

CRIMINAL RISK FACTORS AMONG JUSTICE-INVOLVED VETERANS

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ABSTRACT

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Veterans of the U.S. Armed Force face a multitude of problems stemming from the unfortunate consequences of combat. In a report from The Institute of Medicine (2010), the negative outcomes experienced by veterans after combat service include, but are not limited to, posttraumatic stress disorder (PTSD), major depression, suicide, substance-use disorders, unemployment, homelessness, and incarceration. Given the nexus between veterans' mental health issues and criminal justice involvement (Elbogen, Johnson, Newton, et al., 2012; Greenberg & Rosenheck, 2009), the incarceration of the nation's veterans has created an opportunity for veteran-specific rehabilitation programs and courts as an alternative to punitive sentencing. However, research identifying criminogenic needs of justice involved veterans (JIV) is relatively new and the literature examining this unique population of veterans is incomplete. The Central Eight, criminogenic risk factors, have been studied on a wide array of offender groups (Dowden & Andrews, 1999a; Dowden & Andrews, 1999b; Dowden & Andrews, 2000; Wormith, Hogg, Guzzo, 2012), yet currently no study exists that examines all Central Eight risk factors within a JIV population. Considering the growing population of JIVs, research is needed to maximize the utilization of criminal justice resources and divert veterans into specific rehabilitative programming if necessary. This study extends the current literature of the Central Eight to justice-involved veterans by examining the relationship between risk factors (i.e. Criminal History, Procriminal Attitudes, Procriminal Associates, Antisocial Personality Pattern, Family/Marital, School/Work, Substance Abuse, and

Leisure/Recreation) on group membership (i.e., JIVs or non-veteran offender).

Additionally, the relationship between criminal thinking styles and veteran's justice involvement will be explored. Results from this study will be used to inform veteran specific criminal justice programing.

KEY WORDS: Justice-involved veterans, Central Eight risk factors, Criminal Thinking

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CHAPTER I

Introduction

The prevalence of mental health problems among veterans who have served during wartime is an issue that cannot be understated. Milliken, Auchterlonie, and Hoge, (2007) found prevalence rates of mental health issues in Operation Iraqi Freedom (OIF) veterans to be as high as 42.4%, including diagnosis such as Posttraumatic Stress Disorder, major depression, and alcohol misuse. The National Vietnam Veterans' Readjustment Study (NVVRS) found lifetime prevalence rates for posttraumatic stress disorder (PTSD) in Vietnam veterans to be as high as 30.9 % for male veterans and 26.9 % for female veterans (Kulka et al.,1988). Additionally, studies indicate that the prevalence rate of PTSD in veterans increased four to seven times after the invasion of Iraq (Seal et al., 2009), resulting in PTSD and traumatic brain injury (TBI) being coined the signature wounds of Iraq and Afghanistan (Altmire, 2007).

When compared to civilian counterparts, the rates of PTSD, Major Depressive Disorder (MDD), and TBI are particularly high in veterans (Tanielian & Jaycox, 2008). Research on veterans' mental health problems indicates a number of poor outcomes (Zatzick et al., 1997) including reintegration issues (Sayer et al., 2010), unemployment (Engelhard et al., 2007; Institute of Medicine, 2010), marital and family stress (Goff, Crow, Reisbig, & Hamilton, 2007; Rona et al., 2009; Sayers, Farrow, Ross, & Oslin, 2009), and involvement in the criminal justice system (Institute of Medicine, 2010; Greenberg & Rosenheck, 2009).

Veterans Criminal Justice-Involvement

Of particular concern to society is the involvement of veterans in the criminal justice system. JIVs are defined as a U.S. military veteran incarcerated by, or under community supervision by, the criminal justice system (Blonigen et. al., 2016; Erie VA Medical Center, 2011). The Institute of Medicine (2010) reported criminal-justice involvement as a rising problem for service members returning from Iraq and Afghanistan. Unfortunately, criminal involvement is not limited to service members who served in Iraq and Afghanistan, as studies suggest Vietnam veterans are disproportionately represented in the veteran prison population in the 1980s (Beckerman & Fontana, 1989). Recent estimates reflect approximately 181,500 veterans are incarcerated in local and state jails as well as federal prisons (Bronson, Carson, Noonan, & Berzofsky, 2015). These estimates seem to under-represent the amount of JIVs given that the most recent report shows 68.6% of the correctional population were not incarcerated, but under community supervision such as probation or parole (Glaze & Kaeble, 2014). Recidivism, defined as re-arrest, reconviction, or incarceration for a new crime is estimated to average nearly 68% for the first three years after incarcerated prisoner release (Langan & Levin, 2002). According to the Veterans Health Administration Justice Programs, the lifetime average number of arrests among JIVs is eight (as cited in Blonigen et al., 2016), indicating JIVs recidivism rates follow the high trend of their civilian counterparts.

Given the high number of lifetime arrests of JIVs, efforts to identify potential risk factors of veteran incarceration found financial instability, traumatic brain injury, and combat exposure when combined with high levels of anger/irritability (Elbogen, Cueva,

Wagner, et al., 2014; Elbogen, Johnson, Newton, et al., 2012a; Blonigen et al., 2016; Elbogen, Fuller, Johnson, et al., 2010) are potential risk factors. Additionally, mental health problems, specifically PTSD and co-occurring substance abuse disorders are found to increase a veteran's risk of involvement with the justice system (Greenberg & Rosenheck, 2009; Elbogen, Johnson, Wagner, et al., 2012b). With mental health problems found to increase the risk of justice-involvement, mental health treatment has shown to reduce rates of criminal charges by 33% in veterans utilizing behavioral health services of the Veterans Health Administration for comorbid mental health and substance use disorders (Pandiani, Ochs, & Pomerantz, 2010). Conversely, being involved in the criminal justice system increases the likelihood of mental health issues, such as PTSD for veterans (Black et al. 2005). These findings demonstrate the overwhelming need for a comprehensive

Risk-Need-Responsivity Model and Central Eight

Among the civilian offender rehabilitation literature, the Risk-Need-Responsivity model is well known and when adhered to, is regarded as an empirically supported way to reduce recidivism (Polaschek, 2012; Taxman, Pattavina, & Caudy, 2014; Ward, Mesler, & Yates, 2007). Created as a practical way to implement the General Personality and Cognitive Social Learning perspective of criminal behavior (Bonta & Andrews, 2017) the RNR model consists of three core principles structured to inform and guide rehabilitation efforts.

The risk principle is the first core principle within the RNR model and involves matching treatment services to the offender's level of risk (Bonta & Andrews, 2017). This requires providing more intensive services to high risk offenders and minimal

services to low risk offenders. Research shows a reduction in recidivism risk when treatment is matched to offenders based on their level of risk (Andrews & Kiessling, 1980; Bonta, Wallace-Capretta, & Rooney, 2000; Lovins, Lowenkamp, & Latessa, 2009; Brusman Lovins, Lowenkamp, Latessa, & Smith 2007; O'Donnel, Lydgate, & Fo, 1971). For example, in a study of 13,676 offenders from 97 correctional programs recidivism risk was reduced by 18% for high-risk offenders in residential programs and 9% for non-residential programs when programs adhered to the risk principle (Lowenkamp, Latessa, & Holsinger, 2006). Evidence also indicates the opposite that is recidivism risk increases when intensive treatment is provided to low-risk offenders (Andrews & Dowden, 2006; Lovins, Lowenkamp, & Latessa, 2009). This increase is hypothesized to extend from the disturbance of low-risk offenders' prosocial networks or by increase of antisocial behaviors and cognitions in low-risk offenders as they association with high-risk offenders (Andrews & Dowden, 2006).

The second principle, the need principle, involves differentiating between factors which predict recidivism from those that are not associated with criminal activity and target treatment towards the latter (Bonta & Andrews, 2017). Research has identified eight major risk factors, known as the Central Eight, all of which influence offender recidivism (see Table 1 for summary). In previous research a distinction has been made between the top four criminogenic risk factors termed the "Big Four" and the remaining four named the "Moderate Four" based on magnitude of their correlation to recidivism. However, most recent research studying the Central Eight in multiple populations has found no such differentiation between the "Big Four" and "Moderate Four" (Bonta & Andrews, 2017; Olver, Stockdale & Wormith, 2014; Grieger & Hosser, 2014; Bonta,

Blais, & Wilson, 2014; Gutierrez, Wilson, Ruge & Bonta, 2013; Wooditch, Tang, & Taxman, 2014). It is important to note that excluding criminal history, the other seven risk factors are considered dynamic, in that when changed they increase or decrease an offender risk of recidivism.

Table 1

Central Eight Risk Factors

Factor	Indicators
<i>Big Four Scales</i>	
History of antisocial behavior	Early involvement, large number of offenses, problems while on conditional release
Antisocial personality	Impulsive, pleasure seeking, aggressive and irritable
Procriminal attitudes	Rationalizations for crime, negative attitudes towards law
Social supports for crime	Criminal friends, isolation from prosocial others
<i>Moderate Four Scales</i>	
Family/marital relationship	Inappropriate parental monitoring, poor family relationships
School/work	Poor performance, low levels of involvement and satisfaction
Substance abuse	Abuse of alcohol and/or drugs (tobacco excluded)
Prosocial recreational activities	Lack of involvement in prosocial recreational/leisure activities; teach prosocial activities

The third core principle named the responsibility principle, involves translating the findings of the first two principles into clinical practice. Focusing on higher risk offenders, this principle states treatment and intervention efforts should be adapted for each offender based on which criminogenic risk factors are most dominant (Bonta & Andrews, 2017). For example, if an offender rates higher on substance abuse (among other risk variables), a larger amount of the offender's treatment should focus on

reducing the offender's substance use by providing alternatives. Comprehensively, the RNR model informs professionals on who to treat (the risk principle), what to treat (the need principle), and how to treat (the responsivity principle) (Bonta & Andrews, 2017).

Central Eight as Risk Factors for Justice Involvement in Veterans

Research on the extent to which the Central Eight apply to JIVs is limited.

Regarding the static risk factor of criminal history, two studies have evaluated criminal history as a predictor of future veteran arrest. Specifically, Elbogen, Johnson, Newton et al. (2012a) found previous arrests to be a strong predictor of future justice involvement of Iraq and Afghanistan veterans indicating that non-military aspects possibly contribute to criminal involvement in this era of veterans. Furthermore, a study of veterans and civilian counterparts involved in opiate treatment programs also found prior arrests and incarceration as predictors of future criminal activities (Rothbard et al., 1999).

More research has focused on the risk factor of antisocial personality patterns as a predictor of veteran's criminal involvement. Studies of Vietnam and Gulf War era veterans show traits and/or a diagnosis of antisocial personality disorder (ASPD) are more frequently found among JIVs when compared to non-justice involved veterans (Black et al., 2005; Shaw, Churchill, Noyes, & Loeffelholz, 1987), providing support that antisocial personality patterns might be a relevant risk factor for JIVs. Additionally, in a study of veterans admitted to substance abuse treatment, a diagnosis of ASPD was correlated with higher criminal justice involvement (Cacciola, Rutherford, Alterman, & Snider, 1994).

However, it is important to note a diagnosis of ASPD is partially derived from a history of criminal behavior, which makes it difficult to make predictive conclusions

regarding antisocial personality patterns based on these results (Blonigen et al., 2016). Conversely, research utilizing antisocial personality traits such as aggression, sensation seeking, and disinhibition have correlated to a greater number of past-30 day and lifetime arrests (Kasarabada, Anglin, Stark, & Paredes, 2000), indicating focusing on traits might be a better predictor of veteran criminal involvement.

Literature focusing on procriminal attitudes/cognitions among justice-involved veterans is extremely limited. Lack of remorse, alternatively identified by Walters (2011) as blaming another person for negative consequences of one's actions was found to be more common among a sample of Gulf War era justice-involved veterans when compared to non-incarcerated Gulf War veterans (Black et al., 2005). This however is the only study which identifies any aspect of procriminal attitudes as a potential risk factor for recidivism among JIV.

Similarly, there is a lack in research focused on veteran's procriminal associates. One study found Iraq and Afghanistan era veterans with positive support systems are less likely to display violent and aggressive behaviors (Elbogen, Johnson, Wagner, et al., 2012b), which is important as these behaviors are associated with higher risk of arrest (Taft et. al, 2007).

The results of five studies evaluating the quality of family and marital relationships as a risk factor for veteran justice involvement are mixed. Four studies that looked at group differences indicated JIVs are less likely to be married (Greenberg & Rosenheck, 2009), more dissatisfied with martial relationships (Shaw et al., 1987), demonstrate greater rates of domestic violence (Gondolf & Foster, 1991) and are more likely to have negative family relations and limited support (Benda, Rodell, & Rodell,

2003). On the other hand, Rothbard et al. (1999) found no association between marital status and family functioning with veteran justice-involvement.

Regarding the risk factor of school/work, veterans with lower levels of education are more likely to commit crimes (Benda et al., 2003). However, it is important to note that after switching to an all-volunteer military, service members are required to have a high school diploma or General Educational Development (GED) to enlist, suggesting there is a difference between what is considered a low level of education for veterans when compared to civilians. Research evaluating work as a risk factor is mixed, as one study found JIVs have shorter employment histories (Shaw et al., 1987) where another study found JIVs have higher rates of employment (Greenberg & Rosenheck, 2009), which indicates it is unknown to what extent this risk factor applies to JIVs.

No studies have been conducted to assess the relationship between prosocial activities and justice involvement of veterans (Blonigen et al., 2016). The risk factor of substance use, in terms of self-report and official records, has proved to be a consistent risk factor of criminal justice involvement among veterans of all eras. JIVs are more likely to have a substance use disorder or identify that they currently abuse substances when compared to non-justice involved veterans (Elbogen, Johnson, Newton, et al., 2012a; Erickson et al., 2008; Shaw et al., 1987). Additionally, veterans within the VHA with dual diagnoses (mental illness and substance use disorder) or only a diagnosis of substance use demonstrated higher rates of incarceration than veterans diagnosed with only a mental illness (Rosenheck, Banks, Pandiani, & Hoff, 2000).

Although the limited amount of previous research has found some support for the Central Eight factors among JIVs, there is still a major gap in the literature regarding

their applicability to JIVs. Specifically, no comprehensive studies have been conducted evaluating the importance of the Central Eight risk factors as predictors of recidivism among JIVs (Blonigen et. al, 2016). Identification of these risk factors among JIVs will assist with informing treatment and recidivism prevention programs across correctional and rehabilitative settings.

Criminal Thinking

Criminal thinking is defined as the content and process of thinking that promotes and maintains lawbreaking behavior (Walters, 2006a). Specifically, criminal thinking can be broken down into two parts: the content of a criminal thought involves what an offender is thinking, and the process of criminal thinking encompasses how an offender thinks (Walters, 2012). As previously mentioned, criminal thinking in a broad sense is part of the RNR model with procriminal attitudes/cognition being shown as a risk factor for criminality and recidivism (Bonta & Andrews, 2017). However, other various aspects of criminal thinking have been identified within the Criminal Lifestyle hypothesis (Walters, 1990).

Several theories were adapted and combined to develop a comprehensive hypothesis regarding a criminal lifestyle. First, Sykes and Matz (1957) developed Neutralization theory which explained that in order to understand behavior, one must understand the thought process underlying the behavior. Applied to criminal behavior, Sykes and Matz (1957) reasoned that those engaged in criminal behavior go through a thought process to rationalize their behavior. Secondly, Sutherland and Cressey (1978) proposed Differential Association Theory which asserts that criminal behavior is learned through interactions with others that are involved in crime, with specific focus on

learning about attitudes and motives, among other variables for crime. Lastly, Yochelson and Samenow (1976) established the criminal personality perspective based on their work with offenders to establish thinking errors which branded a criminal personality.

Within this framework, criminal behaviors result from ongoing interactions between conditions (e.g., internal or external factors that increase or decrease options), choices (e.g., decision to engage in one behavior versus another behavior), and cognitions (e.g., thoughts which support, justify, or rationalize the choice). In other words, knowing what and how individuals think about crime is necessary to develop an understanding of criminal behaviors. Walters and White (1990) proposed eight types of criminal thinking that capture the content of criminal thoughts, which was later updated by Walters (2006; depicted in Table 2). Empirical literature has shown an association between these criminal thinking types and recidivism. In particular, studies have found that Cutoff (Walters, 1997), Entitlement (Walters, 2004), Sentimentality (Walters & Elliott, 1999), and Superoptimism (Palmer & Hollin, 2003) are the strongest predictors of recidivism. Additionally, Walters and Lowenkamp (2016) found six of the criminal thinking types (e.g., Cutoff, Discontinuity, Mollification, Entitlement, Power Orientation, and Cognitive Indolence) were predictive of recidivism with low-moderate to medium effect sizes at varying follow-up lengths in a population of federal probationers. Gonsalves, Scalora, and Huss (2009) also found that criminal thinking when assessed by the PICTS contributed significantly to predicting recidivism in a population of forensic hospital patients. In addition, Folk and colleagues (2018) evaluated whether the relationship between criminal thinking and recidivism was moderated by demographic variables.

Their findings suggest the link between criminal thinking and recidivism is present despite differing demographics.

Table 2

Psychological Inventory of Criminal Thinking Style Scales

Scale	Description
Proactive Criminal Thinking*	Presence of overt criminal thinking; Described by others as devious, calculating, and scheming Criminal activity tends to be goal-directed rather than impulsive; Function of planning or forethought; score derived by combining the Entitlement, Self-Assertion, Historical Criminal Thinking scales
Reactive Criminal Thinking*	Presence of overt criminal thinking; Described by others as hostile, impetuous, and emotional Impulsive and hot-blooded; Function of their reactions to situations; score derived by combining Cutoff, Problem Avoidance, and Current Criminal Thinking scales
Mollification (Mo)**	Tendency to project blame for past and present criminal conduct onto external factors
Cutoff (Co)**	Impulsivity and the tendency to use phrases like “fuck it” to eliminate common deterrents to crime
Entitlement (En)**	Sense of ownership, privilege, and uniqueness that is used by the individual to grant him or herself permission to violate the laws of society and the rights of others
Power Orientation (Po)**	Crave power and seek control; Experience zero-state feelings and to overcome them, engage in a power thrust whereby they put another person down in order to feel better about themselves
Sentimentality (Sn)**	Performing good deeds erases the harm a person; has inflicted on others as a consequence of his or her involvement in a criminal lifestyle; Limits awareness
Superoptimism (So)**	Belief that one will be able to indefinitely postpone or avoid; the negative consequences of a criminal lifestyle
Cognitive Indolence (Ci)**	Tendency to take short-cuts and look for the easy way around problems; Often enmeshed in controversy because short-cuts get them into trouble with whom they are accountable
Discontinuity (Ds)**	Propensity to lose sight of one’s goals and to be easily; sidetracked by environmental events; Come across as fragmented, flighty, and unpredictable

Note: * Composite scales; ** Criminal thinking styles

Additionally, Walters (2006b) sought to determine a general estimate of criminal thinking through the development of proactive and reactive composite scales on the Psychological Inventory of Criminal Thinking Styles (PICTS; depicted in Table 2). The proactive and reactive criminal thinking content scales have been found to be adequate general estimates of criminal thinking and predictive of recidivism (Walters, 2006b; Walters & Lowenkamp, 2016).

To date, there is limited research regarding the content and process of criminal thinking within justice involved veterans. Stacer and Solinas-Saunders (2018) evaluated the impact of military background on criminal thinking patterns in a population of JIVs with domestic violence related charges and found military background was associated with higher levels of criminal thinking within multivariate analyses. An unpublished dissertation by Araujo (2020) examined criminogenic risk factors, one being criminal thinking among violent and nonviolent justice involved veterans. Counter to the authors hypothesis, violent justice involved veterans did not obtain clinically significant scores on the eight criminal thinking styles, however they did endorse higher levels of reactive criminal thinking. This implies violent justice involved veterans react impulsively and emotionally based on their environment and current situation.

Given this lack of research, it is interesting to note that treatments such as Moral Reconciliation Therapy (MRT; Little & Robinson, 1988), Reasoning and Rehabilitation (R&R; Ross, Fabiano, & Ross, 1986), and Thinking for a Change (T4C; Bush, Glick, Taymans, & Guevara, 2011) implemented by the Department of Veteran Affairs targets the risk/need factor of procriminal attitudes for change (Timko et al., 2014). In combination, the minimal literature and treatment target by the Department of Veterans

Affairs provides support for the need to understand criminal thinking among justice involved veterans.

Current Study

Given there is a need for better understanding of criminogenic risk factors among JIVs, the current study aims to answer two major research questions.

Research Question 1

Will JIVs criminogenic needs differ in comparison to non-veteran offenders? To what extent do the Central Eight criminogenic risk factors apply to JIVs? This will provide foundational literature regarding the Central Eight criminogenic risk factors as predictors of recidivism for JIVs.

Research Question 2

Will JIVs criminal thinking styles differ in comparison to in non-veteran offenders? To what extent do JIVs think like other criminals? If participating in a mental health treatment which adapts veterans thinking, an assumption based on current treatments used by the Department of Veterans Affairs, utilizing the same rehabilitation efforts earlier in veterans' justice involvement might assist recidivism reduction.

CHAPTER II

Method

Participants

Data for this research study was a subset of a larger study exploring mental health and criminogenic needs of JIVs. Veteran ($n = 81$) and nonveteran ($n = 67$) offenders were recruited from multiple county jails and VTCs to participate. The sample was predominately male (84.7) and White (64) with a mean age of 37.59 ($SD = 11.37$, range 19 - 71). Importantly, 34 participants were unable to complete the entire test battery. The demographic composition of the veteran and nonveteran subsamples are presented in Table 3.

Measures

Level of Service/Case Management Inventory (LS/CMI)

The LS/CMI is an interview based, fourth-generation case management and risk assessment tool for adult offenders (Andrews, Bonta, & Wormith, 2004). Developed to function as a comprehensive tool, the LS/CMI consists of eleven sections to measure general risk factors, specific risk factors, protective factors, and provides a guide for case management (Wormith, Hogg, & Guzzo, 2015). The current study relied on the first section of the LS/CMI, which measures the Central Eight risk factors and is an updated version of the Level of Service Inventory–Revised (LSI-R; Wormith, Hogg, & Guzzo, 2015). This section of the LS/CMI comprises 43-items scored as 0 (not present) or 1 (present). An overall LS/CMI offender risk score is obtained by summing the item scores and ranges from 0 to 43 with higher scores indicative of a higher risk for recidivism. The reliability coefficient for the overall LS/CMI is well within the acceptable range ($\alpha = .88$

Table 3*Sample Demographics*

Variable	Veterans	Nonveterans	Total
Gender			
Male	74 (91.4)	51 (76.1)	127 (84.7)
Female	7 (8.6)	16 (23.9)	23 (15.3)
Race/Ethnicity			
Caucasian	56 (69.1)	39 (58.2)	96 (64.0)
African American	10 (12.3)	15 (22.4)	25 (16.7)
Latinx	6 (7.4)	7 (10.4)	13 (8.7)
Asian/Asian-American	1 (1.2)	0 (0.0)	1 (0.7)
Other	7 (8.6)	3 (4.5)	10 (6.7)
Missing	1 (1.2)	3 (4.5)	5 (3.4)
Marital Status			
Single	10 (12.3)	2 (34.3)	34 (22.7)
Married	13 (16.0)	12 (17.9)	25 (16.7)
Cohabiting	3 (3.7)	9 (13.4)	12 (8.0)
Divorced	30 (37.0)	13 (19.4)	43 (28.7)
Widow	0 (0.0)	2 (3.0)	2 (1.3)
Missing	25 (30.9)	8 (11.9)	34 (22.7)
Education			
Did not graduate	0 (0.0)	20 (29.9)	20 (13.3)
HS Graduate	25 (30.9)	24 (35.8)	50 (33.3)
Some College	47 (58.0)	20 (29.9)	67 (44.7)
Bachelor's Degree	6 (7.4)	2 (3.0)	8 (5.3)
Graduate Degree	2 (2.5)	0 (0.0)	2 (1.3)
Missing	1 (1.2)	1 (1.5)	3 (2.0)
Mean Age (<i>SD</i>)	40.71 (11.6)	33.99 (10.1)	37.59 (11.4)

Note: n (%)

to .92; Andrews, Bonta, & Wormith, 2011). In an unpublished report by Rowe, the overall LS/CMI risk score was found to correlate highly ($r = .96$) with the original 54-item LSI-R (as cited in Wormith, Hogg, & Guzzo, 2015).

According to Andrews et al. (2011), the LS/CMI items are organized as follows: Criminal History (eight items; $\alpha = .76$), Education/Employment (nine items; $\alpha = .80$), Family/Marital (four items; $\alpha = .44$), Leisure/Recreation (two items; $\alpha = .61$), Companions (four items; $\alpha = .71$), Procriminal Attitude/Orientation (four items; $\alpha = .65$), Substance Abuse (eight items; $\alpha = .72$), and Antisocial Personality Pattern (four items; $\alpha = .59$), which correspond with the appropriate Central Eight risk factors. See Table X for a description of the eight scales.

Psychological Inventory of Criminal Thinking Styles (PICTS)

The PICTS is an 80 item self-report measure of eight thinking styles that support and maintain criminal lifestyle (Walters, 2013). Items are measured on a Likert type scale ranging from 1 (Disagree) to 4 (strongly agree). Of interest within this study were the eight thinking style subscales and two higher-order scales—Proactive Criminal Thinking and Reactive Criminal Thinking, although scores for all scales are presented in most of the results. The PICTS professional manual (Walters, 2013) indicates moderate to moderately high internal consistency for the criminal thinking scales with minimal variation by gender ($\alpha = .61$ to $.94$ for males; $\alpha = .54$ to $.93$ for females), as well as moderate to moderately high test-retest reliability at 2-weeks ($r = .73$ to $.93$ for males; $r = .73$ to $.96$ for females), and at 12-weeks ($r = .47$ to $.81$ for males; $r = .47$ to $.92$ for females). Several additional studies provide support for the PICTS internal consistency and test-retest reliability (Walters, 1995; Walters, 2002). Participants who admitted more

than 10 items from the PICTS were removed from the analyses as recommended by the instrument manual.

Procedure

Researchers facilitating data collection consisted of four graduate-level clinical psychology students. Before data collection, each student received training on each measure to ensure proper and standardized data collection.

Recruitment

Recruitment of VTC participants occurred in-person prior to the beginning of the respective court docket. Incarcerated participants were identified through jail records and recruited by researchers in person. Participants were informed that they were being asked to participate in a study regarding factors associated with rehabilitation and post-release success, specifically in terms of mental health and criminogenic needs.

Test Administration

Self-report survey measures were completed by participants in group format. An isolated room was reserved by court or jail staff for the completion of these measures. Group size was determined by the size of the room and appropriate spacing between participants but generally involved assessing four to six individuals per session. To maintain confidentiality, participants were spaced no less than three feet apart from each other. Interview measures were conducted in an individual format, inside an additional isolated room reserved by court or jail staff. Data for this research study was a subset of a larger study exploring mental health and criminogenic needs of JIVs. The larger study was comprised of an additional three self-report measures of mental health and personality factors.

Upon arrival to the site, the researchers provided an overview of the study's purpose and procedures before obtaining informed consent. Administration of all the measures took approximately three to four hours and was frequently split across multiple days. Participants completed a battery of self-assessments including the PCL-5, SDMT, and the PICTS. When participants were between self-assessment measures, they were removed individually from group testing by a researcher to complete the LS/CMI. Upon completion of the LS/CMI, they returned and completed the remaining self-assessment measures.

CHAPTER III

Results

Central Eight Risk Factors for Justice-Involved Veterans and Nonveteran Offenders

The means and standard deviations for the LSI scales for JIV and nonveteran offenders, as well as *t*-test comparisons, are presented in Table 4. As shown in the table, JIVs had lower criminal history scores, $t(df = 123) = -2.36, p = .02, d = .43$. JIVs also had lower scores on leisure and recreation, $t(df = 123) = -2.65, p = .009, d = .48$. The remaining comparisons were nonsignificant.

Criminal Thinking Styles for Justice Involved Veterans and Nonveteran Offenders

The means and standard deviations for the PICTS scales for JIV and nonveteran offenders, as well as *t*-test comparisons, are presented in Table 5. As shown in the table, JIVs had lower self-assertion scores, $t(df = 129) = -1.99, p = .049, d = .35$. JIVs also had lower historical criminal thinking scores, $t(df = 127) = -2.01, p = .046, d = .36$. JIVs had lower fear-of-change scores, $t(df = 130) = -2.72, p = .008, d = .47$. The remaining comparisons were nonsignificant.

Associations between Criminogenic Thinking and Central Eight Risk Factors

Total Sample

The intercorrelations for the full sample are presented in Table 6. As shown, many of the associations achieved statistical significance. The strongest associations ($r \geq .4$), were observed between Total Risk and Defensiveness-Revised ($r = -.41, p \leq .001$) and Total-Risk and Reactive Criminal Thinking ($r = .40, p \leq .001$). Additionally, a stronger association was found between Substance Abuse and Cutoff ($r = .41, p \leq .001$);

Table 4*Central Eight Risk Factors for Justice Involved Veterans and Nonveteran Offenders*

Risk Factor	Mean (SD)		<i>t</i> *	<i>d</i>	95% C.I.
	Veterans (<i>n</i> = 72)	Nonveterans (<i>n</i> = 53)			
Criminal History	3.40 (1.98)	4.23 (1.86)	-2.36*	.43	.07, .79
Antisocial Personality Pattern	1.13 (1.01)	1.21 (1.06)	-.44	.08	-.28, .43
Antisocial Cognitions	1.47 (1.37)	1.38 (1.42)	.38	.07	-.29, .42
Antisocial Associates	1.99 (1.36)	2.15 (1.46)	-.65	.12	-.24, .47
Education/Employment	2.15 (1.96)	2.81 (2.33)	-1.71	.31	-.05, .67
Family/Marital	1.96 (1.25)	1.59 (1.13)	1.72	.31	-.05, .67
Leisure/Recreation	1.08 (.80)	1.47 (.82)	-2.65*	.48	.12, .84
Substance Abuse	4.22 (2.16)	4.26 (2.37)	-.10	.02	-.34, .37
Total Risk	17.43 (6.80)	18.96 (7.25)	-1.21	.22	-.14, .57

Note: * $p \leq .05$

Table 5*Criminal Thinking Styles for Justice Involved Veterans and Nonveteran Offenders*

Scale	Veterans		Nonveterans		<i>t</i>	<i>d</i>	95% C.I.	
	Mean (<i>SD</i>)	<i>n</i>	Mean (<i>SD</i>)	<i>n</i>				
Validity Scales								
Confusion-Revised	14.88 (5.56)	69	15.10 (4.86)	58	-.23	.04	.00, .27	
Defensiveness-Revised	15.67 (4.16)	70	15.14 (3.83)	59	.76	.13	-.21, .48	
Criminal Thinking Styles								
Mollification	13.88 (4.74)	72	15.40 (4.64)	60	-1.85	.32	.00, .66	
Cutoff	17.06 (5.75)	67	18.10 (5.16)	61	-1.07	.19	.00, .53	
Entitlement	13.49 (3.92)	72	13.61 (3.86)	62	-.19	.03	.00, .21	
Power Orientation	15.04 (4.66)	73	14.96 (4.35)	60	.11	.02	-.32, .36	
Sentimentality	16.55 (4.62)	69	17.96 (4.05)	57	-1.81	.32	.00, .67	
Superoptimism	16.04 (4.58)	65	17.08 (4.53)	62	-1.29	.23	.00, .57	
Cognitive Indolence	17.54 (6.47)	71	18.78 (4.45)	60	-1.26	.22	.00, .56	
Discontinuity	17.29 (6.07)	70	18.53 (6.16)	60	-1.16	.20	.00, .54	
Content Scales								
Current Criminal Thinking	27.71 (9.87)	68	28.88 (8.80)	59	-.70	.13	.00, .46	
Historical Criminal Thinking	21.90 (8.01)	70	24.73 (7.90)	59	-2.01*	.36	.00, .70	
Factor Scales								
Problem Avoidance	45.35 (6.49)	71	46.56 (5.93)	61	-1.11	.19	.00, .53	
Interpersonal Hostility	14.61 (4.46)	73	15.11 (4.70)	57	-.61	.11	.00, .44	
Self-Assertion	17.54 (6.61)	69	19.85 (6.75)	62	-1.99*	.35	.00, .69	
Denial of Harm	24.47 (5.03)	66	25.91 (4.71)	58	-1.64	.30	.00, .64	
Composite Scales								
Proactive Criminal Thinking	75.18 (24.60)	68	80.93 (23.03)	59	-1.35	.24	.00, .58	
Reactive Criminal Thinking	129.92 (30.51)	66	135.63 (26.60)	58	-1.10	.20	.00, .54	
Special Scale								
Fear-of-Change	15.60 (5.69)	72	18.28 (5.62)	60	-2.72*	.47	.15, .82	

Table 6*Intercorrelations among Criminal Thinking Styles and Central Eight Risk Factors: Total Sample*

Criminal Thinking Styles	Criminal History	Antisocial Personality	Antisocial Cognitions	Antisocial Associates	Family & Marital	Education & Employment	Leisure & Recreation	Substance Abuse	Total Risk
Confusion-Revised	.04	.28*	.16	.15	.18	.29*	.20*	.25*	.34*
Defensiveness-Revised	-.09	-.32*	-.11	-.24*	-.28*	-.18	-.32*	-.37*	-.40*
Mollification	.15	.25*	.15	.19*	-.05	.32*	.21*	.01	.27*
Cutoff	.16	.24*	.15	.21*	.11	.17	.26*	.41*	.39*
Entitlement	.10	.23*	.15	.23*	.05	.27*	.13	.13	.29*
Power Orientation	.00	.31*	.12	.20*	.11	.22*	.11	.17	.26*
Sentimentality	.08	.16	.10	.11	-.10	.13	.02	.04	.12
Superoptimism	.26*	.21*	.12	.16	-.01	.05	.10	.26*	.28*
Cognitive Indolence	.19*	.15	.03	.16	.06	.23*	.37*	.21*	.31*
Discontinuity	.13	.15	.05	.18	.12	.25*	.23*	.32*	.33*
Current Criminal Thinking	.10	.18	.07	.21*	.10	.22*	.27*	.34*	.34*
Historical Criminal Thinking	.26*	.16	.07	.21*	-.01	.20*	.15	.28*	.32*
Problem Avoidance	.13	.18	.06	.22*	.11	.22*	.33*	.42*	.38*
Interpersonal Hostility	.01	.19*	.14	.09	-.02	.24*	.03	.03	.16
Self-Assertion	.25*	.14	.06	.18*	-.01	.16	.14	.30*	.30*
Denial of Harm	.15	.27*	.24*	.20*	.06	.16	.16	.13	.29*
Proactive Criminal Thinking	.21*	.18	.08	.21*	.01	.24*	.15	.25*	.32*
Reactive Criminal Thinking	.13	.21*	.09	.23*	.11	.25*	.32*	.43*	.40*
Fear-of-Change	.05	.15	.02	.21*	.05	.22*	.24*	.20*	.25*

Note. Coefficients $\geq .40$ are in **bold**.

* $p \leq .05$

Substance Abuse and Problem Avoidance ($r = .42, p \leq .001$); and Substance Abuse and Reactive Criminal Thinking ($r = .41, p \leq .001$).

Justice Involved Veterans

The intercorrelations between the criminal thinking and central eight for the JIVs are presented in Table 7. Several correlations achieved statistical significance. The strongest associations ($r \geq .4$) were observed between Total Risk and Proactive Criminal Thinking ($r = .41, p \leq .001$); Substance Abuse and Defensiveness-revised ($r = -.40, p \leq .001$); Substance Abuse and Cutoff ($r = .43, p \leq .001$); and Substance Abuse and Reactive Criminal Thinking ($r = .40, p \leq .001$).

Nonveteran Offenders

The intercorrelations between the criminal thinking and central eight for the nonveteran offenders are presented in Table 8. Several correlations achieved statistical significance. Largest effects ($r \geq .4$) were observed between Total Risk and Confusion-Revised ($r = .48, p \leq .001$); Total Risk and Defensiveness-Revised ($r = -.51, p \leq .001$); Total Risk and Cutoff ($r = .45, p \leq .001$); Total Risk and Cognitive Indolence ($r = .40, p \leq .001$); Total Risk and Current Criminal Thinking ($r = .47, p \leq .001$); Total Risk and Problem Avoidance ($r = .49, p \leq .001$); and Total Risk and Reactive Criminal Thinking ($r = .52, p \leq .001$). Additionally, strong associations occurred between Family/Marital and Defensiveness-Revised ($r = -.47, p \leq .001$); Antisocial Cognitions and Defensiveness-revised ($r = -.40, p \leq .001$); Antisocial Personality and Defensiveness-Revised ($r = -.44, p \leq .001$); and Antisocial Personality and Power Orientation ($r = .40, p \leq .001$). Stronger associations were observed between Substance Abuse and Cutoff ($r = .40, p \leq .001$); Substance Abuse and Cognitive Indolence ($r = .44, p \leq .001$); Substance Abuse and

Table 7*Intercorrelations among Criminal Thinking Styles and Central Eight Risk Factors: Justice Involved Veterans*

Criminal Thinking Styles	Criminal History	Antisocial Personality	Antisocial Cognitions	Antisocial Associates	Family & Marital	Education & Employment	Leisure & Recreation	Substance Abuse	Total Risk
Confusion-Revised	-.01	.24	.06	.01	.08	.32*	.24	.19	.24
Defensiveness-Revised	-.12	-.23	.09	-.01	-.18	-.19	-.39*	-.38*	-.31*
Mollification	.15	.32*	.16	.25*	-.13	.35*	.34*	-.01	.28*
Cutoff	.10	.16	.04	.14	-.03	.24	.33*	.43*	.33*
Entitlement	.23	.32*	.24*	.29*	-.04	.36*	.37*	.23	.43*
Power Orientation	.01	.24	.08	.07	.04	.25*	.14	.17	.22
Sentimentality	.10	.19	.16	.22	-.18	.09	.13	.03	.14
Superoptimism	.24	.28*	.06	.21	-.08	.16	.26*	.28*	.31*
Cognitive Indolence	.24	.12	-.10	.06	.04	.32*	.38*	.09	.25*
Discontinuity	.03	.17	.05	.05	.03	.35*	.37*	.26*	.28*
Current Criminal Thinking	.02	.12	-.01	.06	-.03	.24	.34*	.30*	.22
Historical Criminal Thinking	.26*	.24	.10	.27*	-.05	.26*	.31*	.33*	.38*
Problem Avoidance	.11	.13	-.02	.07	-.01	.24	.38*	.38*	.29*
Interpersonal Hostility	.01	.23	.18	.14	-.12	.31*	.11	.03	.18
Self-Assertion	.21	.19	.05	.21	-.09	.22	.29*	.33*	.32*
Denial of Harm	.29*	.31*	.15	.27*	.01	.23	.32*	.16	.35*
Proactive Criminal Thinking	.25*	.27*	.14	.28*	-.07	.31*	.36*	.33*	.41*
Reactive Criminal Thinking	.09	.15	.01	.10	-.03	.27*	.38*	.40*	.31*
Fear-of-Change	-.06	.07	-.03	.04	-.03	.16	.23	.22	.13

Note. Coefficients $\geq .40$ are in **bold**.

* $p \leq .05$

Table 8*Intercorrelations among Criminal Thinking Styles and Central Eight Risk Factors: Nonveteran Offenders*

Criminal Thinking Styles	Criminal History	Antisocial Personality	Antisocial Cognitions	Antisocial Associates	Family & Marital	Education & Employment	Leisure & Recreation	Substance Abuse	Total Risk
Confusion-Revised	.12	.34*	.28	.32*	.37*	.26	.13	.32*	.48*
Defensiveness-Revised	-.01	-.44*	-.40*	-.54*	-.47*	-.15	-.20	-.36*	-.51*
Mollification	.09	.14	.14	.11	.15	.26	-.04	.05	.24
Cutoff	.22	.34*	.30*	.30*	.34*	.09	.15	.40*	.45*
Entitlement	-.08	.12	.05	.16	.20	.17	-.17	.01	.13
Power Orientation	-.03	.40*	.17	.38*	.23	.19	.08	.17	.31*
Sentimentality	-.02	.11	.04	-.03	.08	.15	-.23	.05	.07
Superoptimism	.26	.12	.19	.09	.12	-.09	-.12	.26	.23
Cognitive Indolence	.05	.21	.26	.33*	.17	.07	.32*	.44*	.40*
Discontinuity	.21	.12	.06	.32*	.29*	.14	.05	.40*	.38*
Current Criminal Thinking	.18	.26	.18	.41*	.33*	.19	.18	.41*	.47*
Historical Criminal Thinking	.20	.06	.04	.13	.11	.09	-.15	.25	.23
Problem Avoidance	.14	.24	.15	.40*	.33*	.18	.25	.49*	.49*
Interpersonal Hostility	-.01	.12	.08	.02	.14	.15	-.12	.02	.11
Self-Assertion	.23	.07	.09	.14	.16	.05	-.10	.29*	.26
Denial of Harm	-.10	.20	.38*	.12	.19	.06	-.08	.11	.20
Proactive Criminal Thinking	.10	.04	.01	.12	.16	.14	-.17	.18	.20
Reactive Criminal Thinking	.16	.29*	.21	.41*	.37*	.22	.22	.47*	.52*
Fear-of-Change	.09	.25	.10	.42*	.26	.22	.17	.17	.38*

Note. Coefficients $\geq .40$ are in **bold**.

* $p \leq .05$

Discontinuity ($r = .40, p \leq .001$); Substance Abuse and Current Criminal Thinking ($r = .41, p \leq .001$); Substance Abuse and Problem Avoidance ($r = .49, p \leq .001$); and Substance Abuse and Reactive Criminal Thinking ($r = .47, p \leq .001$). Further, stronger associations were observed between Antisocial Associates and Defensiveness-Revised ($r = -.54, p \leq .001$); Antisocial Associates and Current Criminal Thinking ($r = .41, p \leq .001$); Antisocial Associates and Problem Avoidance ($r = .40, p \leq .001$); Antisocial Associates and Reactive Criminal Thinking ($r = .41, p \leq .001$); and Antisocial Associates and Fear-of-Change ($r = .42, p \leq .001$).

Multivariate Examination of the Associations among Veteran Status, Criminal Thinking Styles, and Criminogenic Risk

To further examine the association between criminogenic risk and criminal thinking styles, two hierarchical multiple regression analyses were used. In the first analysis, total risk score was regressed on to veteran status, eight criminal thinking styles, and the two-way interactions. In the second analysis, total criminogenic risk was regressed on to veteran status, the two composite scales of reactive and proactive criminal thinking, and the two-way interactions. For both analyses, the main effects were entered in the first model and the interaction terms were entered in the second model.

In the first analysis, Total Risk was regressed on to veteran status and the eight criminal thinking styles presented in Table 9. The first model was significant, $F(9,85) = 2.64, p = .009, R^2 = .22, \text{adjusted } R^2 = .14$, with Cutoff emerging as the sole significant predictor ($r_{sp} = .22$). The second model was also significant, $F(17,77) = 2.06, p = .017, R^2 = .31, \text{adjusted } R^2 = .16$, but did not significantly account for greater variance, $\Delta R^2 = .09, p = .251$.

Table 9*Multiple Regression for Criminal Thinking Styles and Total Risk moderated by Veteran Status*

Variables	Model 1					Model 2				
	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>	<i>r_{sp}</i>	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>	<i>r_{sp}</i>
Veteran Status	.45	1.42	.31	.75	.03	.68	1.44	.47	.64	.04
Mollification (Mo)	.11	.26	.43	.67	.04	-.27	.46	-.59	.56	-.06
Cutoff (Co)	.49	.21	2.29	.02	.22	.93	.36	2.55	.01	.24
Entitlement (En)	.41	.25	1.63	.11	.16	.00	.44	-.01	.99	.00
Power Orientation (Po)	.00	.21	.00	1.00	.00	.14	.35	.41	.68	.04
Sentimentality (Sn)	-.37	.23	-1.58	.12	-.15	.06	.38	.15	.88	.01
Superoptimism (So)	-.09	.23	-.41	.69	-.04	-.25	.31	-.81	.42	-.08
Cognitive Indolence (Ci)	.15	.27	.57	.57	.05	-.10	.36	-.29	.78	-.03
Discontinuity (Ds)	-.03	.19	-.18	.86	-.02	-.04	.24	-.15	.88	-.01
Mo x Veteran Status	-	-	-	-	-	.62	.56	1.09	.28	.10
Co x Veteran Status	-	-	-	-	-	-.64	.45	-1.43	.16	-.14
En x Veteran Status	-	-	-	-	-	.95	.56	1.70	.09	.16
Po x Veteran Status	-	-	-	-	-	-.21	.46	-.46	.65	-.04
Sn x Veteran Status	-	-	-	-	-	-.66	.48	-1.37	.17	-.13
So x Veteran Status	-	-	-	-	-	.25	.49	.52	.60	.05
Ci x Veteran Status	-	-	-	-	-	.30	.57	.53	.60	.05
Ds x Veteran Status	-	-	-	-	-	-.22	.42	-.53	.60	-.05

Note. Veteran status coded as 0 = Nonveteran and 1 = Veteran

Cutoff again emerged as a significance predictor ($r_{sp} = .241$), but none of the other main effects or interaction terms were statistically significant.

For the second analysis, Total Risk was regressed on to veteran status and the two composite scales presented in Table 10. The first model was significant, $F(3,99) = 7.98$, $p = .000$, $R^2 = .20$, adjusted $R^2 = .17$, with Reactive Criminal Thinking emerging as the sole significant predictor ($r_{sp} = .23$). The second model was also significant, $F(5,97) = 5.50$, $p = .000$, $R^2 = .22$, adjusted $R^2 = .18$, but did not significantly account for greater variance, $\Delta R^2 = .03$, $p = .20$. Reactive Criminal Thinking again emerged as the sole significant predictor ($r_{sp} = .24$), but none of the other main effects or interaction terms were statistically significant.

Table 10

Multiple Regression for Composite Scales and Total Risk moderated by Veteran Status

Variables	Model 1					Model 2				
	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>	<i>r_{sp}</i>	<i>B</i>	<i>SE_B</i>	<i>t</i>	<i>p</i>	<i>r_{sp}</i>
Veteran Status	.56	1.32	.42	.67	.04	.52	1.33	.39	.70	.04
Reactive Criminal Thinking	.16	.06	2.53	.01	.23	.21	.08	2.61	.01	.24
Proactive Criminal Thinking	.06	.06	1.08	.28	.10	.02	.08	.20	.84	.02
Reactive x Veteran Status	-	-	-	-	-	.13	.12	1.08	.28	.10
Proactive x Veteran Status	-	-	-	-	-	-.15	.13	-1.17	.24	-.11

Note. Veteran status coded as 0 = Nonveteran and 1 = Veteran

CHAPTER IV

Discussion

Research pertaining to justice-involved veterans is limited when it comes to identifying criminogenic risk, criminal thinking, and rehabilitation needs. The current study sought to provide preliminary information regarding the differences between JIVs and non-veteran offenders in terms of criminogenic risk factors and criminal thinking. The current findings highlight several areas for consideration for future research.

Are there Differences between Criminogenic Risk for JIVs and Civilians?

The first research question asked whether JIVs criminogenic needs differ when compared to non-veteran offenders. In other words, this question examined to what extent did the central eight criminogenic risk factors apply to JIVs. The results indicated that JIVs differed from non-veteran offenders on criminal history with JIVs having lower criminal histories than their civilian counterparts. This finding was not surprising as individuals with criminal histories are usually disqualified from committing to military service. In other words, Department of Defense recruiting standards preclude anyone entering the service with a significant criminal history, limiting the ability for military veterans to have criminal histories prior to their military service. Additionally, criminal offenses committed while in the military are handled through the Uniform Code of Military Justice (UCMJ). A unique aspect of military regulations is the use of non-judicial punishment which is allowed under article 15 of the UCMJ. Under this article service members can be disciplined by commanders for some violations of UCMJ (e.g., reprimand to reduction in rank, loss of pay, extra duty, and/or restrictions). The purpose of this that, rather than criminal sanctions, is to ensure good order and discipline that

maintains the effectiveness of the military force. This method of punishment essentially keeps the service members civilian criminal record clear, which limits the criminal histories of veterans when they get out of the service.

JIVs also differed from non-veteran offenders on leisure and recreation with JIVs having lower risk related to criminal leisure and recreation activities than their civilian counterparts. A possible explanation of this difference is related to the value of service within the military. While on and off duty in the military, service is heavily emphasized. It is possible for service members to receive awards and accommodations for prosocial actions such as the Meritorious Service Medal or the Legion of Merit award. The value of service also extends to prosocial service-oriented activities while off duty. Specifically, each branch has a medal (e.g., Soldier's Medal, Airman's Medal, etc.) that acknowledges heroism in a non-combat, non-military service capacity. Further, while serving in the military, the service member usually lives in military housing or in the barracks on a military base. Both are usually supervised 24/7, thus it appears there is less opportunity to conduct or engage in antisocial activities. Additionally, while serving in the military, service members tend to hang out with other service members, all of whom are subject to the same penalties for misconduct. Penalties for misconduct off duty and off base have implications for the individual's military service. Ultimately, it is possible that these patterns continue or persist after military service and explain the current findings.

Are There Differences in Criminal Thinking for JIVs and Civilians?

The second question was concerned with evaluating differences in criminal thinking styles of JIVs and non-veteran offenders. JIVs differed from non-veteran offenders on fear of change with JIVs having lower fear towards change than their

civilian counterparts. This finding was also not surprising given how change is built into the military culture. During a service member's military life cycle, they face a multitude of changes in regards to their location, assignment or mission, and job duties which requires the service member to become flexible and able to adapt to frequent changes. For example, service members in the United States Army usually move duty stations every two to three years during their time in service, where as their civilian counterparts are not required to move as often and have more control over where they move. Thus, it appears that JIVs are more comfortable with change, even after they leave military service.

Is Criminogenic Risk Associated with Criminal Thinking?

Regarding the total sample, both proactive and reactive criminal thinking were correlated with total risk, however reactive criminal thinking was more strongly correlated meaning individuals who demonstrate impulsivity and high emotionality, also demonstrated higher levels of total criminal risk. All of the criminal thinking styles with the exception of sentimentality, were associated with total criminal risk. The strongest association appeared for Cutoff which refers to impulsive tendencies as a deterrent to crime (e.g., the use of "fuck it").

For the veteran's sample, all of the criminal thinking styles with the exception of power orientation and sentimentality, were associated with total criminal risk. The strongest association among the criminal thinking styles was Entitlement. With respect to entitlement, a potential explanation may be that veterans by virtue of their service to the United States, believe they have earned the benefits that are derived by criminality or criminal behaviors. Reactive and proactive criminal thinking were both significantly

associated with total criminal risk, although the magnitude of the association was greater for the latter. Thus, for veteran offenders who are more calculating and scheming in their crime tend to have higher levels of total criminal risk.

Examining the non-veteran offenders, a different pattern between criminal thinking and criminal risk emerged. Only four styles were associated with total criminal risk: Cutoff, power orientation, Cognitive indolence, and discontinuity. These associations however appeared to be stronger in magnitude than the associations for the total sample and JIVs. Among non-veteran offenders, the tendency to more quickly discontinue thinking about possible solutions (e.g., cutoff) was associated with increased levels of total criminal risk. Regarding cognitive indolence, the process of taking mental shortcuts or finding an easy way around problems suggests higher levels of total criminal risk. In terms of power orientation, individuals who have a higher need or desire to be in control of situations and/or other people also suggests higher levels of total criminal risk. A lack of personal focus or completing tasks due to being distracted by situations around them (discontinuity) is also suggestive of higher levels of total criminal risk. Further, current criminal thinking was associated with total risk; thus, among non-veteran offender who are currently engaged in criminal thinking demonstrate a higher total level of criminal risk. Problem avoidance was also associated with total criminal risk, among nonveteran offenders, suggesting those who have a tendency avoid problem solving had higher level of criminal risk. Lastly, reactive criminal thinking, but not proactive criminal thinking, was associated with total criminal risk, meaning that when impulsive and emotional criminal thinking increases, the non-veteran offender's level of total risk also increases.

Is Criminal Thinking Predictive of Total Criminogenic Risk?

When I examined the eight criminal thinking styles and total criminal risk in a multivariate context, I found that we could predict criminogenic risk, however the prediction was driven by Cutoff. In other words, Cutoff emerged as the only significant predictor of criminal risk and importantly, Cutoff did not vary by or interact with veteran status. Thus, instead of engaging in problem solving or planning on how to overcome a problem or situation, individuals who rate higher on Cutoff tend to stop thinking about the problem and engage in criminal behavior.

When I examined the composite scales and total risk in a multivariate context, I found that we could predict criminogenic risk, however the prediction was driven by Reactive Criminal Thinking. In other words, Reactive Criminal Thinking was the only significant predictor of total criminal risk and did not vary by veteran status. Thus, it appears that not having or using problem solving skills or effortful attempts to solve problems leads to acting based on impulsivity, which ultimately predicts total criminal risk.

Implications

The present study provides preliminary information about JIVs criminogenic risk factors and how those factors can be used to guide the development of rehabilitative programs that target veterans' criminogenic needs. Studies examining the effectiveness of the RNR model in the treatment of criminogenic needs demonstrate positive findings in the reduction of recidivism (Sondhi, Leidi, & Best, 2020). Specifically, Holliday, Heilbrun, and Fretz (2012) evaluated the effectiveness of brief structured re-entry program based on the RNR model and found that participants experienced reductions in

their criminogenic needs and overall risk levels after completion of the program. Specifically, the program targeted the domains of education/employment, family/marital, procriminal attitudes/orientation, and antisocial personality pattern and found that individuals who need the most support (i.e., had higher criminogenic risk levels) were able to improve in these areas of criminogenic risk. This study provides support that targeting these criminogenic needs in the treatment of offenders, lowers criminal risk for offending. Further, a meta-analysis by Hanson and colleagues (2009) evaluated 23 recidivism outcomes studies to evaluate the effectiveness of the RNR principles in reducing recidivism in a population of sex offenders. They found programs that adhered to the RNR principles demonstrated the largest reductions in recidivism, providing more support for targeting the central eight criminogenic needs in treatment programs. Additionally, research shows it is not only important to target criminogenic needs utilizing the RNR principles to reduce recidivism, but this method is financially comparable to other methods such as traditional or inappropriate correctional services (that do not adhere to the RNR model; Romani et al., 2012). Thus, based on the literature, the current findings of this study suggest adhering to the RNR principles in design and implementation of veteran centric interventions may be effective for reducing the criminogenic risk of JIVs. Further, the results of this study suggest that interventions targeting family relationships, employment, or prosocial leisure/recreation activities may be relevant to non-veteran offenders.

In terms of criminal thinking, JIVs did not appear to differ from non-veteran offenders with respect to the eight-criminal thinking styles or the scales of reactive or proactive criminal thinking. The only statistically significant difference was observed for

fear of change which was not a focus of the current study. Specifically, JIVs had lower scores with regard to fear of change than their non-veteran counterparts. According to (Walters, 2013) the fear of change scale measures how much an individual's fear undermines effective interventions. Thus, this difference suggests that veteran offenders may be more amendable to the changes involved with rehabilitative efforts within the criminal justice system and provides some support for the continued use of therapeutic efforts, such as MRT, R&R, and T4C.

Limitations and Future Research

The results of this study are limited by several factors. First, the data collected for this study was part of a larger project with other researchers collecting additional data. Participants were asked to complete a battery of assessment measures which took anywhere from 2 to 4 hours to complete and due to time limitations, participants often took multiple iterations (e.g., 2-3) to complete the entire battery of assessments. Thus, it is possible that the motivation of the participants could have waned impacting the consistency of their responses. It is recommended that future research note these challenges and use different methodological factors.

Also, as a result of multiple iterations, the study had a small sample size, which under powered the study in terms of statistical results. It may be that there were differences, however due to being underpowered the differences were obscured. The larger pattern across the data demonstrates is that non-veteran offenders tended to score higher across all criminal thinking scales, but the differences only achieved statistically significant for very few comparisons with similar effect sizes. Given the time constraints and small sample size, conclusions drawn from this study are limited in their

applicability. It is possible that using a larger sample may identify or clarify differences with these two populations. Future research should evaluate these criminogenic risk and criminal thinking on a larger scale with a more robust sample.

This study used two different measures (e.g., LS/CMI and PICTS) to capture different aspects of antisocial or criminal thinking, from two different theories on criminality and risk. The findings of this study showed that criminal thinking measured by the LS/CMI is weakly correlated with the eight criminal thinking styles measured by the PICTS. This suggests that these are unrelated concepts or variables. Future theory and research should consider a way to integrate these different aspects of criminal thinking into a parsimonious definition. A more comprehensive model of criminal thinking that might provide a better association with criminal recidivism

Further, this study did not use a non-justice involved veteran comparison group to determine if differences between veterans involved and not involved in the criminal justice system exist. This difference is important to establish as it is possible that something happens by virtue of being exposed to combat which changes the way veterans think, and that change might appear criminogenic. Conversely, it is also possible that there is a distinction in criminal risk and thinking between veterans that are involved in the criminal justice system and their non-justice involved veteran counterparts. Thus, future research should include this comparison group to future clarify what differentiates veterans who do and do not engage in crime.

Lastly, future research should continue to focus on other kinds of psychosocial problems and their relation to criminogenic thinking that have yet to be identified yet by the justice system.

Conclusions

This study provides the first to date comprehensive evaluation of the Central Eight Risk factors as predictors of criminogenic risk and preliminary evidence regarding criminal thinking styles among JIVs and non-veteran offenders. The results of this study provide evidence that JIVs differ from their non-veteran offenders with regard to several criminogenic risk factors which should be considered when developing criminogenic risk treatment programs. Future research should include larger samples, non-criminal comparison groups, and different methods of assessment to further understand the differences between JIVs and their civilian counter parts. This will continue to allow for accurate treatment programs to be developed to mitigate the risk of recidivism for JIVs.

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- Zatzick, D. F., Marmar, C. R., Weiss, D. S., Browner, W. S., Metzler, T. J., Golding, J. M., Stewart, A., Schlenger, W. E., & Wells, K. B. (1997). Posttraumatic stress disorder and functioning and quality of life outcomes in a nationally representative sample of male Vietnam veterans. *American Journal of Psychiatry*, 154, 1690-1695. <https://doi.org/10.1176/ajp.154.12.1690>

VITA

CHRISTINA L. BROOKS

EDUCATION

- Current **Doctor of Philosophy (Clinical Psychology)**
Sam Houston State University
 Huntsville, Texas
Thesis: Criminal Risk Factors among Justice-Involved Veterans
- May 2016 **Bachelor of Arts in Psychology, minor in Technical Writing**
Texas A&M University – Corpus Christi
 Corpus Christi, Texas

SUPERVISED CLINICAL POSITIONS

- May 2019 – **Student Clinician**
 Present Psychological Services Center at Walker County Probation Department
 Huntsville, Texas
- Population:* Adult community members
- Duties:*
- Providing individual therapy services to a forensic population in the community
 - CBT, DBT, CPT, STAIR/NST, ACT, Motivational Interviewing
 - Conduct crisis intervention and risk assessments
 - Co-facilitating anger management groups
 - Completing substance abuse evaluations and full psychological evaluations based on initial court orders and re-assessment of needs
- Supervisor:* Wendy Elliot, Ph.D., ABPP; Darryl Johnson, Ph.D.
- August 2018 **Student Clinician**
 – Psychological Services Center
 Present Huntsville, Texas
- Population:* Adult community members
- Duties:*
- Provide individual therapy and assessment services to a community population
 - CBT, DBT, Exposure/ Desensitization Therapy, and Interpersonal Therapy
 - Psychodiagnostic, adaptive functioning, intelligence, and achievement testing
 - Attend clinic meetings weekly, developing treatment plans, and determining diagnoses Conduct forensic evaluations for the courts, including competency to stand trial, criminal responsibility, and mitigating factors
- Supervisor:* Darryl Johnson, Ph.D.; Craig Henderson, Ph.D.; Mary A. Conroy, Ph.D., ABPP

January 2018 **Student Clinician**

– Montgomery County Mental Health Treatment Facility

April 2018 Conroe, Texas

Population: Incarcerated Adults

- Duties:*
- Conduct competency restoration services including psychotherapy and evaluation to improve and assess patient’s knowledge and understanding of the relevant legal proceedings

Supervisor: Sarahi N. Torres, PsyD.

August 2017 **Practicum Counselor**

– University Counseling Center

December 2017 *Sam Houston State University*

Huntsville, Texas

Population: Adult college students

- Duties:*
- Conduct intake assessments and provide individual psychotherapy using evidence-supported treatment
 - Treatment modalities include CBT, Exposure/Systematic Desensitization Therapy, CPT, Emotional Processing Therapy, and Interpersonal Therapy
 - Co-facilitate Emotional Intelligence workshop weekly, encouraging member development through self-reflection
 - Assist with outreach programs promoting mental health and well-being across campus
 - Develop insight and competence in individual supervision and didactic training

Supervisor: Annie Mathew, Ph.D.

January 2017 **Student Counselor**

– Practicum I

May 2017 *Sam Houston State University*

Huntsville, Texas

Population: Undergraduate psychology students registered in the Psychology Research Participation system

- Duties:*
- Conducted clinical interview and brief counseling session with undergraduate students by applying counseling skills, theory, and research obtained in coursework to induce positive change in clients’ lives
 - Built therapeutic relationships in on-going dyad counseling sessions with graduate classmates through active listening, empathetic understanding, and collaborative goal formation

Supervisors: Marsha J. Harman, Ph.D.

RESEARCH EXPERIENCE

January 2017 – **Principal Investigator (Master’s Thesis)**

Present *Department of Psychology and Philosophy*
Sam Houston State University
 Huntsville, Texas

Project: • Design and execute multi-site study of criminogenic needs and criminal thinking among offenders in Veteran Treatment Court, other specialty courts, and county jail correctional facilities in Harris and Montgomery Counties (Texas)

Supervisor/Chair: Jorge G. Varela, Ph.D.

September 2016 – **Graduate Research Assistant**

March 2017 *Department of Psychology and Philosophy*
Sam Houston State University
 Huntsville, Texas

Responsibilities: • Completed annotated bibliographies to identify Tier 2 interventions most widely used in Texas grade schools
 • Created recruitment materials, variable code book, and design online survey utilizing Qualtrics survey software

Principal Investigator: Courtney S. Banks, Ph.D.

January 2016 – **Research Assistant**

August 2016 *Department of Social Science, Public Administration*
Texas A&M University – Corpus Christi
 Corpus Christi, Texas

Responsibilities: • Research assistant for studies regarding Glass Ceiling in Federal Law Enforcement and Occupational Barriers in Federal Law Enforcement
 • Created research collection survey’s in Qualtrics survey software and analyzed data using SPSS Statistical software

Principal Investigator: Helen H. Yu, Ph.D.

January 2015 – **Research Assistant**

May 2015 *Department of Psychology and Sociology*
Texas A&M University – Corpus Christi
 Corpus Christi, Texas

Responsibilities: • Conducted literature searches, reviews, and managed references for studies on Cross-Cultural Phenomenology of Gender Dysphoria and Impact of Religious Beliefs on Mental Health

Principal Investigator: Pilar Galiana Y Abal, Ph.D.

January 2014 – **Principal Investigator**

May 2014 *Department of Psychology and Sociology*
Texas A&M University – Corpus Christi
 Corpus Christi, Texas

- Project:*
- Designed and executed study examining the impact of location on a person's self-evaluation and speakers perceived credibility
 - Produced APA manuscript: *Location impression management*

Supervisor/Chair: Steven D. Seidel, Ph.D.

PRESENTATIONS

Camins, J. S., Ridge, B. E., Varela, J. G., Francis, J. M., **Brooks, C. L.**, & Anderson, J. L. (2020, March). *Exploring symptom validity concerns and psychopathic traits among justice-involved veterans*. Paper [to be] presented at the Annual American Psychology-Law Society Conference, New Orleans, LA.

Francis, J. M., Camins, J. C., Ridge, B. E., **Brooks, C. L.**, & Varela, J. G. (2020, March). *Sensation seeking and criminogenic risk in justice-involved veterans*. Poster [to be] presented at the Annual American Psychology-Law Society Conference, New Orleans, LA.

Camins, J.C., **Brooks, C. L.**, Francis, J., & Ridge, B. E. (2019, February). *Service Members Among Us: Military Culture In & Out the Classroom*. Presented at the 15th annual Sam Houston State University Diversity Leadership Conference, Huntsville, TX.

Brooks, C. L. (2017, August). *Supplementing your instruction: Strategies for engaging and collaboration in problem- and concept-based courses*. Presented at the 14th annual Sam Houston State University Teaching & Learning Conference, Huntsville, TX.

Brooks, C. L. (2015, December). *The great divide: A historical analysis of abnormal behavior*. Poster presentation at the annual Texas A&M University – Corpus Christi History and Systems of Psychology Symposium, Corpus Christi, TX.

Brooks, C. L. (2014, December). *Location impression management*. Poster presentation at the annual Texas A&M University – Corpus Christi Experimental Psychology Symposium, Corpus Christi, TX.

INVITED LECTURES

Brooks, C. L. & James, V. (2020, January). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Houston Police Department, Houston, TX.

Brooks, C. L. & James, V. (2019, June). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Houston Police Department, Houston, TX.

Kiel, T. M. & **Brooks, C. L.** (2019, April). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Houston Police Department, Houston, TX.

Brooks, C. L. & James, V. (2019, February). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Houston Police Department, Houston, TX.

Brooks, C. L. (2019, June) *Thought Disorders*. Invited lecture as part of TCOLE 1850 for Conroe Independent School District Police Department, Conroe, TX.

Brooks, C. L. (2019, June) *Anxiety Disorders*. Invited lecture as part of TCOLE 4001 for Conroe Independent School District Police Department, Conroe, TX.

Brooks, C. L. & James, V. (2018, April). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Harris County Sherriff's Department, Houston, TX.

Brooks, C. L. & James, V. (2017, August). *Texas Commission on Law Enforcement 4067 - Trauma Affected Veterans*. Invited lecture for Houston Police Department, Houston, TX.

Brooks, C. L. (2017, November). *Posttraumatic stress in our current world*. Invited lecture for employees of Air Liquide, Houston, TX.

Brooks, C. L. (2015, July) *Interview Techniques: Approaches*. Invited lecture for Texas A&M University – Corpus Christi Psychology of Criminal Behavior course, Corpus Christi, TX.

Brooks, C. L. (2013, June). *Preliminary Credibility Assessment Screening System*. Invited lecture for Charlie Company 351st M.I. B.N, United States Army Reserves, Round Rock, TX.

ADDITIONAL PROFESSIONAL EXPERIENCE

June 2017 – **Elton Long Fellow**

June 2018 *Veterans Behavioral Health Initiative (VBHI)*
Mental Health of America Greater Houston (MHA)
 Houston, Texas

- Responsibilities:*
- Coordinates monthly visits to Lychner State Jail, to interview veterans who are releasing from state jail, in order to identify needs
 - Develop a need assessment survey to be distributed to statewide veteran jail in reach coordinators
 - Facilitate TCOLE course 4067 Trauma Affected Veterans providing information on veterans with combat-related trauma, post-traumatic stress disorder and traumatic brain injury to local law enforcement agencies
 - Coordinate community services through referrals with community partners to include comprehensive assessment of client issues, financial assistance to stabilize crisis situation, housing assistance, employment guidance, veterans benefits, mental health referrals, and other supportive services to Justice-Involved Veterans
 - Assists with the orientation of Veterans Treatment Court Advocacy Mentoring Program by creating a Veterans Treatment Court Mentor Standard Operation Procedures (SOP) document

January 2017 – **Supplemental Instruction Graduate Assistant**

August 2017 *Academic Success Center*
Sam Houston State University
 Huntsville, Texas

- Responsibilities:*
- Assist the Supplemental Instruction Coordinator in supervision of workspaces and mentorship of employees
 - Observed Supplemental Instruction sessions and provided feedback to Coordinator and Leaders on performance

May 2015 – July 2016 **Supplemental Instruction Program Assistant**
Programs for Academic Student Success
Texas A&M University – Corpus Christi
 Corpus Christi, Texas

- Responsibilities:*
- Created and maintained attendance database and reports
 - Assisted with the planning and facilitation of SI Leaders professional development for up to 40 SI leaders

MILITARY EXPERIENCE

February 2012 – **Human Intelligence Collector Team Leader**
 December 2014 *United States Army Reserves*

- Responsibilities:*
- Granted and maintained a United States Government Top-Secret Security Clearance
 - Directed subordinates by providing tactical and technical guidance
 - Supervised/conducted training over source operations, liaison, interviews, report writing resulting in the production of highly competent soldiers

June 2008 – February **Human Intelligence Collector**
 2012 *United States Army*

- Responsibilities:*
- Conducted over 200 source meetings, tactical questionings, local national screenings, interviews, and liaisons with local nationals in Spink Boldak District and Shah Wali Kot District, Kandahar Province, Afghanistan
 - Observed and analyzed interpersonal interactions during Intelligence Operations in support of Operation Enduring Freedom to assess the truthfulness and accuracy of information provided by individuals in question
 - Certified Preliminary Credibility Assessment Screening System (PCASS) operator
 - Managed three Human Collection teams consisting of three personnel each
 - Authored, proofread, evaluated, and dispensed Intelligence Information reports and operational reports
 - Established and maintained relationships with other intelligence agencies to ensure no duplication of information and gain more knowledge of current trends

AWARDS AND HONORS

- Graduated *Summa Cum Laude* (GPA: 4.0)
Texas A&M University – Corpus Christi
 May 2016
- Vice President of Student Engagement and Success Impact Award
Texas A&M University – Corpus Christi
 Spring 2016

- Student Engagement and Success Leadership Scholarship
Texas A&M University – Corpus Christi
Academic Year 2015-2016
- Vet Center Initiative Grant (\$10,000)
Texas A&M University – Corpus Christi
Student Veterans Organization
July 2015
- United States Army Achievement Medal, First Oak Leaf Cluster
May 2011
- United States Army Meritorious Unit Commendation
May 2011
- United States Army Achievement Medal
November 2009

PROFESSIONAL AFFILIATIONS

- American Psychological Association
- American Psychology Law Society
- Psi Chi International Honor Society in Psychology