



**NATIONAL ASSOCIATION
OF STATE HEAD INJURY
ADMINISTRATORS**

**Co-Occurring TBI and SCI among Justice
Involved Veterans:
A Literature Review of Prevalence and Need
&
Best Practices for Intervention and Training**

Abstract

This paper reviews the available literature on justice-involved veterans impacted by traumatic brain injury (TBI) and spinal cord injury (SCI). A review of the literature suggests that such comorbid conditions are often missed (Creasey et al., 2015). Inconsistency in the screening and identification process of individuals with TBI/SCIs contributes to less effective treatment. More than 2.5 million veterans serving after September 11, 2001, have sustained a TBI (Reger et al., 2022). TBI is also associated with major depressive disorder and anxiety disorders like post-traumatic stress disorder (PTSD) (Drapela et al., 2018). PTSD and TBIs are robust predictors of incarceration, indicating a high risk of justice-involvement for veterans with TBIs (Morissette et al., 2011). SCIs are also prevalent in veteran populations; approximately 1 in 7 people with an SCI are veterans (U.S. Department of Veterans Affairs, 2021). Mental health disorders, such as major depressive disorder, are diagnosed at higher rates among veterans with SCI relative to the general public (Wilson et al., 2018). Veteran courts are available in 46 states and many also feature peer support for this vulnerable population of justice-involved veterans (Johnson et al., 2016). The benefits of peer support include increased hope, optimized recovery, feelings of empowerment, and improved quality of life when combined with therapy (Simmons et al., 2017). *Keywords:* veteran, justice-involved, traumatic brain injury, spinal cord injuries, comorbid, court models, peer support.

As of 2018, the estimated total veteran population in the U.S was 18 million (U.S Census Bureau, 2020). According to Bureau of Justice Statistics that were released in 2021, 107,400 veterans were incarcerated in state or federal prison in 2016 and make up 8% of the incarcerated population (Bureau of Justice Statistics, 2021). Some of these veterans are dealing with injuries sustained during their service in the military. Some veterans sustain traumatic brain injuries (TBI) and/or spinal cord injuries (SCI). TBI and/or SCI, can make it difficult to navigate the criminal justice system. The creation of veteran treatment courts, or VTC, was intended to address the unique difficulties faced by justice-involved veterans.

Traumatic Brain Injuries (TBI) in Veteran Populations

According to the Center for Disease Control and Prevention, a TBI is an interruption to normal brain function caused by a bump, blow to the head, blast, or penetrating head injury (2021). More than 2.5 million veterans serving after September 11, 2001, have sustained a TBI (Reger et al., 2022). Additionally, one study reported that 46% of veterans who were involved in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) screened positive for a deployment related TBI. TBIs are often comorbid with Post-Traumatic Stress Disorder (PTSD) and/or depression among veteran populations (Morissette et al., 2011).

Justice-Involved Veterans with Brain Injury

There is a lack of information on the relationship between TBI and criminal justice involvement among veterans. The prevalence of TBI in male prisons is approximately 40 to 60% compared to the general population (Schneider et al., 2022). A study conducted by Schofield et al (2015) determined that individuals with a TBI had a twofold risk of criminal conviction relative to persons with no history of TBI. While mild TBI rarely leads to significant cognitive and

behavioral change, more severe TBI has been associated with the development of adverse behaviors. Vaughn et al (2018) determined that TBI is comorbid with psychiatric disorders and both violent and nonviolent antisocial disorders. While a causal relationship between TBI and criminality cannot be assumed, the literature clearly reflects the criminogenic vulnerability for individuals with a history of TBI.

In Veteran populations, TBIs pose an increased risk of adverse outcomes. This can be seen in higher unemployment rates, homelessness, and suicide risk (Slattery et al., 2013). The unemployment rate for veterans is nearly double the rate for the general population. Research suggests that there are 31 homeless veterans per 10,000 veterans (Slattery et al., 2013). Additionally, a veteran commits suicide about every 80 minutes in this country. Importantly, veterans with mental health issues or TBI, for which they do not seek treatment, may be at a higher risk for involvement in the criminal justice system (Slattery et al., 2013).

Veterans with SCI

Spinal cord injuries (SCI) are caused by damage to either the spinal cord or surrounding tissue and bones that can result in paralysis, chronic pain, loss of feeling, and impact the brains' ability to send messages to the body (U.S Department of Veterans Affairs, 2021). According to the National Spinal Cord Injury Statistical Center (NSCISC), there are approximately 17,900 new SCI cases each year (2021). In 2020, the National Spinal Cord Injury Statistical Center estimated that, in the United States, around 296,000 people are living with an SCI (2021). About 42,000 individuals with SCIs are Veterans (U.S Department of Veterans Affairs, 2021), and, looking at another way, approximately 1 in 7 people with a spinal cord injury (SCI) are veterans. SCI affects more than 11% of military personnel injured in Operation Iraqi Freedom and Operation Enduring Freedom (US Department of Veteran Affairs, 2021).

The US Department of Veteran Affairs is the largest integrated healthcare system in the country, providing care to more than 27,000 veterans with spinal cord injuries or disease. One descriptive study of nearly 50,000 veterans with SCIs using the Veterans Health Administration reported that more than 50% had paraplegia, 39% had quadriplegia, and a small percentage had an unspecified injury (Curtin, 2021). The average number of comorbid conditions for a patient with SCI is 15. The average age of the SCI patients in that study was 60 years old with 30% of the sample being older than age 65.

Veterans with SCI have a risk of experiencing depression. Depressive symptoms are common after a spinal cord injury and are related to a number of factors like pain. One study reported that 41% of veterans with SCI had a lifetime diagnosis of depression (Wilson et al., 2018). That same study reported that women veterans had even higher rates of depressive complaints. The pressing behavioral health issues associated with SCI can best be addressed in veteran treatment courts.

Justice-Involved Veterans with SCI

The available literature on justice-involved veterans with SCI diagnoses is highly limited. However, a study from 2014 has found that criminal history, including both arrests and convictions, was common in the history of veterans with SCI. Persons with SCI were reported to

have a higher level of criminal involvement and also sensation-seeking behavior and substance use prior to their injury (LePage et al., 2014). Criminality and sensation seeking may be significant, yet independent predictors of SCI, where individuals with SCI are more likely than their peers to have a history of juvenile delinquency and incarceration prior to their injury (Mawson et al., 1996). However, more research is needed to better understand the relevance to veteran populations and the impact of SCI on justice-involvement.

Comorbid TBI and SCI among Veterans

The prevalence of patients with comorbid TBI and SCI is difficult to quantify due to discrepancies in the identification of TBI with under and overreporting. While screening efforts for TBI are common, the screening of TBI patients for SCI and the reverse are inconsistent. There is sometimes a lack of collaboration between SCI and TBI units and less severe TBIs may go undiagnosed.

Budd et al. (2017) examined how comorbid TBI and SCI lead to several different outcomes among veterans. Persons with comorbid TBI and SCI have poorer motor functioning compared to persons with SCI only and sometimes have greater cognitive impairment, greater emotional distress, and make smaller functional gains during rehabilitation. Veterans with SCI have better independence for mobility and transportation and have overall better mental health than veterans with comorbid TBI and SCI. Multiple TBIs are related to poorer quality of life, less functional independence in areas of self-care, communication, problem-solving, memory, and social interactions (Budd et al., 2017). Persons with comorbid TBI and SCI have poorer memory and problem-solving skills, and persons with severe TBI and paraplegia have the poorest motor function and longer rehabilitation stays during treatment (Creasey et al., 2015; Macciochi et al., 2004). Persons with SCI and TBI are more likely to have chronic pain and develop pain syndromes and heterotopic ossification (Alvarez & Dalal, 2021). Heterotopic ossification is the development of bone in soft tissue (Shehab et al., 2002).

Veteran Court Models

Veteran treatment courts (VTC) were first established in 2004 to address the needs of veterans with mental illness who were involved in criminal proceedings. As of 2021, there are hundreds of VTC across 46 different states. The intended purpose of VTC is to divert veterans from incarceration into specific programs and community treatment centers. The focus of VTC varies, with some focusing on combat veterans, others allowing for violent crimes, and a few primarily working with veterans from Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF). The emphasis on OEF and OIF for some VTC stems from the prevalence of TBI and SCI coming out of these specific military operations. Requirements for participation in VTC include having a substance use disorder or other psychiatric condition (Johnson et al. 2016). Successful participation in VTC can result in the dismissal of criminal charges, while unsuccessful completions could lead to program extensions, sanctions, or removal from the program in general. Veteran Affairs, Veterans Justice Outreach, and peer mentorship programs provide support to local VTC, which creates stability and coordination among the veteran service community. Previous studies on VTC suggest that more than two-thirds of veterans successfully complete their program (McGuire et al. 2013). In regard to recidivism after participation in a

VTC, research suggests that the longer a veteran is involved in a program, the lower the likelihood of another arrest (Johnson et al. 2015).

A 2016 survey on VTC characteristics reported that 22% of VTC emphasized OEF/OIF veterans, 77% accept felony cases, and 86% of VTCs accept post-plea veterans (Johnson et al., 2016). That same study suggested that the greatest obstacles to securing treatment for veterans are distance, accessibility, and timeliness of services. The most common sanction imposed by VTC are verbal reprimands (96%) and the least common is placing in a holding cell (35%) (Johnson et al. 2016). When analyzing the aspects that increase successful termination, VTC programs with frequent drug testing and more severe sanctions for failing goals are more successful. Less successful features include allowing reserve/national guard veterans to participate, less rigorous drug testing, the use of behavioral contracts, and brief incarcerations. By analyzing components of VTC, policy makers can better understand how to serve the veterans in our criminal justice system. Further research is needed on how VTC supports individuals with TBI or SCI.

Peer Support and Mentoring in VTC

Peer support services in problem-solving courts are associated with better outcomes (Adams et al., 2021). This benefit may be especially salient for justice-involved veterans; an often-under-served at-risk population. Peer support groups compliment the work of mental health professionals and VTC by providing a safe space to process and discuss difficult topics with an individual with first-hand experience and a more in-depth understanding of the experience the veteran is having (Azevedo et. al., 2020). Specifically for justice-involved veterans, peers with previous experience with incarceration are more likely to connect to veterans on a personal level than a mental health professional with no to little personal experience (Simmons et. al., 2017). Peer support providers may provide different benefits than mental health professionals, including delivering more practical help (Simmons et. al., 2017). Peer support workers have skills such as providing crisis support, building community, promoting advocacy, helping with goal setting, and providing vocational and housing aid (Adams et. al., 2021). Additionally, peer support providers offer participants hope of success as a result of having shared experiences, and they build relationships based on self-disclosure and friendship which facilitates trust between participants and peer mentors (Simmons et. al., 2017). Peer mentor participants suggest that trust is essential to opening up and speaking informally about their past and current experiences (Azevedo et. al., 2020).

Justice-involved veterans are at increased risk of recidivism in the first months of community reentry after involvement in the criminal justice system. Peer support programs may aid in bridging the gap between incarceration and community resources upon reentry, thus reducing the risk of recidivism in the early months. Studies of peer support with justice-involved veterans demonstrate the effectiveness of such resources in reducing risk behaviors and improving health among these populations. High risks of homelessness, mortality, and recidivism can be reduced through engagement with peers and access to the resources provided by peer groups (Simmons et. al., 2017).

Peer-mentoring might be an especially powerful tool in rural and agricultural regions. As an increasing number of veterans move to more rural regions upon return from service, peer-mentoring may aid in providing specialized mental health treatment for individuals without ready

access to mental health professionals (Azevedo et. al., 2020). Rural communities may have limited availability of law enforcement and criminal justice resources, and providing remote peer-mentoring to justice-involved veterans in these communities may fulfill some of the needs created by this deficiency.

Discussion

Improving the identification of TBI and SCI will inform prevalence estimates which will improve research on this unique population. That information will inform better treatment and management in the criminal justice system. Research involving justice-involved veterans with traumatic brain injury confirms the vulnerability to poor community re-entry outcomes associated with TBI. Research on veterans with spinal cord injury is limited to veterans who utilize the VHA, so results cannot be generalized to veterans with SCI who do not use VHA.

Given the proliferation of VTCs, future studies will likely inventory larger numbers of courts and thereby benefit from enhanced statistical power. Future research on peer support for justice-involved veterans with comorbid TBI and SCI should examine the benefits of providing peer support even during their time in the military. Research may explore expanding the buddy system already incorporated into military service, to ultimately include peer support upon departure from service. Further, studies have been mainly limited to male veterans with specific socio-economic status, and future program evaluation should evaluate the needs of female veterans and veterans of all eras and conflicts.

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Literature Review: Best Practices for Support and Interventions

This literature review follows one developed by University of Denver students spring 2022, which focused on justice involved Veterans impacted by acquired brain injury and spinal cord injury. This report focuses on the unique compilation of Veterans and reintegration, the success of the Veteran Treatment Courts (VTC's), the dynamics that contribute to the success of mentorship within VTC's, and current mentorship programs within the VTC's. Understanding the current mentorship programs (training, structure, volunteer/paid, and recommendations) will support the development of a specific acquired brain injury (ABI) or spinal cord injury (SCI) training process to complement the current peer support programs in the VTC's. Currently, there aren't specific articles that address VTC's mentorship programs specific to those that have had an injury to the brain, neck, and/or spinal cord. Additionally, there are few research articles related to Veterans that are justice involved that have an injury to the spinal cord.

Background of Peer Support in Veterans Court

A specialty court utilizing the design of drug and mental health courts had been deemed necessary to support veterans returning with TBI, SCI, mental health diagnoses, including PTSD, and substance abuse. The psychosocial impacts with reintegration in addition to the above listed diagnoses have contributed to some Veterans becoming justice involved. Ramunno (2019) shares the goals of VTCs, which is to identify risk factors resulting in justice system engagement, to improve self-regulation (impulsivity and self-control), to reduce recidivism rates and improve the quality of life for veterans during VTC engagement and beyond.

In January of 2008, Buffalo Veterans Treatment Court was one of the first to offer specialized services to veterans in the justice system in the US. Douds et. al. (2021) identifies Judge Robert Russell as instrumental in developing the peer support component of VTC. Judge Robert Russell recognized and honored the value of Veteran support and declared peer mentors to be included as part of the Treatment Court Team when he witnessed the benefit in his courtroom. The value of having a trusted person with lived experience became the standard for future VTCs.

Reasons People Enlist

Ginexi et. al. (1995) found four reasons for military enlistment. These are: self-improvement, education/skill, lack of investment in school or work, or wanting something different, and patriotism. Characteristics of self-improvement included earning respect, proving self to others, improving self, and gaining clarity on next steps in life. These underlying reasons people enlist have some impact on the ease or challenge of reintegration as Veterans self-assess the degree to which their visions were met and work through any cognitive dissonance.

Reintegration

Research suggests that successful reintegration is more likely among commissioned officers, those with college degrees, those that understood the purpose of the missions, and those who reported higher religiosity levels (Morin, 2011). But others, particularly those who endured trauma, incurred an injury, experienced mental health diagnoses (including post-traumatic

stress), or had a combat buddy with injury, illness or death had increased difficulty with reintegration (Morin, 2011).

Adjusting to civilian life was difficult for approximately 44 percent of returning military members (Resnik et. al, 2012). Ahlin et. al (2015) reviewed that half of Veterans did not understand the purpose of military missions in which they participated. They felt the directive was to kill first to save their own lives, and this resulted in bitterness and inner conflict. An area for future research is to measure the internal conflict as it may directly relate to reintegration challenges, mental health challenges and behaviors that lead to justice involvement.

Sayer et. al. (2010) shares statistics related to reintegration. A recent survey of OIF/OEF veterans seeking VA care reported widespread prevalence of severe problems related to social functioning. For example, 49 percent of veterans reported problems participating in community activities, 42 percent in getting along with their spouse or partner, and 25 percent in finding and keeping a job [9]. Other problems reported by OIF/OEF veterans in the survey included difficulty in controlling anger (52%), loss of a job (24%), dangerous driving (35%), and legal problems (20%).

Resnik et. al. (2012) recognizes The SOTA Working Group on Community Reintegration, and their identification of the areas impacted as Veterans return to civilian life:

• Social: engaging with friends and family members. • Work: engaging in paid and unpaid employment. • Education: engaging in learning activities. • Parental: caring for and supervising the raising of children. • Spouse/significant other: engaging in a long-term relationship. • Spiritual/religious: engaging in activities that address spiritual needs. • Leisure: engaging in preferred avocational activities. • Domestic life: engaging in activities to maintain the home and live in a noninstitutional residence within the community. • Civic: engaging in activities focused on the betterment of society and the responsibilities of citizens. • Self-care: engaging in activities to maintain societal standards of grooming and to maintain health. • Economic life: engaging in simple and complex economic transactions and having command over economic resources (p.89).

This is important, as these areas offer stability, purpose and meaning, and self-care. When these are out of balance, it contributes to reintegration challenges and choices that increase the likelihood of substance misuse. Additionally, when these areas are optimized, it offers purpose and meaning/healthy lifestyle choices that support Veterans to meet their court expectations and live a purposeful and balanced life following justice involvement. The above doesn't recognize the impact of acquired brain injury, spinal cord injuries, and mental health diagnoses or the lack of support from some experience to return to a life that may have changed or may not have felt adequate prior to leaving.

Romaniuk et. al. (2018) identifies the post-deployment impact of the loss of military culture and community, a loss of identity, and the loss of purpose. In relation to the loss of culture and community, he states, "Despite participants originating from varying military organizations during different conflict eras, descriptions of military culture were consistent. Overall, military culture was described as a collectivist social institution that emphasizes hierarchy, structure, conformity and comradery. Once enlisted, participants described the acculturation process

‘wherein their appearance, behaviors, and thoughts are remodeled’ and conformity was enforced” (p. 63-67). He goes on to share language that emphasizes the loss of identity with characteristics of enlisted participants identified: competent, motivated, efficient, creative, dedicated, passionate, mission driven, focused, task-oriented, assertive, collectivist, structured, and rank identity. These are characteristics that can be expressed in other areas of civilian life once purpose and meaning is re-established. Romaniuk et. al. (2018) further identifies the loss of purpose, utilizing the following words to depict experience in theater: powerful purpose, part of something bigger, responsibility, accomplished, successful, empowered, meaningful contribution, and noble cause. The process of shifting life direction, akin to a sense of starting over, takes time and consistently focus on a new goal. While some people adapt with ease knowing they can recreate these dynamics in their lives in the future, some Veterans hold on to these qualities as some of the most purposeful experiences in which they have engaged. Cognitive reframing is a valuable process that can support this post-deployment adjustment. People that naturally have this skill have greater ease in identifying purpose and meaning and then acting in this direction to experience increased life satisfaction.

Brain Injury and Spinal Cord Injury

A significant portion of veterans are noted to have acquired brain injuries and spinal cord injuries as a result of military engagement. Baldwin (2015) estimates that, “Approximately 25% to 40% of OIF/OEF/OND-era veterans have neurological and psychological injuries related to post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI), and since 2000, more than 347,962 veterans have suffered a form of TBI while on active duty” (p. 708). Similarly, White et.al. (2012) reviewed that less than ½ of Veterans seek assistance for acquired brain injuries. These numbers share the extent to which current data may be under-reported.

Individuals that have an injury to the brain are impacted mentally, emotionally, and physically. A common area of impact that is seen with brain injuries is in the frontal lobe region of the brain which is responsible for executive functioning. This may mean that there isn’t awareness of anything wrong. This may impact areas such as focus, decision-making, planning, prioritizing, short-term memory, initiating and following through with tasks. These impacts result in difficulties implementing solutions, adjusting to changed circumstances and proactively moving forward in their lives.

In 2014, LePage assessed 157 Veterans with spinal cord injuries. He found that employment resulted in fewer arrests. LePage further found that only 13.8% of people with SCI were employed at one year post injury. Theories on higher rates of legal involvement with those with a SCI are related to higher rates of substance use (possible opioid connection), higher incidences of violence, and riskier behavior prior to the injury.

Compilation of Veterans Treatment Court

There are multiple research studies that link substance use to justice involvement. The 2000 Bureau of Justice Statistics report was reviewed in Russell (2009). The report indicates: significant rates of drug and alcohol use, homelessness, and mental illness among the veterans who end up in the criminal justice system. The report found that prior to incarceration in jail or

prison, 81% of veterans report drug use problems. The report also found that prior to incarceration in jail, 35% were identified as having current alcohol dependency, 23% were homeless at some point in the prior year, and 25% were identified as mentally ill. These rates were slightly lower with veterans in prison; finding 31% identified as having current alcohol dependency, 12% were homeless in the year prior to incarceration, and 19% were identified as living with mental illness (362-363).

According to the annual SAMHSA National Survey on Drug Use and Health, the rate of illicit drug use among Americans is 8.7%. Within criminal justice populations, rates of illicit drug use increase to 26.5%. It is estimated that 60% of veterans in U.S. prisons have substance use disorders and the Bureau of Justice Statistics reports that 81% of justice-involved veterans had a substance abuse problem prior to incarceration (Ramunno, 2019). The highest predictor of criminal behavior in Veterans is problematic substance use (Slattery et al., 2013).

PROCESS

The following people make up the Veterans Treatment Court: judge, prosecutor, defense attorney, coordinator, case manager, a law enforcement representative, Veteran Justice Outreach Specialist, and treatment specialists. This team evaluates and determines eligibility. While all treatment courts have their own policies of inclusion, typically the following areas are considered for eligibility once an acceptable discharge status is confirmed: offense type (felony/misdemeanor, violent/non-violent), mental health status, crime, assessment of a link between the crime and a mental health condition, and the degree to which the team assesses the person is invested in treatment.

The phases of participation were offered by Lindsey Cupo (Problem Solving Court Coordinator II) at the Denver District Court:

- Phase 1 Orientation and Engagement (30+ days). This period is noted for intake, treatment plan development and engagement in the plan.
- Phase 2 Stabilization (120+ days). This phase is inclusive of meeting expectations with probation officers, treatment interventions, attending hearings, obeying the law, meeting with the mentor, and over thirty days of sobriety.
- Phase 3 Relapse Prevention/Treatment Maintenance (120+ days). This portion of VTC programming is noted for consistency with phase two expectations and begins to develop an aftercare plan. It is here that community service hours become a focus and here that payment plans are established for debts. Focus is on structure and social engagement. Sixty days of sobriety are required to move to phase four. Stable housing is a focus at this phase.
- Phase four Independence and Mastery (90+ days). This phase focuses on maintaining stable housing, stabilizing previous expectations, developing a stabilization/aftercare plan (including relapse prevention/safety plan). 90 days of sobriety is required to move to graduation.
- Graduation and Post-Graduation Phase. A ceremony is held in honor of accomplishments. Graduates continue to have support meetings. This time represents “the maintenance phase of living a clean, sober and legal lifestyle.”

Russell (2015) acknowledged the rewards for adherence to treatment plans and sanctions for non-compliance in VTCs. Investment in treatment and awareness of life stressors are considered as part of assessment. Depending upon multiple factors, some participants will have their criminal history dismissed as part of a successful graduation process.

Success of Veterans Treatment Court

The success of finding employment, housing, and successful addiction and mental health treatment in the VTC is well documented. (Slattery et al., 2013) found that upon treatment entry, thirty-four percent were unemployed, 28% at the 6-month mark in VTC, and 20% one year into the program. Improvements in mental health and substance use were significantly improved at 6-months into treatment and this improvement was sustained at one year (Slattery et. al., 2013).

Ramunno's (2019) research identifies the following successes of Veterans Treatment Court:

- The average graduation rate is 28.9% with a standard deviation of 16.2%.
- VTCs appear to be stricter than drug courts as evidenced by a lower graduation.
- Violent offenders were eligible for half of the VTCs.
- Mentorship was mandated in sixty-three percent of VTC's.
- Sixty-two percent of VTC participants were dismissed of their criminal charges in comparison to the U.S. population's dismissal rate of approximately seven percent (U.S. Courts, 2019).
- Housing was provided in half of the VTCs evaluated and the other half was not.
- Forty-three percent of VTC participants received either education or employment opportunities.
- All of the VTCs included a counseling component suggesting that participants benefit from the improved communication, expression and management of emotions, and relief from depression, anxiety, and other mental health concerns. (p. 15)

This research of VTC process and success demonstrates the value of a program designed to understand Veteran issues from the perspective of lived experience. The support, team effort, leadership and clear expectations have similarities to military training and deployment experiences.

Recidivism Research

Johnson et. al. (2015) identified psychological and medical comorbid conditions and this relationship to recidivism:

A history of opioid misuse ($p = .025$) was associated with subsequent criminal recidivism. However, none of the following were associated with criminal recidivism: schizophrenia, bipolar disorder, major depressive disorder, posttraumatic stress disorder, generalized anxiety disorder, adjustment disorder, cluster B/borderline personality disorder (all $p > .05$). None of a variety of 10 major medical disorders (e.g., diabetes, hypertension, cancer, traumatic brain injury) were associated with criminal recidivism. Regarding opioid misuse, 50% of those subjects who were positive for a history of opioid misuse (two of four veterans) engaged in criminal recidivism after discharge from the HCVCP.

Similarly, cocaine misuse was trending toward significance ($p = .057$) with regard to criminal recidivism. Other substances (alcohol, amphetamines, cannabis, nicotine) were not associated with post discharge criminal recidivism (all $p > .05$). (p. 170)

Carter (2018) sites research from Frederick (2014), which identifies that in 2011, 11 of the 14 VTC's had recidivism rate of under 2% for VTC graduates, in comparison to state prisoners (including veterans) in which the recidivism rate was 70%.

As of 2011, Russell (2015) reviewed the outcomes of 71 graduates from the Buffalo Veterans Treatment Court. There was a zero percent recidivism rate. All graduates had maintained sobriety, were active with mental health treatment, were in school or employed. Additionally, all graduates had stable housing and had improved interpersonal relationships with family and friends.

Roles of Mentors and their Roles in Outcome Successes

In identification of the value and benefit of peer support in the VTC, Douds et.al (2021) quoted a mentor named Jake during an interview. He shared:

This court's being run by vets for vets. [It] tries to capitalize on that positive experience [in the military] and tries to help the [vets]. Veterans helping veterans. Shared history. [It is a] life experience [that] is similar for a private and a colonel ... [and they] have that common background and stories to share. [There is] an ethic instilled in all veterans to leave no one behind. [To] help one another. Give a guy a hand up. Military culture continues [and is] lifelong. Psychologists talked to World War Two vets who said their service years were some of the best of their lives; the band of brothers. [There is] something special about being in the military.

When asked about the impact of peer mentors on their success in the program, 87% of Veterans identified their peer mentors as instrumental (Slattery, 2013). Russell (2009) quotes a peer support idiom, "behind every successful person, there is one elementary truth: somewhere, somehow, someone cared about their growth and development. This person was their mentor" (p.370).

Research consistently identifies informal expectations for mentors in many VTC's. While there are some positive attributes to this style of programming, additionally there are concerns, including the lack of standardization and perceived support and boundaries. Confidentiality is an outgrowth of the lack of structure and fosters trust. Yet, some peers aren't open about the choices they are making, and the mentors don't feel like they have sufficient information because they aren't allowed into the hearings, so that they can influence a course correction. In the VTC's where the mentors could sit in on the hearings, the mentors were seen as part of the treatment team, an enforcer of the rules, and this had the potential to impact trust in that relationship. Additional perceived positive aspects of informal programs include the independently created boundaries in which a mentor may become a friend or extension of family. The mentor may be more accessible and have less paperwork/administrative requirements for the program. The perceived negatives about informal programs are that the mentor can feel

unprepared to respond to problems, they may not have enough details about what is really going on with the peer, they sometimes feel undervalued and underappreciated, and as though they aren't part of the team. The role may feel like a duty or a mission that hasn't been defined, is vague, lacks direction or is absent of a clear goal.

Mentors in the VTC are identified as having multiple traits and roles. Some of these are:

- Buddy
- All in this together
- Have each other's backs
- Leadership
- Resolution
- Comradeship
- Been there, done that
- Belonging
- Trust (within military)
- Non-judgmental
- Advocate to increase peer support
- Support fidelity to treatment plan
- Accountability coach
- Role Model
- Listener
- Self-confidence promoter
- Goal setting
- Solution-focused
- Honest feedback
- Highlight successes
- Stigma reality check
- Success coach

Research identifies that advice giving isn't a preferred mentorship style. Research identifies some benefits for mentors including a sense of purpose, self-confidence, giving back, self-regulation, making a difference, accountability to another, and improved interpersonal skills.

Training of Mentors

Models of peer support often look to 12-step programs as an early example of what is possible in peer relationships. The goals of these programs are to listen, support abstinence, motivate, recognize progress, celebrate successes and recovery. These 12-step programs elevate a peer to the role of sponsor when they demonstrate sobriety, stability, and identify readiness. Some of this process transfers to the VTC's as well, as they are looking for mentors that have had a year of recovery. Additionally, an acceptable discharge status and training completion are required. Peer mentors may be independently selected in VTC due to exceptional outcomes, referred by a community agency or hired through the VA.

Justice for Vets hosts training through Psych/Armor online to support training for mentors when a VTC doesn't have a formalized training program. Others were trained through "on the job" experience. Overall, Jalain et. al. (2020) identifies there is a lack of standardization for training and process. While most VTC mentors are volunteers, the federal government hires mentors and offers standardized training. This allows mentors to contribute to policy and treatment recommendations.

Mentorship sometimes embodies teamwork, a "tough love" approach and the idiom of "leave no one behind." Jalain et. al. (2020) reviews the values of each branch of service that step down to mentorship values and approaches:

- honor, courage, commitment (U.S. Navy, U.S. Marine Corps)
- loyalty, duty, respect, selfless service, honor, integrity, personal courage (U.S. Army)
- integrity first, service before self, excellence in all we do (U.S. Air Force)
- honor, respect, and dedication to duty (U.S. Coast Guard)

Jalain et. al. (2020) is quoted, “Mentors worked tirelessly to help the veteran succeed in the VTC program and advocated for their mentees while reinforcing the need for personal accountability, perseverance, and honesty. (p. 1180-1181).

Future Recommendations for VTC Mentor Programs

Russell (2009) brings attention to the importance of seeing success as more than not having a relapse or further justice involvement:

The successes of these veterans may not be adequately expressed simply by the inexistence of recidivism and relapse. Rather, their successes may be better understood by the positive changes in their individual lives. Some have experienced positive changes in their personal lives, relationships, and marriages. Some have been able to successfully reunite with their children. Some have made 'lemonade out of lemons' and turned community service sanctions into permanent gainful employment. Some have decided to make the commitment to work in the treatment field after graduation. These veterans now have their lives back on track. Perhaps most significant of all are the changes in the demeanor and attitudes of these individuals. Participants emerge from the process standing tall, smiles on their faces, with a renewed sense of hope, pride, accomplishment, motivation, and confidence in their ability to continue to face challenges and better their lives (p.370).

Recommendations for training include reviewing scenarios (suicide prevention, directives if a peer violated a court order, topics to review/not review with court). As identified by Lucas (2018), these additions to training were recommended by mentors:

- Bringing in past mentors and mentees to discuss what worked and did not work for them
- Allowing better access to and knowledge about current treatment options
- Explaining what the mentees experience when they go to the VA for various types of treatment
- Establishing a proper chain of contact in case an emergency occurs
- Providing better guidance to the mentors about what the court expects from them and whether they are accomplishing their goals as peer mentors (p. 80).

The following are recommendations of future programs and research:

- Tracking post-graduation data in the VTC's is a future recommendation
- Exploring program differences in the different VTCs to understand variations in recidivism rates is also recommended
- Tracking the dynamics that influenced the quality of the match is recommended (race, ethnicity, mentor approach, commonalities)
- Supervision and mentorship program evaluation
- Increased paid mentorship funding and opportunities
- Paid mentorship coordinators

With the success of the VTC mentorship programs, it is easy to see that an increased effort to engage in peer programs when military return from deployment, has a beneficial preventative

factor to justice involvement. Expanding peer mentorship as a component of reintegration and redefinition of life purpose and engagement is recommended.

Final Conclusions

In anticipating the reintegration and adjustment needs of those with an injury to the head, neck, and/or spinal cord, there are multiple areas to consider which can increase success in the treatment courts. These considerations include cognitive dynamics such as attention/focus, processing, and short-term memory challenges and skill development and compensatory strategies to manage these impacts. Emotional/mental health considerations including anger, defeat, paranoia, mood disorders, and post-traumatic stress disorder. The physical impacts of disability result in adjustments to transportation, ease of navigating the court facilities, and self-care strategies.

The duration post injury to the brain, neck, and/or spinal cord is important, as there are multiple phases of adjustment (emotional, cognitive, and physical) and self-awareness development in the first couple years post injury. This time is valuable for recovery and rehabilitation and navigates VTC in addition to this may prove to be very difficult. The cognitive impact of brain injury is important to be assessed by professionals and recommendations for successfully navigating the VTC's will need to be known by the treatment team. Mentorship training is very valuable in orienting mentors to education about injuries to the brain, neck, and/or spinal cord, the resulting impacts, the adjustment process of their peers, as well as strategies they can support their peers to implement.

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