Victimization Among Incarcerated Military Veterans: A Target Congruence Approach

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Research Summary

Studies explicitly examining the antecedents of prison victimization are rare relative to other institutional outcomes (e.g., misconduct) and are virtually nonexistent for incarcerated military veterans. In the current study, we employed Firth regression models to predict victimization among a subsample of military veterans housed by the Minnesota Department of Corrections (MnDOC) using a target congruence approach. Inconsistent with prior theory and research, we observed no differences among veterans on the basis of race and physical or mental health disorders. We did, however, observe a relationship between an individual's risk of recidivism as measured by the MnSTARR 2.0 and victimization whereby higher scores corresponded with greater odds of victimization. Implications for theory and correctional policy are discussed and directions for future are given.

Introduction

Personal safety is an omnipresent concern among those who live and work in prison. Indeed, the deprivation of security and accompanying stressors are among the most salient pains of imprisonment identified in the corrections literature (Edgar et al., 2012; Griffin et al., 2012; Lambert et al., 2002; Steiner & Wooldredge, 2021; see also Sykes, 1958) and are of primary interest to administrators and staff whose goal is to promote order maintenance and security (Marquart & Couch, 1984). (In)security has been operationalized to include metrics of physical victimization, although other forms (e.g., property-related) have been analyzed (Meade et al., 2020; Struckman-Johnson & Struckman-Johnson, 2002; Wolff & Shi, 2009; Wolf et al., 2009b; Wooldredge & Steiner, 2013, 2014). Prison victimization is not a uniform experience, however, and several studies have shown that some groups confer higher levels of risk than others (McNeeley, 2022; Wolff et al., 2008; Wolff et al., 2009a; Wooldredge & Steiner, 2012, 2016). One demographic that has received limited empirical attention is military veterans.

This is an important oversight for at least three reasons. First, prior research has indicated veterans tend to be at greater risk than the general population of experiencing a variety of negative life outcomes that are relevant for studying prison adjustment. Indeed, studies have found that they are more likely than non-veterans to be involved in the criminal justice system, including the probability of arrest and subsequent incarceration (Edwards et al., 2023; Lucas et al., 2022). Results from population studies have also demonstrated that military members are more prone to lifetime arrests relative to other demographics (Snowden et al., 2017) and research on the relative risk of imprisonment between veterans and non-veterans has indicated that they are significantly more likely to be incarcerated than their non-veteran peers (Greenberg & Rosenheck, 2012). Furthermore, research has shown that increased criminal justice involvement among military

veterans is partly a function of the fact that they confer a higher risk of substance abuse (Canada & Albright, 2014) and mental health disorder (Morgan et al., 2019) relative to non-veterans, both of which are comorbid (Crum-Cianflone et al., 2016)—a point substantiated most recently by a systematic review on the most pressing criminogenic risks for veterans, including antisocial behavior and substance abuse (Edwards et al., 2023). Still, other studies have suggested that veteran status corresponds with higher rates of lifetime trauma (Saxon et al., 2001) and greater risks of suicide while incarcerated (Frisman & Griffin-Fennell, 2009; Wortzel et al., 2009).

Second, veterans constitute a notable proportion of the United States' correctional population. According to the most recent estimates from the Bureau of Justice Statistics, there are between 100,000 and 180,000 veterans currently serving time in correctional facilities (Maruschack et al., 2021). Although these numbers are proportionate to their numbers in the community, the veterans in this report were more than twice as likely be incarcerated for violent and sexual offenses, relative to non-veterans (26% vs. 12%). A spate of studies within the general penological literature have further documented that the nature and severity of the offenses for which individuals are incarcerated are robust predictors of prison adjustment, including the initiation and experience of serious institutional misconduct and victimization (Butler et al., 2021; Kuanliang & Sorenson, 2008; Loucks & Zamble, 2001; McNeeley, 2022; Steiner et al., 2014).

Third, research has shown that military veterans are not a monolithic group and vary substantially from one another across several domains. Tens of thousands are deployed overseas, yet many never serve in a warzone or experience combat; others return from tours of duty having sustained some form of bodily harm or emotional affliction, such as post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI) that negatively affects them over the life course (Booth-Kewley et al., 2010; MacLean & Elder, 2007). The potential impact of PTSD on veterans is further

corroborated by the fact that the lifetime prevalence of PTSD among United States military veterans ranges between 10% and 30%, compared to 7% among American adults in the general population (Gradus, 2021). Differences such as these might predict variation across outcomes of interest. This point was recently stressed by Baktir and colleagues (2020), who argued that research should be contextualized according to the factors that are unique to service members—as opposed to general comparisons between veteran and non-veteran populations.

Studies of prison victimization are rare relative to other measures of prison adjustment, such as institutional misconduct (Wooldredge & Steiner, 2014); studies focusing on victimization among incarcerated veterans are virtually nonexistent. A review of research on incarcerated military veterans has shown that the majority of scholarship on this topic focuses on rule violations, excluding those pertaining to victimization (Logan et al., 2022). The dearth of scholarship on this topic coupled with greater levels of criminogenic risk (including their overrepresentation in violent and sexual criminal offending categories and substance abuse) among the veteran population necessitate an explicit examination of veteran-specific risk factors for victimization in prison. The goal of the current study is to identify correlates of victimization among a sample of military veterans incarcerated in the state of Minnesota using a target congruence and victim-offender overlap approach (Berg & Mulford, 2020; Finkelhor & Asdigian, 1996). Examining differences in victimization risk across military veterans may facilitate the design and implementation of equitable prevention strategies and prison programming and is congruent with best practices in establishing "what works" to promote public safety and improve the lives of incarcerated people (Cullen et al., 2009; Latessa et al., 2020).

Target Congruence, Prison Victimization, and the Victim-Offender Overlap

Target congruence theory (Finkelhor & Asdigian, 1996) has become an increasingly popular framework for understanding prison victimization (see McNeeley, 2022). The theory

refers to the degree to which individual characteristics align (i.e., are congruent) with the motivations and preferences of would-be perpetrators. These traits and corresponding behaviors may provoke others (target antagonism), convey a sense of target vulnerability, or signal a utility to be exploited (target gratifiability). For example, individuals suffering from mental health disorders or addiction may be perceived as weak or otherwise incapable of defending themselves, thus increasing their prospect of being targeted for victimization by others (Felson et al., 2012).

In the context of the current study, it is possible that military veterans exhibiting certain characteristics could be targeted (or sidestepped) for victimization by other incarcerated people. Physical injuries or other health problems, which are especially common among veterans (Deutsch, 2017; Hasday, 2008; Kidron et al., 2019), may leave individuals vulnerable to attack while incarcerated (Grosholz & Semenza, 2021; McNeeley, 2022; Pare & Logan, 2011). Military experience may also be accompanied by serious physical and emotional trauma that manifests in the form of afflictions such as TBI and PTSD—both of which have been shown to be associated with higher levels of aggression and other antisocial behavior and amplified or exacerbated by substance abuse (Associated Press, 2004; Baguley et al., 2006; Blakey et al., 2018; Caplan et al., 2015; Hoge et al., 2008; McManus et al., 2015; Taft et al., 2007; Tateno et al., 2003; White et al., 2012). To the extent that these afflictions are imported into the prison environment (DeLisi et al., 2011), veterans may engage in provocative behaviors that increase the probability of their own victimization, a pattern which has also been observed among other incarcerated populations (Blitz et al., 2008; Drapela et al.,2009; Fahmy et al., 2020; Hochstetler et al., 2004; McNeeley, 2022; Pare & Logan, 2011).

By the same token, racial disparities among military veterans have been documented outside of prison, including the receipt of VA benefits and mental health care (Goldberg et al.,

2020; Nayback, 2008; Seamone, 2022). To the degree that these unaddressed differences are also imported into the prison context, veterans of minoritized races or ethnicities might exhibit different victimization risk relative to their white counterparts—as both classic and contemporary assessments of other incarcerated groups have indicated (Bell, 2017; Berg & DeLisi, 2006; Bonner et al., 2017; Bowker, 1980; Carroll, 1974; Harer & Steffensmeier, 1996; McNeeley, 2022; Schenk & Fremouw, 2012).

As mentioned, a notable proportion of incarcerated veterans are also serving time for serious offenses, both violent and sexual (Maruschak et al., 2021). Among the general prison population, studies have shown that offense type significantly factors into the probability of institutional maladjustment. For example, Pare and Logan (2011) examined nationally representative prison data and found that those serving time for violent offenses were significantly more likely to report experiencing both minor and serious victimization, net of controlling for individual-level assaults (verbal and physical) against staff and other incarcerated people. Similar patterns were observed more recently by McNeeley (2022) whereby total victimization risk was significantly higher among those incarcerated for violent offenses—which is consistent with observed patterns from large-scale reviews of prison adjustment (Steiner et al., 2014; see also Drury & DeLisi, 2011).

The findings from these studies collectively suggest that veterans might evince certain sociodemographic characteristics and legal histories that make them more likely to be either perpetrators or targets for prison-based victimization relative to other groups. Our purpose here is to identify which characteristics are the most salient among this population. Our inquiry is also congruent with the concept of the victim-offender overlap (Berg & Mulford, 2020), which itself is a corollary of target congruence theory. It is predicated on the notion that the probability of

becoming a victim of crime necessarily increases as a function of targeting others.

Methods

Data and Sample

The sample included veterans who were incarcerated in Minnesota Department of Corrections (MnDOC) facilities on January 1, 2021. All variables were obtained from the Correctional Operations Management System (COMS) maintained by MnDOC. The Department began recording the identity of victims of violent rule infractions in January 2021. Therefore, independent variables were measured as of (or before) January 1, 2021, while victimization was measured during the following twelve months, between January 2 and December 31, 2021.

There were 459 individuals with military histories who were incarcerated on January 1, 2021. To account for differences in time at risk of in-prison victimization, 132 individuals were removed from the sample because they were released before the end of the follow-up period and were not victimized.[1] Individuals were assessed during intake using the Minnesota Screening Tool Assessing Recidivism Risk (MnSTARR) 2.0 (discussed in more detail below). Because the MnSTARR 2.0 was an important control variable in the analyses, nine individuals were removed from the sample because they did not receive a MnSTARR 2.0 assessment, which resulted in a final sample size of 318.

Sample characteristics were presented in Table 1. Unfortunately, we had limited details about the individuals' military service, a point on which we elaborate in our discussion of future research. The only available information to which we had access was the branch in which they served. These data were not recorded for nearly half of the sample (41%); however, about a third

[1] We conducted supplemental analyses (available upon request) including these 132 individuals. The results were substantively similar to those presented below.

(34%) served in the Army, 12% in the Marines, 11% in the Navy, and 2% in the Air Force.

Table 1. Sample Characteristics

	Mean or %	Range
Military Branch		
Air Force	2%	---
Army	34%	---
Marines	12%	---
Navy	11%	---
Other/unknown	41%	---
Male	98%	---
Race		
Non-Hispanic White	77%	---
Black	15%	---
Native American	4%	---
Other race/ethnicity	4%	---
Offense Type		
Sexual offense	44%	---
Violent offense	41%	---
Drug offense	5%	---
Property offense	2%	---
DWI offense	2%	---
Other offense type	6%	---
Age	50.81	21-94
Length of incarceration	94.36	0-554

Note. N = 318

The majority of individuals in the sample (98%) were men. About three-quarters (77%) were non-Hispanic White, while 15% were Black, 4% were Native American, and 4% were Hispanic, Asian, or another race. Nearly half of the sample (44%) was incarcerated for a sexual offense, 41% for non-sexual violent offenses, 5% for drug offenses, 2% for property offenses, 2% for driving while intoxicated (DWI), and 6% for other types of offenses. Individuals ranged in age from 21 to 94 years old, with an average age of about 51 years old. The average length of incarceration as of January 1, 2021 was 94 months (about 7.8 years); length of stay ranged from

less than one month to 554 months (about 46 years).[2]

Measures

Dependent variable. Victimization was measured as officially recorded experiences of violence due to fights or physical assaults.[3] The measure used in this study was a binary variable indicating whether the individual was listed as the victim on a discipline record between January 2 and December 31, 2021. Twenty-four individuals were victimized during the one-year follow-up period, which amounted to 8% of the sample. Descriptive statistics for all variables were presented in Table 2.

Table 2. Descriptive Statistics

	Mean or %	*SD*	*Min-Max*
Dependent Variable			
Victimization	8%	---	---
Independent Variables			
TBI/PTSD	76%	---	---
Other mental illness	42%	---	---
Non-Hispanic White	77%	---	---
Physical health	0.41	0.419	0-4
MnSTARR 2.0	1.53	0.921	1-4

Note. N = 318

Independent variables. Consistent with the target congruence and victim-offender overlap literature, the independent variables of interest were indicators of mental and physical health as well as race. Two binary variables were included to measure the individual's mental health.[4] The first indicated whether the individual's record noted a diagnosis of a TBI and/or combat-related

[2] The demographic characteristics of the veterans in our sample (e.g., older, white, educated males serving time for serious, violent, or sexual offenses) appear representative of the incarcerated veteran population and mirror those of other studies from different geographic regions as well as figures provided by the BJS (Morgan et al., 2019; Bronson et al., 2015; Drapela et al., 2019; Maruschak et al., 2021). This is also true regarding the respective proportions across different branches of service (Brooke, 2020).

[3] The victim's identity is also captured for incidents of homicide and holding hostage; however, none of the veterans in the sample experienced these types of victimization.

[4] Mental health assessments are conducted during intake, within 14 days of admission. This includes assessments for current mental condition as well as a review of medical history. Assessments can also be conducted at any point while incarcerated at the request of correctional staff. Therefore, the diagnoses measured here may have been made prior to incarceration, at intake, or after intake.

PTSD. Scholars have argued TBI and PTSD are comorbid disorders (i.e., they frequently occur in the presence of one another) and should be analyzed together when examining veterans (e.g., Campbell et al., 2009; Dolan et al., 2012; Morrissette et al., 2011; Ramchand et al., 2008; Walter et al., 2014). The second variable indicated whether there was a record of another mental health issue. Physical health was measured as a continuous variable indicating the number of medical conditions or disabilities that were recorded in COMS. Race was a binary measure indicating whether the individual was non-Hispanic White (1) or was a racial or ethnic minority (0).

Because of the small sample size, there were few observed events (i.e., few individuals who had been victimized). This was a potential issue given the argument that there should be a minimum of five to ten events for each independent variable included in a logistic regression model (Penduzzi et al., 1996; Vittinghoff & McCulloch, 2007). It was therefore important to include a small set of variables in the multivariate models. In order to control for known correlates of prison victimization while also maintaining a parsimonious model, we included the MnSTARR 2.0 risk level as the primary control variable. The MnSTARR was originally validated using a sample of people incarcerated in Minnesota prisons (Duwe, 2014). Implemented in 2017, the MnSTARR 2.0 is a fully-automated assessment that calculates different risk scores for men and women (Duwe & Rocque, 2017). It was computed using 48 variables that measure prior criminal history, prior prison stays, sentence length, offense type, institutional behavior (including misconduct), visitation, age, gang membership, and participation in programming. Scores were classified into one of four risk levels: low risk contains the bottom 40% of scores, medium risk contains the next 20%, high risk contains the next 20%, and very high risk contains those in the top 20% of scores. The average MnSTARR risk level in this sample was 1.53, or between low and medium risk.

Analytic Strategy

Traditional logistic regression models are not ideal for predicting rare events. First, when the number of events is small, the probability of the outcome of interest occurring is underestimated, while the probability that it will not occur is overestimated (King & Zeng, 1999). Second, separation occurs when, due to the small sample size and/or small number of cases in which the outcome of interest occurs, an independent variable always or never occurs along with the dependent variable (Karabon, 2020). Separation can lead to non-convergence in traditional maximum-likelihood logistic regression models.

We therefore employed a Firth logistic regression (Firth, 1993), which used a penalized likelihood function to account for separation in the logistic model and to reduce bias in the likelihood estimates when predicting rare events. While this analytic strategy is not commonly used in social sciences, it is ideal for studying small samples with rare outcomes of interest and has been used in criminological studies to predict rare events (e.g., Arndt et al., 2020; Campedelli et al., 2020; Schaible et al., 2021) including victimization (Zheng et al., 2020).

Results

Bivariate correlations between violent victimization and the independent variables were presented in Table 3. Contrary to prior research, no significant correlations were observed between victimization and mental health, physical health, or race. However, MnSTARR risk level was significantly related to victimization whereby those with higher MnSTARR risk levels were more likely to have been victimized ($r = 0.274$, $p < .001$).

Table 3. Bivariate Correlations with Victimization

	r	*p*
TBI/PTSD	-.039	.477
Other mental illness	-.004	.943
Physical health	-.049	.380
White	-.064	.245
MnSTARR 2.0	.274	< .001*

Note. N = 318. *p < .05

The results of the multivariate Firth logistic regression model presented in Table 4 were consistent with the bivariate results presented above. Neither individuals with TBI and/or PTSD (b = -0.105, p = .907) nor those with other mental health disorders (b = -0.004, p = .993) were more or less likely to experience violence during the one-year follow-up period. The number of physical health concerns was not related to victimization (b = -0.110, p = .754). White and non-White veterans were similarly likely to experience victimization (b = -0.750, p = .111). On the other hand, as with the bivariate tests presented in Table 2, the MnSTARR risk level was positively associated with the odds of victimization (b = 0.784, p < .001).

Table 4. Firth Logistic Regression Model Predicting Victimization

	b (SE)	*p*
TBI/PTSD	-0.105 (0.894)	.907
Other mental illness	-0.004 (0.444)	.993
Physical health	-0.110 (0.349)	.754
White	-0.750 (0.469)	.111
MnSTARR 2.0	0.784 (0.179)	<.001*

Note. N = 318. *p < .05

Discussion

Inconsistent with prior theory and research on prison victimization (Bell, 2017; Berg & DeLisi, 2006; Blitz et al., 2008; Bonner et al., 2017; Bowker, 1980; Carroll, 1974; Ellison et al., 2018; Harer & Steffensmeier, 1996; Jachimowski, 2018; Kuo et al., 2014; McNeeley, 2022; Pare & Logan, 2011; Schenk & Fremouw, 2012; Teasdale et al., 2016), this study found no relationship between mental and physical health or race and victimization among incarcerated veterans. It is possible these factors operate differently among veterans than among non-veterans. For example,

while physical injuries or disabilities may generally signal vulnerability in that they prevent resisting an attack, potential predators may associate injured former service members with courage (i.e., "badges of honor;" Deutsch, 2017; Hasday, 2008; Kidron et al., 2019), which could inspire a level of respect and thereby thwart the advances of others.

In addition, the null results may be due to differences between incarcerated veterans and the broader prison population. Incarcerated veterans are far more likely to experience mental health issues than their non-veteran counterparts. A prior study examining Minnesota prisons (Logan et al., 2021) showed that approximately 12% of the non-veteran population suffered from PTSD or TBI—compared to 76% of the sample of veterans examined here—while 16% of incarcerated non-veterans suffered from other mental health disorders, compared to 42% in the current sample. Similarly, the average number of physical health issues among the sample of veterans examined here (mean = 0.41) is nearly double that found in a prior study examining the general population incarcerated in Minnesota state prisons (mean = 0.23; McNeeley, 2022). Furthermore, White individuals made up 77% of the sample of veterans studied here, compared to 46% of the broader prison population in Minnesota (McNeeley, 2022). The ubiquity of physical and mental health issues among incarcerated veterans, as well as the homogenous population in terms of race and ethnicity, may render these factors less important in predicting which veterans will experience violence.

On the other hand, MnSTARR 2.0 risk level was significantly associated with higher odds of victimization. Therefore, our study highlights the utility of incorporating empirically validated assessments when specifying models to predict victimization risk. This is especially true with respect to achieving model parsimony when dealing with smaller sample sizes, as is often the case when studying special populations. Assessment instruments such as the MnSTARR 2.0 or the

Level of Service Inventory-Revised (LSI-R) (Labrecque et al., 2018; McCafferty & Scherer, 2017) that are comprised of many relevant variables may be particularly useful for research because they allow scholars to control for a number of known correlates without including a large number of control variables.

The results also demonstrate how validated risk assessments might aid in the development of target congruence theory and the victim-offender overlap, at least for prison research. Indeed, the ability of the MnSTARR 2.0 to differentiate veterans on the basis of victimization risk has both practical and theoretical implications. Indeed, our findings substantiate past research examining the predictive capabilities of risk assessments in the domain of victimization (Labrecque et al., 2014; Labrecque et al., 2018; McCafferty & Scherer, 2017). As mentioned, this appears to be a byproduct of the victim-offender overlap, whereby incarcerated people who evince higher recidivism risk scores that stem from certain lifestyle choices—such as substance abuse, criminal activity and institutional misconduct, and associating with antisocial peers—also experience greater levels of victimization (Daquin & Daigle, 2021; Toman, 2019; Kuo et al., 2022). Therefore, in addition to attempting to prevent violent behavior by high-risk incarcerated people, correctional officers may be able to further prevent violence by also providing guardianship over high-risk individuals.

Although we found that higher scores on the MnSTARR corresponded with an increased likelihood of victimization among military veterans, we are unable to identify which components of the assessment are driving the effect. This shortcoming highlights an important tradeoff between establishing model parsimony when studying rare events and parsing out potential causal mechanisms. Still, some items used to calculate the MnSTARR 2.0 are particularly relevant for a veteran population. First, substance abuse as a means of coping with emotional and psychological

trauma is endemic among returning veterans. Some research has estimated that approximately 1.1 million veterans are living with a substance use disorder (SUD)—a quarter of whom struggle with illicit substances including cocaine, heroin, and various prescription drugs (Substance Abuse & Mental Health Services Administration, 2018). Prior drug convictions and substance abuse treatment during incarceration are important predictors of recidivism in the MnSTARR 2.0 and studies have shown that SUDs among veterans correspond with a host of other negative events, including victimization and the initiation of aggression (Anderson et al., 2017; Lapp et al., 2005). It is possible (and likely) that veterans suffering from SUDs appear vulnerable to others—perhaps because of the lasting physiological and psychological effects—and are targeted accordingly. The reverse scenario is also plausible, whereby veterans affected by SUDs engage in provocative behaviors that increase the prospect of victimization, as research on the general incarcerated population has suggested (Felson et al., 2012; Pare & Logan, 2011; Teasdale et al., 2017).

Similar arguments can be made regarding the effects of criminal history, offense severity, institutional misconduct, and association with antisocial peers on victimization. Embedded within the MnSTARR assessment are items tapping the total number of prior convictions, offense type, discipline convictions in prison, and involvement in security threat groups (STGs). As mentioned, a spate of research has indicated that incarcerated people import their social and criminal histories with them into prison such that their experiences during incarceration often mirror their experiences prior to admission (DeLisi, 2003; DeLisi et al., 2004; DeLisi et al., 2010; Delisi et al., 2011; Steiner et al., 2017). Recent scholarship has further demonstrated that serious, chronic offending prior to incarceration is tied to disproportionate levels of prison violence and misconduct (DeLisi & Butler, 2020; Logan et al., 2022), which in turn corresponds with higher levels of victimization. Evidence of the potential victim-offender overlap among incarcerated veterans

could also be attributed to differences in age and socioeconomic capital (e.g., educational attainment), both of which are reflected in MnSTARR scores. This explanation is further buttressed by studies which have shown that military enlistment is higher among younger men from disadvantaged backgrounds, who have higher propensities for fighting or other antisocial behaviors (Bachman et al., 2000; Elder et al., 2010).

Our results also corroborate recent arguments made regarding the generality of deviance and risk for vulnerable populations (Pratt & Turanovic, 2019) and indicate that general instruments may be used in lieu of more specific assessments. We are not suggesting that the MnSTARR 2.0 is superior to any particular specialized assessment; only that adequate prediction might be achieved by considering general criminogenic risks. On the one hand, it could be that static factors alone—such as age, sex, criminal history, and offense severity—are sufficient predictors of victimization risk (Harris & Rice, 2015; Zhang & Farebee, 2014) even among special populations such as veterans. On the other hand, it could be that former service members portend unique, dynamic risks that could be best addressed by implementing veteran-specific assessments, as Elbogen and colleagues (2010, 2014) previously argued. Unfortunately, our data did not contain any instruments designed for veteran populations.

The results of the current study offer several avenues for future research. First, as noted above, we are unable to assess the predictive capabilities of veteran-specific assessments relative to general ones. Future research should therefore explicitly compare different assessments, both general and specific, to 1) assist in developing best practices as they relate to classification and service delivery among incarcerated veterans, and 2) further inform theoretical debates regarding the generality of deviance and risk between various groups of incarcerated people. Second, we were unable to incorporate important information about the veterans' military experiences, such

as service era, cohort, or combat experience. In particular, combat experience is associated with PTSD, TBI, and serious injuries; therefore, our inability to examine combat experience could account for the null findings found when examining the relationship between health and victimization. We encourage scholars to examine the extent to which these aspects of military service are related to institutional or reentry outcomes among incarcerated veterans. As an important caveat, studies have found that the effects of combat experience on maladjustment are nuanced. Contrary to popular belief and depictions, numerous service members appear to actually benefit physically and psychologically from having served in warzones and experiencing combat (e.g., the "healthy warrior/soldier effect"; Kang et al., 2015). Future research should therefore attempt to account for this possibility. Third, our data do not permit assessment of veterans' victimization across their prison experiences. Future researchers should, where feasible, employ longitudinal research designs, as mental health factors such as PTSD and TBI are not static and may be exacerbated (or assuaged) throughout the course of one's sentence, depending on their experiences while incarcerated.

Finally, our study was limited to Minnesota prisons; thus, the findings may not be generalizable to military veterans incarcerated in other locations. Researchers should attempt to replicate our study in other states or by using nationally representative data to account for potential geographic differences in risk for victimization while incarcerated. It is likely that regional variation exists not only in the way facilities are managed (and the budgets they command) but also in the characteristics of the veterans they supervise. This is an important consideration given that our sample consisted mostly of older, white men; yet the demographic composition of those who enlist in the United States' military writ large is changing, especially regarding female (Street et al., 2009) and Hispanic military veterans (Laff, 2020). To this end, some research has indicated

that the effects of PTSD among combat veterans is tied to sex, race, and ethnicity vis-à-vis economic marginalization, which might further exacerbate the pains of imprisonment experienced by vulnerable groups (MacDonald et al., 1997; Nayback, 2008; Penk et al., 1989; Ruef et al., 2000). Future studies should therefore aim to include more diverse samples of incarcerated veterans to establish the degree to which overlap exists in victimization risk factors.

Veterans have been and continue to be a vulnerable population whose prior experiences in the military may affect how they experience the criminal justice system, including how they adapt to prison. Given the diversity of experiences among the men and women who have served, it is instructive to identify factors that differentiate them from one another as a means of establishing best practices and effective strategies for preventing violence. The results of this study suggest some characteristics that predict risk for violence among the general incarcerated population may not perform as well when used among veterans, possibly because these factors are more common among veterans than among the general incarcerated population. However, the results showed a significant association between the MnSTARR 2.0 and victimization. Correctional administrators may be able to use empirically validated assessments designed to measure recidivism or institutional misconduct (see Duwe, 2020) to accurately identify those at greatest risk of violence while incarcerated who might be suitable for interventions meant to reduce violence.

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