
Use of VHA mental health care in past 3 months					8.67**	.10
Yes	69	43.1	201	30.9		
No	91	56.9	450	69.1		

\*  $p < .05$

\*\*  
 $p < .01$

\*\*\*  
 $p < .001$

<sup>a</sup>Black race was not significantly related to justice involvement within our sample. Thus, a collapsed variable was utilized.

*Note.* Data missing for the following variables: combat exposure ( $n = 26$ ), ethnicity ( $n = 5$ ), race ( $n = 18$ ), education ( $n = 1$ ), VHA eligibility ( $n = 6$ ), and use of VHA mental health care in past 3 months ( $n = 1$ ). C-SSRS = Columbia-Suicide Severity Rating Scale; DRRI-2 = Deployment Risk and Resilience Inventory-2, GED = General Educational Development, PCL = PTSD Checklist; PHQ-8 = Patient Health Questionnaire-8; VHA = Veterans Health Administration. Recent suicidal ideation severity score was square root transformed. Modified scoring for PHQ-8 used.

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**Table 2.**

Characteristics of Justice Involvement among the Justice-Involved Veteran Sample (n = 160)

<b>Characteristic</b>	<b><i>n</i></b>	<b>%</b>
Lifetime history of alcohol- or drug-related crime	102	63.8
Lifetime history of violent crime	32	20.0
Lifetime history of domestic violence-related crime	18	11.3
Lifetime history of "other" crime	40	25.0
Justice involvement in past 12 months	21	13.1
Lifetime history of spending time in jail or prison	53	33.1
Current probation or parole	19	11.9

**Table 3**

Regressions of the Role of Lifetime Justice Involvement on PTSD Symptoms, Depressive Symptoms, Recent Suicidal Ideation, and Lifetime Suicide Attempt

	Lifetime history of justice involvement	
	$\beta$	95% CI
PTSD		
Crude	.16 <sup>***</sup>	4.05, 10.19
Adjusted	.08 <sup>*</sup>	.86, 6.21
Depression		
Crude	.15 <sup>***</sup>	.66, 1.74
Adjusted	.08 <sup>*</sup>	.30, 1.41
Recent suicidal ideation		
Crude	.10 <sup>**</sup>	.04, .24
Adjusted	.08 <sup>*</sup>	.01, .21
	<b>OR</b>	<b>95% CI</b>
Lifetime suicide attempt		
Crude	2.98 <sup>***</sup>	1.95, 4.56
Adjusted	2.89 <sup>***</sup>	1.83, 4.59

\*  
 $p < .05$

\*\*  
 $p < .01$

\*\*\*  
 $p < .001$

*Note.* All regression models were significant (crude: PTSD:  $F(1, 807) = 20.68$ , Adjusted  $R^2 = .02$ ,  $p < .0009$ ; depression:  $F(1, 791) = 18.75$ , Adjusted  $R^2 = .02$ ,  $p < .0009$ ; depression:  $F(10, 765) = 21.02$ , Adjusted  $R^2 = .21$ ,  $p < .0009$ ; suicidal ideation:  $F(10, 771) = 7.65$ , Adjusted  $R^2 = .08$ ,  $p < .0009$ ; suicidal ideation:  $F(1, 807) = 7.83$ , Adjusted  $R^2 = .01$ ,  $p = .005$ ; adjusted: PTSD:  $F(10, 770) = 37.35$ , Adjusted  $R^2 = .32$ ,  $p < .0009$ ; suicide attempt: Crude:  $\chi^2(1, N = 806) = 23.84$ ,  $p < .005$ ; Adjusted:  $\chi^2(10, N = 769) = 59.16$ ,  $p < .0009$ ). Data missing for outcome variables included: PCL ( $n = 4$ ), PHQ-8 ( $n = 20$ ), recent suicidal ideation ( $n = 4$ ), and lifetime suicide attempt ( $n = 5$ ). Adjusted analyses adjusted for education, service branch, sex, combat exposure, and use of VHA mental health care. PTSD = posttraumatic stress disorder; VHA = Veterans Health Administration.