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Examination of Psychosocial Factors in Offender and Non-Offender Army Populations by Combat Experience and Offense Type

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14. ABSTRACT
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Results: Data from 252 non-offenders and 246 offenders were analyzed. Seventy-two percent of offenders and 58 percent of non-offenders had combat experience. Within the offender group, 52 percent were incarcerated for a violent crime and 71 percent for a sexual crime. The data between offenders and non-offenders did not meet assumptions of normality and non-parametric analyses were performed to compare between offender statuses and between combat experience statuses. To test for an interaction between criminality and combat experience, the data were grouped into four categories in a 2 x 2 design (i.e., Offender Status X Combat Experience Status).

Conclusion: Although it may be unsurprising that military offenders at the USDB experience more psychological distress than non-offending SMs, we also found that offenders' stress varied by the type of crime for which they were incarcerated.

Executive Summary

Background: Criminal behavior in the civilian population, including Veterans, has been studied broadly; however, little research has explored patterns of criminality in active military Service Members (SM). With the growing concern and public attention on SMs engaging in criminal and high-risk behaviors, the need arises to better understand the factors defining these SMs. Combat exposure has been associated with a number of poor psychosocial outcomes, but research on its direct relation to criminality is lacking. In addition, the predominant crime types in the military are sexual and violent crimes, yet current explanations for why these crimes are more likely is limited. The present study examines psychosocial characteristics in two main ways: first, through comparing offender and non-offender Soldiers with and without combat experience, and second, by contrasting military offenders of both violent and sexual crimes to other military offenders. Specific hypotheses of this study are: 1) the offender sample will display significantly higher scores on measures of health conditions such as psychopathy, anxiety, depression, stress, posttraumatic symptoms, and antisocial traits; 2) the offender sample will parallel other offender research and display higher rates of drug and alcohol problems than the non-offender sample; 3) individuals with combat exposure will report higher levels of posttraumatic symptoms, aggression, and alcohol problems; 4) offenders with combat experience will have the highest levels of posttraumatic symptoms and other mental health issues including anxiety and depression; and 5) there will be distinguishable differences between offenders of violent and sexual crimes and offenders of other crimes.

Method: This study compared de-identified, archival prisoner data obtained from the U.S. Disciplinary Barracks (USDB) and data from U.S. Army Soldiers without criminal histories. The data collected from non-offender Soldiers paralleled the USDB intake and risk assessment battery completed by the offenders. It included assessments of intelligence, personality, personal and combat experience, aggression, psychopathy, suicide ideation, substance abuse, post-traumatic stress (PTS), and physiological data (heart rate and blood pressure).

Results: Data from 252 non-offenders and 246 offenders were analyzed. Seventy-two percent of offenders and 58% of non-offenders had combat experience. Within the offender group, 52% were incarcerated for a violent crime and 71% for a sexual crime. The data between offenders and non-offenders did not meet assumptions of normality and non-parametric analyses were performed to compare between offender statuses and between combat experience statuses. To test for an interaction between criminality and combat experience, the data were grouped into four categories in a 2 x 2 design (i.e., Offender Status X Combat Experience Status). Offenders were significantly more likely to score higher than non-offenders on scales of suicide ideation, substance use, anxiety, antisocial disorders, stress, borderline symptoms, psychopathy, somatic complaints, and blood pressure. Non-offenders were significantly more likely to score higher on intelligence, aggression, mania, dominance, and treatment rejection. Offenders with combat experience scored significantly higher on PTSD symptoms than any other group and were more likely to have higher scores on aggression scales than offenders without combat experience. Differences within the offender sample were explored based on the two predominant crime types, i.e., sexual and violent crimes. Stress was significantly higher for sex offenders than other, non-sexual offenders and treatment rejection lower for sexual versus non-sexual offenders. For violent offenders, treatment rejection and psychopathy were significantly higher. Violent

offenders were lower than non-violent offenders on measures of stress and lack of support. There were also age group differences in both comparisons.

Conclusion: Although it may be unsurprising that military offenders at the USDB experience more psychological distress than non-offending SMs, we also found that offenders' stress varied by the type of crime for which they were incarcerated. Specifically, stress was higher for sexual offenders (vs. non-sexual offenders) but lower for violent offenders (vs. non-violent). The results of the present study also suggests that Soldiers who have committed criminal offenses and have combat experience are likely to report higher PTSD symptoms even than combat-exposed, non-offending Soldiers. Differences between offense statuses and within the offender groups were also found on numerous factors, all of which are interpreted and discussed for their implications.

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Introduction

This study examined de-identified, archival prisoner data obtained from the U.S. Disciplinary Barracks (USDB) in Fort Leavenworth, Kansas, and compared it to data from U.S. Army Soldiers without criminal histories. The data collected from non-offender Soldiers mirrored the USDB intake and risk assessment battery completed by the offenders. It included measures of intelligence, personality, personal and combat experience, aggression, psychopathy, suicide ideation, substance abuse, post-traumatic stress, and physiological data (heart rate and blood pressure). The study was exploratory to examine what factors might differ between the two populations and within the criminal population in order to understand characteristics that may suggest a propensity to commit crime in a U.S. Army Soldier sample.

Background

Reports of crimes involving military Service Members (SM) have increased since the beginning of Operation Enduring Freedom (OEF) in 2001 and Operation Iraqi Freedom (OIF) in 2003. For instance, an El Paso County jail near Fort Bliss, Texas, reported a 59.66% rise in the number of SM arrests between 2005 and 2010, despite no appreciable increase in Soldiers stationed on post (Ridder, 2007). A string of presumably unrelated homicides and violent crimes committed by Soldiers in Fort Carson, Colorado, from 2008 to 2009, prompted an Army investigation that ultimately concluded that exposure to intense combat, in addition to shortcomings in mental health and addiction service follow-up, were to blame for the violent criminal Soldier behavior (U.S. Army Center for Health Promotion and Preventative Medicine, 2009). Military sexual assault reports have also grown steadily since 2004, with a 6% increase from 2011 to 2012 (Department of Defense, 2012). Although the increase in reports of sexual assault may appear to indicate an increase in the instance of sexual assault within the military, the increase in reports may also suggest an increase in the willingness of victims to report those crimes (Garamone, 2013). In response to the escalating number of high-profile criminal incidents affecting military populations and the subsequent national scrutiny, the Army has established a request for informative research to mitigate violent or criminal acts committed by and/or against Soldiers (McHugh, 2013).

Within the general population, research suggests that many variables are related to criminal activity. Specifically, alcohol consumption and its association with criminal behavior has been studied extensively. Carpenter and Dobkin (2011) suggest that the scientific association between alcohol use and crime is significantly strong because of the pharmacological effects of alcohol on the human body and the availability and legality of alcohol. Although the effects of alcohol differ across individuals, alcohol generally has an anxiolytic, depressant effect that can also increase mood, and stimulate the brain's reward system, which may lead to increased impulsivity and aggression (Carpenter & Dobkin, 2011; Wallner & Olsen, 2008). Additionally, Gidycz et al. (2007) found that the use of alcohol was often related to the occurrence of sexual assault and suggested that this relationship could be moderated by contextual factors such as location (i.e., social setting) and concurrent alcohol use by others.

In a study examining the interaction of alcohol, drug use, and criminality conducted by Valdez, Kaplan, and Curtis (2007), results supported the relationship between drug and alcohol use and criminal activity, and also found that poverty and population concentration mediated this

relationship, whereas social relationships were a protective factor for drug/alcohol users. Another notable finding by Valdez et al. (2007) indicated that positive urinalysis for alcohol intoxication positively correlated with violent criminal arrests. Thus, the results of this study indicated that within this sample, a relationship between alcohol consumption and criminal misconduct existed.

Several mental health issues have been associated with criminality as well. However, the direct relationships between alcohol use, mental health, and criminal behaviors are difficult to delineate given the occurrence of drug and alcohol use by mental illness sufferers. Fazel et al. (2015) found that an individual with depression who is convicted of a violent crime is five times more likely to have abused alcohol and four times more likely to have abused drugs than those who do not suffer from depression. One possible explanation is that individuals may use drugs and/or alcohol to self-medicate against depression and anxiety, which may in turn lead to uncharacteristic criminal behavior.

While difficult to separate alcohol and/or drug use and mental-health-related-crimes, researchers have attempted to do so with mixed results. Peterson, Skeem, Kennealy, Bray, and Zvonkovic (2014) conducted an observational study of criminal cases and mental health diagnoses of the individuals accused of committing a crime. Peterson et al. (2014) concluded that the pattern at which crimes determined to be caused by a mental illness that were committed by individuals who suffered from a mental illness were inconsistent and that individuals who suffered from a mental illness who did commit crimes that were determined to be caused by a mental illness were just as likely to commit crimes that were determined to be not caused by a mental illness as well.

Fazel et al. (2015) studied the relationship between depression and violent crime more directly by examining a population of individuals who received outpatient mental health care for a depressive disorder in Sweden. Fazel et al. (2015) found that, after controlling for socioeconomic and familial variables, there was a significant relationship between having a depression diagnosis and the conviction of a violent crime in their sample. Specifically, individuals who were identified as being diagnosed with depression were three times more likely to be convicted of a violent criminal offense than individuals not diagnosed with depression or any other mental health disorder (Fazel et al., 2015).

Research has also indicated that the affective outcomes caused by depression are often opposite of those of psychopathy. For instance, an investigation conducted by Willemsen, Vanheule, and Verhaeghe (2011) determined that there is a strong inverse relationship between the symptoms of psychopathy and depression. Psychopathy is cited as a common factor in criminals within the civilian population (De Brito & Hodgins, 2008). Hare, Hart, and Harpur (1991) mention the great disparity between individuals who suffer with psychopathy in prison from those within the general population. According to Hare et al. (1991), more than 20% of individuals incarcerated within the U.S. suffer from psychopathy although less than 1% of the overall population suffers from psychopathy. This overrepresentation of individuals who suffer from psychopathy in U.S. prisons suggests that there may be a relationship between psychopathy and criminal behavior. Through a systematic literature review, Dhingra and Boduszek (2013) concluded that specific characteristics of psychopathy, such as a grandiose sense of self, lack of impulse control, and an inability to feel empathy, are most likely to lead to criminal behavior. They also noted that criminals with psychopathic traits are much more likely to recidivate within

five years after being released from jail or prison than individuals who do not possess psychopathic traits (Dhingra & Boduszek, 2013).

Research has also found that the prevalence of posttraumatic stress disorder (PTSD) is higher in prisoners than in the general public (Goff, Rose, Rose, & Purves, 2007). Childhood physical and sexual abuse, as well as childhood neglect, also tend to be common among prisoners (Dutton & Hart, 1992; Weeks & Widom, 1998). Lower intelligence in civilian samples has been shown to relate to criminal and antisocial behaviors (Hirschi & Hindelang, 1977; McGloin, Pratt, & Maahs, 2004). Furthermore, prisoners tend to have higher rates of psychotic illness, depression, and antisocial personality disorders (Fazel & Danesh, 2002). Antisocial personality disorder is characterized by violent behaviors that can develop during childhood or adolescence and is often associated with violence toward animals or other individuals, and often is accompanied by conduct disorder during school age (De Brito & Hodgins, 2008). Antisocial personality disorder further is associated with impulsivity, lack of regard for consequences, or the effects that behavior will have upon themselves or others (De Brito & Hodgins, 2008). Thus, numerous psychiatric diagnoses show a significant relationship with criminal behavior.

Despite the large number of research studies that have attempted to draw conclusions about the reasons for criminality within the civilian population, less research has been conducted to understand the reasons why a SM may engage in criminal behavior. While some overlap may exist, there are unique psychosocial factors between civilian and military life that likely contribute to criminality. Among the many characteristics that distinguish Soldiers as a unique population, combat experience is one of the most influential factors in military-related shifts in psychopathology, cognitive ability, somatic complaints, post-combat social functioning/integration, and personality traits (Shea & Fishback, 2012). Exposure to both traumatic events and prolonged stress in combat experience has been strongly tied to anxiety and PTSD (e.g., Tanielian & Jaycox, 2008; Hoge et al., 2004). Further, PTSD has been strongly linked to antisocial behaviors post-military in a number of studies (e.g., Hartl, Rosen, Drescher, Lee, & Gusman, 2005; McFall, Fontana, Raskind, & Rosenheck, 1999; Miller, Fogler, Wolf, Kaloupek, & Keane, 2008; Miller, Kaloupek, Dillon, & Keane, 2004). Imaging studies examining patients with PTSD have uncovered a reduction in normal functioning within the anterior cingulate cortex (ACC), a region of the limbic system associated with a wide variety of distinct cognitive and affective processing roles, including affective regulation, error detection, distress related to inaccurate behavioral responses, anticipation of aversive events, inhibitory response, and affective learning and memory (Bush, Luu, & Posner, 2000; Devinsky, Morrel, & Vogt, 1995). Dysfunction within the ACC has also been strongly associated with criminality, and has been tied to symptoms in offenders that include reduced impulse control, reduced anticipation of negative consequences, and increased recidivism (Birbaumer et al., 2005; Barbarin, 1979; Aharoni et al., 2013). Despite strong correlations with observably reduced functioning in the same specific region of the brain, PTSD does not appear to be a direct predictor of criminality (Shaw, Churchill, Noyes, & Loeffelholz, 1987). This may be due, in part, to the various types of PTSD symptom expression, including internalizing symptoms (e.g., anxiety, depression, withdrawal, etc.) and externalizing symptoms (e.g., impulsivity, risk-taking, disruptiveness, etc.). Considering the physical effects of combat stress on the ACC, and the subsequent role of ACC in criminality, it is of interest to the field of military crime prevention to assess whether exposure to combat may affect the risk of criminality among Soldiers after returning from deployment. Combat exposure has been linked to premorbid and comorbid

mental health symptoms as well as violent and antisocial behavior, suggesting that it directly influences the relationship between psychological functioning and misbehavior. In a study on the impact of deployment during Operation Iraqi Freedom on British SMs, violent post-war behaviors were associated with pre-enlistment antisocial behavior, serving in a combat position, having multiple traumatic experiences while deployed, and post-deployment mental health problems such as alcohol abuse and PTSD (MacManus & Wessely, 2011). Research on Vietnam veterans has shown a significant correlation between combat exposure and post-war arrests, interpersonal violence, and antisocial behaviors, often while controlling for demographic differences (e.g., Kulka et al., 1990; Yager, Laufer, & Gallops, 1984; Resnick, Foy, Donahoe, & Miller, 1989; Beckham, Feldman, Kirby, Hertzberg, & Moore, 1997). Both combat exposure and PTSD have shown correlations to post-war violent behaviors in Vietnam and Gulf War veterans (Black et al., 2005; Taft et al., 2007). In a large-scale study using data from the National Vietnam Veteran's Readjustment Study, Novaco and Chemtob (2015) found that anger problems mediated the relationship between posttraumatic symptoms due to combat exposure and domestic violence, such that higher levels of anger as well as higher levels of combat exposure and post traumatic symptoms increased the likelihood of domestic violence or violence toward a family member. Overall, research suggests what intuitively makes sense: that a diagnosis of PTSD or a history of combat exposure does not in itself make one a criminal, but rather the mediation and interaction of other factors with these variables may increase the likelihood for criminality.

As previously discussed, the use of alcohol is thought to be a factor that could contribute to behaviors or acts that are considered criminal within the civilian population. Research has been conducted to understand the relationship between military alcohol use and combat exposure in this context. Bray, Brown, and Williams (2013) examined data related to alcohol use of SMs from 1980 to 2008 utilizing data collected from the Department of Defense (DOD) Survey of Health Related Behaviors among Active Duty Military Personnel. Bray et al. (2013) found that the levels of heavy drinking among SMs rose steadily from 15 to 20% between 1980 and 2008 and that levels of binge drinking were double that of heavy drinking. Heavy drinking was measured by Bray et al. (2013) as engaging in at least one instance of binge drinking, or consuming more than 5 alcoholic beverages in one sitting or instance, per week within the past month. A spike in binge drinking was also discovered with an increase from 35 to 47%. Bray et al. (2013) attribute these results to a significant positive relationship between combat exposure and heavy and/or binge drinking. Further, those surveyed who had no combat experience were found to be 95% less likely to engage in heavy and/or binge drinking than those with combat experience. These findings also indicate that at least a quarter of SMs with high combat exposure (those who scored a 10 or higher on the Deployment and Combat Exposure Survey) had engaged in heavy drinking and that more than half of SMs with high combat exposure had engaged in binge drinking. The propensity to use alcohol by SMs with high levels of combat exposure may correlate with the increase in mental health issues, specifically PTSD, displayed by SMs with combat experience. Due to the connection between mental health issues and substance use, factors that contribute to the likelihood of mental health issues such as combat experience could then contribute to the increase in criminal behavior.

Capone, McGrath, Reddy, and Shea (2013) assessed National Guard and Reserve Soldiers one month post-deployment from OIF and OEF for daily alcohol use, PTSD, combat exposure, and myriad other psychological issues. Service Members of the National Guard and

Reserves have shown particularly high levels of vulnerability to alcohol use and abuse post-deployment; an issue that is thought to be caused by a lack of available resources and the comradery and support that is often provided in the active-duty environment (Capone et al., 2013). Capone et al.'s (2013) findings suggest a positive relationship between the presence of PTSD and alcohol use and abuse. Specifically, Capone et al. (2013) found that the presence of the PTSD symptom of re-experiencing was most likely to predict alcohol use. Miller, Greif, and Smith (2003) proposed that individuals who externalize in coping with their PTSD symptoms have more alcohol misuse and traits of antisocial personality, whereas those who internalize their coping had higher rates of depression and anxiety. Thus, alcohol use often relates to criminal behavior in SMs both directly and indirectly, through interaction with PTSD symptoms.

Depression is another factor that has been studied heavily in returning veterans and military SMs. The results of one study indicated that combat exposure during deployment for OEF and OIF Veterans had the largest impact upon a Soldier developing depression (Wells et al., 2010). Depression is often associated with posttraumatic stress through its interaction with combat exposure or trauma. In a review of literature related to the interaction of combat exposure, depression, and PTSD, Stander, Thomsen, and Highfill-McRoy (2014) examined whether pre-existing depression acted as a moderator between combat experience and the development of PTSD. The results were unclear (Stander et al., 2014). Approximately half of the studies reviewed found that pre-existing depression did moderate the development of PTSD following combat while the other half found that pre-existing depression did not moderate the development of PTSD following combat (Stander et al., 2014).

Though combat exposure has a clear link to poor mental health and the possibility for criminal behavior, there is also research highlighting the influence that pre-military conditions and functioning can have on the propensity to commit a crime. Booth-Kewley, Highfill-McRoy, Larson, and Garland (2010) found a link between lower cognitive ability and military misconduct in a sample of male Marine Veterans. Research has also demonstrated a relationship between pre-deployment antisocial behaviors and post-war violence, making it unclear how pre-military conditions and post-military conditions may influence the propensity to commit a crime (Resnick et al., 1989; Fontana & Rosenheck, 2005). Research exploring the predictors of misconduct in a large, cohort sample of male Marines found that younger age at time of combat exposure and pre- or post-deployment psychiatric diagnoses were the strongest predictors of military misconduct (e.g., dishonorable discharges, demotions) (Booth-Kewley et al. 2010). Post-deployment mental health diagnoses were especially predictive of misconduct, suggesting the role combat exposure plays in psychological symptom development is particularly related to the likelihood for misconduct. Hoge et al. (2004) found that involuntary discharge from the Army due to misconduct and legal problems was significantly more likely to occur for someone who had a history of a hospitalization for a mental disorder during Active Duty service independent of whether they saw combat. Rossellini et al. (2015) developed a model to predict those that would be at high risk of committing violent crimes (i.e., murder, manslaughter, aggravated arson, kidnapping, aggravated assault, robbery) based on data from a large dataset of Soldiers who served in the U.S. Army from 2004-2009. Rossellini et al. (2015) determined that key predictors of accusations of a physically violent crime include socioeconomic status, early career status, prior crime, and mental disorder treatment. Other predictor variables identified were being aged 17-22, junior enlisted, male, any race other than non-Hispanic white, have an education level of less than a high school diploma or a high school diploma but no college, and any hospitalization

or treatment for psychosis within the last 12 months. All of these factors were predictors of the likelihood to commit a violent crime independent of history of combat exposure, suggesting that individual predispositions, pre-military experiences, and combat exposure may all play a role in changing one's propensity to offend.

Given the lack of clear research on the psychosocial characteristics of violent and sexual military offenders and the frequency of these crimes, it is necessary to explore this area specifically to see if the same patterns of association seen in civilian samples are consistent in the military sample as well. Different factors may relate to the different crime types, which would help further understand the characteristics of criminals in the military. To explore criminality in the military further, we can examine whether characteristic differences exist between SMs who commit different crime types. The most frequently committed crimes leading to incarceration in the military are sexual (Schaffer, 2011) and violent crimes (MacManus et al., 2013). Research on violent and sexual crimes in civilian samples has found hostility, poor social support, increased distress, and antisocial tendencies to be consistent predictors (Abbey, Parkhill, BeShears, Clinton-Sherrod, & Zawacki, 2006). In particular, notable predictors of sexual crimes include antisocial traits, substance use, hostility, impulsivity, childhood victimization, lack of empathy, increased anger or distress, and lack of social support. Predominant predictors of violent crimes also include antisocial dispositions, as well as family factors and posttraumatic stress symptoms (Dekel & Monson, 2010). However, it is not established whether these same or any different factors play a significant role in differentiating military offenders.

In the present study, our goal is to identify whether differences exist in the characteristics associated with a criminal and non-criminal military sample. We seek to explore this question by considering the psychosocial and diagnostic factors that may be associated with offenders. Because of the impact combat experience can have on individuals' lives and its specificity to military personnel, we also will consider its relationship to criminal behavior. This investigation attempts to identify significant effects of combat experience on criminality by studying a number of clinical variables between military prisoners and non-incarcerated Soldiers with and without combat experience. As this is purely a correlational study, we did not attempt to draw a causal relationship between any variables and criminal behavior. Further, our exploration focused on the characteristics that may differ *within* criminals, between offenders of different crime types, was correlational and only sought to identify patterns of association.

We intend to explore the differences across psychosocial and diagnostic variables between the offender and non-offender samples as well as between samples with and without combat experience. Based on our review of literature above we hypothesized:

1. The offender sample would be significantly higher than the non-offender sample on ratings of mental health conditions such as psychopathy, anxiety, depression, stress, posttraumatic symptoms and antisocial-related traits.
2. Offender sample will parallel other offender research and show higher rates of alcohol and drug problems than non-offenders.
3. Offenders with combat experience will have higher levels of posttraumatic stress symptoms and other mental health issues including anxiety and depression than both offenders and non-offenders without combat experience.
4. The interaction of offender-status and combat experience will reveal offenders with

combat experience have the highest levels of posttraumatic symptoms and other mental health issues such as anxiety and depression. Since this study is exploratory, though, we do not have any other, specific hypotheses in regards to expectations of group differences.

5. There will be distinguishable differences between offenders of violent and sexual crimes and offenders of other crimes.

To understand the factors that relate to criminality further, we also seek to examine which factors might distinguish offenders of both violent and sexual crimes from other military offenders. Sexual as well as drug-related crimes are the most common reasons for incarceration in the military prisons (Haasenritter, 2003). As mentioned above, research on violent and sexual crimes in civilian samples has found hostility, poor social support, increased distress, and antisocial tendencies to reliably predict these crime types. We intend to explore whether these factors likewise relate to offenders in our sample and whether other characteristics significantly differentiate between crime types as well.

Methods

Participants and Procedures

Clinical data from 310 incarcerated subjects were obtained from de-identified, archival intake mental health battery responses of U.S. Army prisoners housed in the USDB at Fort Leavenworth, Kansas. Data were received in March of 2015 when there were 461 inmates total (67.2% response rate). This data was collected as part of the standard intake procedure for prisoners when they arrived at the USDB. In the interest of subject privacy, incarcerated subjects were not approached for information at any point in the study. The data was de-identified and sent from authorized study personnel at the USDB via secure data transfer to authorized research personnel at the U.S. Army Aeromedical Research Laboratory located at Fort Rucker, Alabama. To protect the identities of incarcerated subjects, potentially identifiable information such as rank, Military Occupational Specialty (MOS), and education were not included in the prisoner data received. The locations of deployment (e.g., Iraq, Afghanistan, Vietnam) were also not collected, only whether the subject reported that they had been deployed to a combat zone.

Matched data were gathered from 310 non-incarcerated, male U.S. Army Soldiers in the greater Fort Rucker, Alabama area. Investigators attempted to match the control sample to the archival data based on age group and combat experience in order to control for confounding effects. To assess for combat exposure, participants were asked, "Have you ever been deployed to a combat zone?" and indicated yes or no to this question. No distinctions were made between Active Duty, Reserve, or National Guard status of the control participants. Only male participants were recruited to match the sample of all-male prisoners. Volunteers were recruited through flyers, group briefing sessions, and word of mouth. Individuals interested in participating met with a study team member individually to be briefed on the study, including the requirements and their rights as participants. They were informed of the voluntary nature of the study, their right to withdraw at any time, and the anonymity of their responses. The limits of confidentiality were also discussed, and participants were informed that there was no formal compensation for participating. Those willing to participate then gave their informed, written

consent. Following informed consent, research team members assisted the participant with completion of the Psychopathy Check List-Revised (PCL-R). The participants also completed the Adult Suicide Ideation Questionnaire (ASIQ) in the presence of a member of the research team as the ASIQ is sensitive in nature and determined whether the participant was currently engaging in suicidal ideation. Any subject reporting suicidal thoughts in the past month was to be referred to the local on-post mental health clinic (Lyster Army Health Clinic) immediately, where an on-call clinician was available to speak with them. A score above a specific threshold on the ASIQ determined the presence of suicidality in participants. No participants indicated they were suicidal, and no immediate referrals were made. Research technicians recorded heart rate and blood pressure from each of the control participants at a separate, seated station. The participants then completed all remaining questionnaires individually in paper and pencil form. The CAGE (which is an acronym for cut down, annoyed, guilty, eye opener, describing the questions that make up the questionnaire) Assessment for alcohol use was reviewed in the presence of the respondents before they left the data collection site. Any participant who scored above a specific threshold on the CAGE Assessment indicating problematic alcohol use was provided self-referral information to Lyster Army Health Clinic. The scoring of all other data collection instruments took place after the research volunteer left the research team's proximity. Complete participation for control group participants required approximately two hours. Because of the long estimated time of completion, testing fatigue was addressed by randomizing the order in which the questionnaires were presented. There were five possible arrangements of the questionnaires excluding the PLC-R and the ASIQ (which were always completed first). An example of the schedule of events for one subgroup of the control participants is included in Table 1. Further, all questionnaires used in this study are included in Appendix A.

Three control methods were used to screen control participants for prior criminal activity. First, participants were verbally told before consent to self-exclude if they had a history of incarceration. Prior history was also obtained in the self-report surveys, allowing researchers to exclude any participants responding positively to this screen. Finally, any individuals that had elevated scores (raw score of 10 or greater) on the Substance Abuse Subtle Screening Inventory (SASSI) - Correctional Score, a subscale that subtly assesses correctional history, were excluded from analysis.

All investigators and technicians were trained on the scoring and administration of all instruments and received refresher training on data security related to the use of de-identified prisoner information. A test-run of the procedures for data collection was completed successfully by all investigators and research technicians prior to the formal data collection period. This study was approved by the U.S. Army Medical Research and Materiel Command (USAMRMC) Institutional Review Board (IRB) and the U.S. Army Research Development and Engineering Command (ARDEC) IRB governing both USAARL and the USDB, respectively.

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Table 1. Schedule of Events for One Subgroup of Control Group Participants

Session	Task/Activity	Approximate Time to Complete
1 (In-Processing and Screening)	Informed Consent	10 minutes
	Demographic Questionnaire	5 minutes
	Introduction to the Study	10 minutes
	Collection of Medical Variables	5 minutes
2 (Psychometric Questionnaires)	Adult Suicide Ideation Questionnaire	5 minutes
	Psychopathy Checklist - Revised	2-5 minutes
	Personality Assessment Inventory	30 - 45 minutes
	Aggression Questionnaire	10 minutes
	Shipley Institute of Living Scale	15 minutes
	CAGE Assessment	2 - 5 minutes
	PTSD Checklist - Military	2 - 5 minutes
	Substance Abuse Subtle Screening Inventory	10 minutes

Materials

All psychometric variables that were gathered from control participants mirrored the USDB intake battery completed by the USDB prison sample. See Table 2 for a complete list of all psychometric variables collected.

Table 2. List of Study Variables

Instruments	Variables	Construct Measured
Demographics and Independent Variables	Age	Participant's age
	Crime Type (Prisoners Only)	Coded based on specific types of crimes (e.g., violent offense, sexual offense, property offense, drug offense, public order offense, military offense, other offense)
	Combat Experience	Whether or not participant had been deployed to a combat zone
	Incarceration Status	Whether or not participant was presently incarcerated
Medical Variables	Heart Rate	Participant's heart rate at intake
	Blood Pressure	Participant's blood pressure at intake
Adult Suicide Ideation Questionnaire	Total ASIQ Score	Current level of suicide ideation
Psychopathy Checklist- Revised	Total PCL-R Score	Psychopathic personality traits
Personality Assessment Inventory	Dominance Score	Desire to control interpersonal relationships
	Warmth Score	Interest and comfort with attachment relationships
	Aggression Score	Behaviors related to anger and aggression
	Suicide Ideation Score	Suicide potential
	Stress Score	Recent or current life stressors experienced
	Anxiety Score	Participant's level of anxiety
	Anxiety-Related Disorders Score	Anxiety related to the obsessive-compulsive, phobia, and traumatic stress disorders
	Depression Score	Major elements of the depressive syndrome
	Mania Score	Prototypical signs of a manic episode
	Borderline Score	Elements related to borderline symptoms
	Antisocial Score	Antisocial symptoms in character pathology
	Somatic Complaint Score	Participant's preoccupation with physical health
Alcohol Problems Score	Issues related to the use of alcohol	

Personality Assessment Inventory Continued	Drug Problems Score	Issues related to the use or misuse of illicit drugs
	Treatment Rejection Score	Potential problems with treatment motivation
	Nonsupport Score	Perceived lack of social support
Aggression Questionnaire	Physical Aggression Score	Use of physical force when expressing anger
	Verbal Aggression Score	Hostile speech
	Anger Score	Excitability and control of anger
	Hostility Score	Pervasive social maladjustment
	Indirect Aggression Score	Expressions of anger without confrontation
Shipley Institute of Living Scale	Abstraction Quotient Score	General intellectual functioning; cognitive impairment
CAGE Assessment	CAGE Score	Symptoms of alcoholism
PTSD Checklist-Military Version	Total PCL-M Score	Posttraumatic stress disorder symptoms in military populations
Substance Abuse Subtle Screening Inventory	Face-Valid Alcohol Score	Perceived consequences of alcohol use
	Face-Valid Drug Score	Perceived consequences of drug use
	Symptoms Score	Symptoms causes and consequences of substance abuse
	Obvious Attributes Score	Willingness to admit symptoms
	Subtle Attributes Score	Predisposition of dependence development
	Defensiveness Score	Denial or deception regarding substance use problems
	Supplemental Addiction Score	Defensive chemical dependence
	Family Score	Dependence of family or cohabitants
	Corrections Score	Probability of becoming a reoffender
	Random Answer Score	Random responses

Demographic questionnaire.

The demographic questionnaire consists of three multiple-choice questions that were answered by the control participants only. Participants indicated their age group (distributed into seven groups: 18-24, 25-29, 30-34, 35-39, 40-44, 45-49, and 50+), combat experience [i.e., prior deployment to a combat zone (yes or no), and history of incarceration (yes or no)]. Prior history of incarceration was a disqualifying factor due to the confounding effect it would have on between-group analysis for criminality (as incarceration was used as a proxy measure for criminality). Thus, any participants responding positively to this question were screened out and removed from analysis. The information on age and combat experience allowed the control population to be matched as closely as possible to the experimental group, and allowed for age and combat experience to be used as covariates in the analysis.

Medical variable collection.

Heart rate and blood pressure data from each of the control participants were collected and recorded. Blood pressure was taken using a Welch Allyn Connex® Vital Signs Monitor 6000™ Series hand-held aneroid sphygmomanometer (Welch Allyn, 2014) on each upper arm and averaged into one rating. Heart rate was taken by measuring the radial pulse for 15 seconds; this score was multiplied by 4 to calculate the average heart rate for 1 minute. Collection of these two medical variables took approximately 5 minutes.

Adult Suicide Ideation Questionnaire.

The Adult Suicide Ideation Questionnaire (ASIQ) (Reynolds, 1991) rates the current and recent past level of suicide ideation experienced by respondents. It consists of 25-items measuring specific thoughts or behaviors related to suicide. A total score is calculated, with higher sums indicating greater levels of suicidal ideation. Several studies have established that the ASIQ significantly differentiates between suicidal and non-suicidal populations (Reynolds, 1991; Osman et al., 1999). In this study, the responses on the ASIQ were reviewed before participants left the testing area. Any participants who indicated that they had experienced suicidal ideation in the past month or with an overall score above 30 were referred by trained technicians to the local mental health clinic in accordance with IRB safety standards. The ASIQ took approximately 5 minutes to complete.

Psychopathy Checklist - Revised.

The Psychopathy Checklist- Revised (PCL-R) is a widely used tool for assessing psychopathic personality characteristics through measurement of both psychopathic traits and behaviors (Hare, 2004). As in the original version, the PCL-R provides a total score that can be interpreted dimensionally, in terms of degree of match to the prototypical psychopath based on standardized information in the scoring manual, or categorically, to identify or diagnose psychopaths based on the sum score (Hare, 2004). For the present study, the structured interview component of the PCL-R was not included in the data collection. Completion of the 20 self-report questions without the interview took approximately 2 to 5 minutes.

Personality Assessment Inventory.

The Personality Assessment Inventory (PAI) is a 344-item self-report inventory that assesses various domains of personality and psychopathology among adults (Morey, 1999). Items are answered on a 4-point, Likert-type scale according to how true the descriptions are for the respondent. There are 22 unique scales, including 4 validity scales (i.e., positive impression scale, negative impression scale, inconsistency scale, infrequency scale), 11 clinical scales (i.e., somatic complaints, anxiety, anxiety-related disorders, depression, mania, paranoia, schizophrenia, borderline features, antisocial features, alcohol problems, drug problems), 5 treatment consideration scales (i.e., aggression, suicidal ideation, stress, nonsupport, treatment rejection), and 2 interpersonal scales (i.e., warmth, dominance) (See Table 2 for a description of each subscale). The inventory takes approximately 50–60 minutes to complete and requires a fourth-grade reading ability (Morey & Lowmaster, 2010). For this measure, *t*-scores for each subscale were used in the final analysis.

Aggression Questionnaire.

The Aggression Questionnaire (AQ) is used to routinely screen children and adults for aggressive tendencies (Buss & Perry, 1992). The AQ is a full revision of the Buss-Durkee Hostility Inventory, a longtime standard for assessing anger and aggression (Buss & Durkee, 1957). Its 34 items measure an individual's aggressive responses and his or her ability to channel those responses in a safe, constructive manner. Each item reads at the third-grade level and is rated on a 5-point scale. The AQ was standardized on a sample of 2,138 individuals, ages 9 to 88, and has normative data divided into three age sets: 9 to 18, 19 to 39, and 40 to 88. (Buss & Warren, 2000). Although it includes five subscales, for our purposes, only the total score was calculated. Higher scores indicate greater levels of aggressive tendencies. This scale took approximately 10 minutes to complete.

Shipley Institute of Living Scale.

The Shipley Institute of Living Scale (SILS) assesses general intellectual functioning in adults and adolescents and aids in detecting cognitive impairment in individuals with normal intelligence (Zachary, 1986). The SILS takes a maximum of 20 minutes to complete and yields three major summary scores: Vocabulary, Abstraction, and Combined Total scores. The Vocabulary sub-scale consists of 40 multiple-choice verbal reasoning questions, and the Abstraction subscale includes 20 series completion items of inductive reasoning (Zachary, 1986). The total score can be used to find the equivalent estimated Wechsler Adult Intelligence Scale-IV (WAIS-IV) IQ score. Convergent validity of both the Vocabulary and Abstraction measures with crystallized and fluid intelligence, respectively, has been established in a large, representative sample (Matthews, Orzech, & Lassiter, 2011). The abstraction quotient score, which assesses fluid intelligence to assess potential cognitive impairment, was the primary measure of interest in the present study.

CAGE Assessment.

The CAGE is a 4-item, binary response questionnaire for detecting alcohol abuse (Ewing, 1984). It takes less than 1 minute to administer and is intended to be non-confrontational about

drinking habits. The four questions included in the assessment ask participants to state whether they have felt the need to cut down on drinking, felt annoyed by others' complaints about their drinking, felt guilt about their drinking, and whether they have ever needed an "eye-opener" or a drink first thing in the morning to relieve withdrawal symptoms. Two or more affirmative responses suggest that the client is a problem drinker (Ewing, 1984). Participants who scored 2 or higher on this instrument in the current study were provided with self-referral information to the Army Substance Abuse Program (ASAP) at Lyster Army Health Clinic before leaving the testing site. Completion of this assessment took 2 to 5 minutes. The total score (sum of all affirmative responses) on the CAGE was included in analyses.

PTSD Checklist – Military.

The PTSD Checklist-Military version (PCL-M) is a commonly used, self-report measure of PTSD symptoms based on Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) symptom criteria (McDonald & Calhoun, 2010). It contains 17 items and asks respondents to indicate how much each symptom has bothered them in the past month. Higher scores indicate more severe levels of posttraumatic symptoms. The PCL-M has been used for nearly 20 years and over a dozen validation studies have been conducted (e.g., McDonald & Calhoun, 2010). For the purposes of this study, the PCL-M was used to capture severity of PTSD symptoms. Completion of this assessment took 2 to 5 minutes. The total score of the PCL-M was used in analysis.

Substance Abuse Subtle Screening Inventory.

The Substance Abuse Subtle Screening Inventory (SASSI) is a 93-item scale that implicitly measures a participant's history of drug and alcohol use and forensically-relevant concerns such as past corrections experiences and impulsivity (Clements, 2002). The self-report instrument contains 67 true/false subtle questions for sensitive scale topics (e.g., addiction history, history with law enforcement) and 26 direct, multiple-choice questions. Subtle items return scores on eight subscales: symptoms of substance misuse, obvious attributes, subtle attributes, defensiveness, supplemental addiction measure, family vs. control subjects, correctional, and random answering pattern. Direct items return scores on two subscales: face-valid alcohol and face-valid other drugs (Clements, 2002). In the current study, the correctional subscale was used to screen control participants whose scores exceeded the cut-off score levels. All other subscales were included in the analysis. Completion of this assessment took 10 minutes.

Analytic Approach

International Business Machines (IBM) Statistical Package for the Social Sciences (SPSS) v. 19 was used to run all analyses. Age was divided into seven distinct categories: 18 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, and 50+. Prisoner data included age at the time of intake. Descriptive statistics were calculated for all study variables and data distributions were examined prior to analysis. Differences in clinical variables between groups (offender versus non-offender, combat experience versus no combat experience) were the primary foci of the analysis and explored through Mann-Whitney U tests. Combat experience was also considered in how it may interact with offender status in influencing their relationship to other

variables. Thus, a 2 x 2 factorial design (combat experience by offender status) was explored through Kruskal-Wallis tests. Independent samples *t*-tests were conducted to examine mean differences on all variables within the criminal sample for the two predominant crime types, specifically, between violent and non-violent offenders, and sex and non-sex offenders, with particular attention paid to the factors relevant in predicting civilian criminal behavior mentioned above.

Results

The final analysis included data from 246 participants from the USDB group and 252 from the control group. Using power estimates based on Cohen (1988), the group sizes were sufficient to detect small group difference effect sizes ($d = .40$) with a power of 0.80, and were sufficient to detect medium within-group variable correlations ($r = .30$) for a power level of 0.80. The validity scales of the PAI and SASSI were used to screen out participants who may have been responding inaccurately on that measure and likely had inaccurate results on other measures as well. In the control group, data from five participants were excluded due to elevations in the Infrequency scale, two participants due to elevations in the Inconsistency scale, and forty due to elevations in the Positive Impression scale. Elevations in the SASSI Random Answer scale resulted in the exclusion of data from eight control participants. One control participant self-disclosed that they had been incarcerated before and two had elevated (over 10) correction scores on the SASSI. All three were excluded from analysis to avoid any confounding impact of correctional history between groups. Lastly, one participant was missing substantial data and thus was excluded from analysis. For the offender group, data were removed from nine participants due to elevations in Infrequency scale, five participants due to elevation in Inconsistency scale, nine due to elevations in the Negative Impression scale, and forty-one due to elevations in the Positive Impression scale. In sum, 123 participants (out of 621) were eliminated due to elevated scores on the validity scales or missing data; 64 offenders and 59 non-offenders.

Demographic statistics are displayed in Table 3. Age, as mentioned above, was measured on an ordinal scale. The mode of age was in the 18-24 year old range in both the offender and control samples. With regard to combat experience, 59% of non-offenders and 72% of offenders had combat experience. Overall, 326 (65%) of participants reported combat experience, and 173 (35%) reported no combat experience. Within the offender sample, the predominant two crime types leading to incarceration were violent and sexual crimes, with 128 violent (118 nonviolent) and 175 sexual (71 nonsexual) offenders in this sample. Although not reported in Table 3, none of the control participants endorsed suicidal ideation.

Table 3. Summary of Demographics

	USDB group (N=246)	Control group (N=252)	Total (N= 498)
	M (n), SD (%)	M (n), SD (%)	M (n), SD (%)
Age			
18-24	67 (27%)	75 (30%)	142 (29%)
25-29	52 (21%)	66 (26%)	118 (24%)
30-34	58 (24%)	68 (27%)	126 (25%)
35-39	30 (12%)	21 (8%)	51 (10%)
40-44	22 (9%)	10 (4%)	32 (6%)
45-49	12 (5%)	6 (2%)	18 (4%)
50+	3 (1%)	5 (2%)	8 (2%)
No Response	2 (<1%)	1 (<1%)	3 (<1%)
Combat Experience			
Yes	178 (72%)	148 (59%)	326 (65%)
No	69 (28%)	104 (41%)	173 (35%)
Incarceration Offense*			
Sexual	175		
Violent	128		
Property	19		
Drug	13		
Public Ordinance	5		
Military	63		
Other	70		

* 147 offenders were incarcerated for multiple crime types, including 69 for both sexual and violent crimes.

The data between offenders and non-offenders did not meet assumptions of normality; therefore, non-parametric analyses were used. To determine the interaction of offender status and combat experience, the data were divided into four categories: 1) non-offender with no combat experience ($n = 104$); 2) non-offender with combat experience ($n = 148$); 3) offender with no combat experience ($n = 68$); and 4) offender with combat experience ($n = 178$). Multiple Kruskal-Wallis tests were run for each dependent variable to test for significant differences among the four groups (See Table 4). A Bonferroni correction was performed to determine the confidence interval ($p = .002$). There were significant differences between groups on intelligence, substance use, suicidal ideation, posttraumatic symptoms, somatic complaints, anxiety-related disorders; anxiety, depression, mania, and borderline symptoms; aggression (as measured by the PAI), stress, treatment rejection, dominance, and psychopathy. Differences between groups on aggression (as measured by the AQ) were not seen in the overall score, but were seen in subscales of physical aggression, anger, hostility, and indirect aggression. Differences on the SASSI measure of substance abuse were specifically significant on subscales of symptoms, obvious attributes, subtle attributes, supplemental addiction measure, and correctional history, as well as the overall score.

Table 4. Median (Interquartile Range) for Kruskal-Wallis Tests between Offender Status and Combat Experience

	Group 1	Group 2	Group 3	Group 4	Sig.
SILS	60 (9)	57 (6)	52.5 (13)	52 (11)	.000*
CAGE	0(0)	0(0)	0(0)	0(1)	.013
SASSI	0(0)	0(0)	0(0)	0(1)	.000*
SYM SASSI	1(3)	2(2)	2(3)	2(4)	.000*
OBV SASSI	3(3)	3(2)	5(3)	5(3)	.000*
SUBT SASSI	2(1)	3(1)	3(2)	3(1)	.000*
DEF SASSI	6(2)	6(3)	6(3)	6(3)	.067
SUPADD SASSI	5(2)	5(3)	7(3)	7(3)	.000*
FAM SASSI	9(2)	9(3)	9(2)	9(3)	.304
COR SASSI	3(3)	3(3)	5(5)	5(4)	.000*
ASIQ	43 (1)	43 (0)	44 (12)	44 (11)	.000*
AQ	47 (11)	47 (9)	42 (10)	47 (12)	.005
AQ PA	48(6)	49(6)	45(10)	48(9)	.000*
AQ VA	47(14)	47(9)	44(10)	47(9)	.002
AQAnger	46(11)	48(8)	40(12)	43(4)	.000*
AQHostil	47(13)	47(10)	49(13)	51(14)	.001*
AQIA	48(10)	46(10)	42(14)	44(11)	.000*
PCLM	19 (4)	22 (11)	20 (8)	28 (18)	.000*
PAI Som	44 (5)	44 (6)	47 (11)	49 (11)	.000*

PAI Anx	46 (10)	44 (8)	47 (13)	50 (16)	.000*
PAI ARD	45 (12)	44 (8)	49 (18)	50 (19)	.000*
PAI Dep	43 (10)	44 (9)	52 (17)	54 (15)	.000*
PAI Man	53 (13)	51.5 (13)	46 (13)	49 (13)	.000*
PAI Bor	46 (13)	46 (9)	51 (16)	52 (16)	.000*
PAI Anti	51.5 (12)	51 (12)	50 (11)	51 (12)	.793
PAI AP	47 (9)	50 (10)	47 (14)	49 (15)	.047
PAI DP	48 (10)	48 (8)	48 (12)	48 (12)	.009
PAI Agg	48 (12)	48 (11)	40 (13)	45 (12)	.000*
PAI SI	44 (6)	43 (4)	45 (11)	47 (11)	.000*
PAI Stress	47 (7)	44 (7)	57 (15)	62 (16)	.000*
PAI NonSup	45 (14)	45 (11)	45 (19)	45 (14)	.152
PAI RxR	57 (10)	59 (9)	44 (14)	45 (13)	.000*
PAI Dom	53 (11)	56 (10)	50 (14)	53 (14)	.000*
PAI Warm	53 (13)	49 (14)	52 (20)	51 (13)	.031
PCLR	26 (7)	25 (7)	38 (9)	38 (9.75)	.000*

*Significance ($p \leq .002$)

Note: Group 1 = No Offense, No Combat; Group 2= No Offense, Yes Combat; Group 3 = Yes Offense, No Combat; Group 4 = Yes Offense, Yes Combat

Because our hypotheses were exploratory on group differences, we did not have planned contrasts included in our analysis plan. We instead elected to follow up our Kruskal-Wallis tests with pairwise comparisons. Generally, with nonparametric data, multiple Mann-Whitney U-tests would be performed at this stage. However, since our nonparametric tests (i.e., the Kruskal-Wallis's) matched the results of analyzing the data parametrically through factorial ANOVAs, we choose to report here the results of the pairwise comparisons in the ANOVAs to minimize Type I error and in order to explore interactions as well as main effects. The Mann-Whitney U-tests for both main groups, offender status and combat status, are included in Appendix B for those interested.

To determine interactions between our four groups, a 2 x 2 (Offender Status x Combat Status) factorial ANOVA was performed for each dependent variable. For the SILS, there was a significant interaction between offender status and combat status, $F(1,481) = 5.02, p < .05$. Offender status and combat status also both had main effects, $F(1,481) = 90.32, p < .001$ and $F(1,481) = 4.03, p < .05$, respectively. Non-offenders scored higher than offenders on the SILS, and those without combat experience similarly scored significantly higher than those with combat experience. The SASSI overall score saw only a significant main effect of offender status, $F(1,479) = 44.34, p < .001$, with offenders scoring higher than non-offenders. The SYM SASSI subscale had significant main effects: for offender status, $F(1,434) = 20.32, p < .001$, and for combat status, $F(1, 434) = 4.74, p < .05$. Offenders were significantly higher on this scale than non-offenders, and those with combat experience significantly higher than those without. There was a significant main effect of offender status on OBV SASSI scores, $F(1, 434) = 67.08, p < .001$, which were significantly higher for offenders than non-offenders. Similarly, offender

status had a significant main effect on SUBT SASSI scores, $F(1, 434) = 33.91, p < .001$, with offenders again higher than non-offenders on this SASSI subscale. There was a significant interaction between offender status and combat status for the SUPADD SASSI, $F(1,434) = 6.27, p < .05$. There was also a significant main effect of offender status on SUPADD scores, $F(1, 434) = 117.29, p < .001$, with offenders scoring higher than non-offenders. There was a significant main effect of offender status on COR SASSI scores, $F(1, 434) = 58.61, p < .001$, which were significantly higher for offenders than non-offenders. There was a significant main effect of offender status on ASIQ scores, $F(1, 491) = 43.34, p < .001$, which were significantly higher for offenders than non-offenders. The AQPA subscale had significant main effects: for offender status, $F(1,480) = 20.36, p < .001$, and for combat status, $F(1, 480) = 5.24, p < .05$. Offenders were significantly lower on this scale than non-offenders, and those with combat experience significantly higher than those without. There was a significant main effect of offender status on AQAnger, $F(1, 482) = 13.66, p < .001$, which was significantly lower for offenders than non-offenders. There was a significant main effect of offender status on AQHostil, $F(1, 480) = 9.03, p < .005$, which was significantly higher for offenders than non-offenders. There was a significant main effect of offender status on AQIA, $F(1, 481) = 16.40, p < .001$, which was significantly lower for offenders than non-offenders. The PCLM had significant main effects: for offender status, $F(1,385) = 21.68, p < .001$, and for combat status, $F(1, 385) = 36.50, p < .001$. Offenders were significantly higher on this scale than non-offenders, and those with combat experience significantly higher than those without. There was a significant main effect of offender status on PCLR, $F(1, 478) = 438.86, p < .001$, which was significantly higher for offenders than non-offenders.

For the PAI, several subscales showed significant differences across offender and combat statuses. There was a significant main effect of offender status on PAI Som, $F(1, 417) = 39.48, p < .001$, which was significantly higher for offenders than non-offenders. There was a significant interaction between offender status and combat status on PAI Anx, $F(1,465) = 5.26, p < .05$. There was also a significant main effect of offender status, $F(1, 465) = 19.27, p < .001$, with offenders scoring higher than non-offenders. There was a significant main effect of offender status on PAI Ard, $F(1, 465) = 38.45, p < .001$, which was significantly higher for offenders than non-offenders. There was a significant main effect of offender status on PAI Dep, $F(1, 465) = 96.40, p < .001$, which was significantly higher for offenders than non-offenders. There was a significant interaction between offender status and combat status on PAI Man, $F(1,465) = 5.01, p < .05$. There was also a significant main effect of offender status, $F(1, 465) = 46.28, p < .001$, with offenders scoring lower than non-offenders. There was a significant main effect of offender status on PAI Bor, $F(1, 465) = 33.25, p < .001$, which was significantly higher for offenders than non-offenders. The PAI Agg had significant main effects: for offender status, $F(1,465) = 6.51, p < .05$, and for combat status, $F(1, 465) = 5.82, p < .05$. Offenders were significantly lower on this scale than non-offenders, and those with combat experience significantly higher than those without. There was a significant main effect of offender status on PAI SI, $F(1, 464) = 30.73, p < .001$, which was significantly higher for offenders than non-offenders. There was a significant interaction between offender status and combat status on PAI Stress, $F(1,465) = 4.82, p < .05$. There was also a significant main effect of offender status, $F(1, 465) = 211.78, p < .001$, with offenders scoring higher than non-offenders. The PAI RxR had significant main effects: for offender status, $F(1,417) = 154.28, p < .001$, and for combat status, $F(1, 417) = 5.95, p < .05$. Offenders were significantly lower on this scale than non-offenders, and those with combat experience significantly higher than those without. The PAI Dom had significant main effects:

for offender status, $F(1,465) = 16.84, p < .001$, and for combat status, $F(1, 465) = 9.81, p < .005$. Offenders were significantly lower on this scale than non-offenders, and those with combat experience significantly higher than those without.

Lastly, we explored group differences between crime types in offenders across all factors using independent samples t -tests (See Table 5 for results). An association between age and violent offense status was observed, $\chi^2(6) = 15.79, p < .05$. Specifically, 34% of violent offenders were under the age of 25, compared to 21% of non-violent offenders. A similar association was found between age group and sex offense status, $\chi^2(6) = 17.89, p < .01$. Twenty-nine percent of sex offenders were between the ages of 30-34, compared to only 7% of other offenders being in that age group. Non-sexual offenders were almost twice as likely to be in the age range of 18-24 than sexual offenders were (41% and 22%, respectively). An association between age and violent sexual offending was also found, $\chi^2(6) = 12.74, p < .05$. There were no significant relationships between combat experience and offender type, all $p > .05$. There was a significant difference in stress and treatment rejection, with stress being higher for sex offenders ($M = 62.63, SD = 11.56$) than other, non-sex offenders ($M = 58.03, SD = 9.77$), $t(243) = -2.95, p < .01$, and treatment rejection being lower for sex ($M = 43.86, SD = 10.35$) versus non-sex ($M = 48.11, SD = 11.65$) offenders, $t(196) = -2.58, p < .05$. The results for violent offenders are summarized in Table 6. For violent offenders, treatment rejection and psychopathy were significantly higher than other offenders, $t(196) = -2.61, p = .01$ and $t(239) = -3.40, p = .001$, respectively, with a mean of 47.42 ($SD = 11.34$) for treatment rejection in violent offenders compared to 43.41 ($SD = 10.29$) in other offenders, and a mean psychopathy score of 39.78 ($SD = 6.19$) for violent offenders compared to a mean of 37.10 ($SD = 6.01$) for other offenders. Violent offenders were significantly lower than nonviolent offenders on measures of stress ($M = 59.60, SD = 10.46; M = 63.15, SD = 11.80$) and lack of support ($M = 46.61, SD = 11.43; M = 50.20, SD = 11.56$), both $p < .05$. Higher reported borderline symptoms for violent offenders was approaching significance, at $p = .05$. We further explored differences between violent sex offenders ($N = 69$) and non-violent sex offenders ($N = 106$) and found they only differed significantly in that violent sex offenders scored higher on psychopathy than non-violent, sex offenders, $t(168) = 3.29, p = .001$. For all other measures, no significant differences were found (see Table 7).

Table 5. Results of *t*-tests and Descriptive Statistics by Sexual Offense Status

	Offender Type						95% CI	t	df
	Sexual			Other					
	M	SD	n	M	SD	n			
PAI Stress	62.63	11.56	174	58.03	9.77	71	1.53, 7.67	2.95**	243
PAI RxR	43.86	10.35	136	48.11	11.65	62	-7.51, -1.00	-2.58*	196
SILS	51.10	7.45	168	51.65	8.87	69	-2.77, 1.67	-.49	235
CAGE	.62	1.10	175	.67	1.10	70	-.36, .251	-.350	243
SASSI	.25	.44	173	.21	.41	70	-.08, .16	.66	241
SYM SASSI	3.04	2.48	137	2.95	2.69	61	-.69, .86	.22	196
OBV SASSI	4.91	2.19	137	4.89	1.77	61	-.60, .66	.09	196
SUBT SASSI	3.15	1.14	137	3.23	1.15	61	-.42, .27	-.44	196
DEF SASSI	5.64	2.34	137	5.74	2.17	61	-.80, .59	-.29	196
SUPADD SASSI	7.02	2.00	137	7.33	2.04	61	-.92, .31	-.99	196
FAM SASSI	9.04	2.01	137	9.16	1.92	61	-.72, .48	-.39	196
COR SASSI	5.12	2.69	138	5.56	2.86	61	-1.27, .39	-1.05	197
ASIQ	51.21	14.10	174	48.23	11.84	70	-.78, 6.74	1.56	242
AQ Aggreg	45.09	8.25	168	45.54	8.73	65	-2.86, 1.96	-.37	231
AQ PA	46.20	7.53	169	47.64	7.94	66	-3.63, .75	-1.30	233
AQ VA	45.89	7.59	171	46.06	7.18	66	-2.30, 1.97	-.15	235
AQ Anger	43.56	7.59	171	43.55	9.547	66	-2.89, 2.92	.01	235
AQ Hostil	51.40	10.18	170	50.20	10.27	65	-1.73, 4.13	.81	233
AQIA	44.99	9.07	170	44.02	8.95	66	-1.61, 3.56	.74	234
PCLM	30.02	13.76	104	28.83	12.87	36	-3.99, 6.36	.45	138
PAI Som	51.25	9.75	136	50.36	9.14	61	-2.02, 3.80	.60	195
PAI Anx	51.35	10.40	174	50.08	9.69	71	-1.56, 4.10	.88	243
PAI Ard	52.13	11.28	174	52.35	12.07	71	-3.41, 2.97	-.14	243
PAI Dep	57.22	13.65	174	54.34	10.74	71	-.69, 6.46	1.60	243
PAI Mania	48.05	8.88	174	48.93	10.58	71	-3.49, 1.72	-.67	243
PAI Bor	53.99	11.49	174	51.45	9.84	71	-.52, 5.61	1.64	243
PAI Anti	53.28	9.58	174	52.51	9.24	71	-1.86, 3.40	.58	243
PAI AP	52.91	13.09	174	55.03	16.11	71	-6.01, 1.77	-1.07	243
PAI DP	49.83	7.87	174	52.34	12.81	70	-5.17, .15	-1.86	242
PAI Agg	46.16	10.30	174	46.61	9.98	71	-3.28, 2.39	-.31	243
PAI SI	51.90	12.92	173	49.69	10.99	71	-1.23, 5.65	1.27	242
PAI No Sup	48.91	11.54	136	47.94	11.84	62	-2.54, 4.49	.55	196
PAI Dom	50.58	10.55	174	52.17	9.99	71	-4.47, 1.30	-1.09	243
PAI Warm	49.65	10.32	174	49.58	11.01	71	-2.85, 2.99	.05	243
PCLR	38.47	6.31	170	38.58	6.09	71	-1.85, 1.63	-.12	239
Heart Rate	73.93	11.48	171	72.21	12.56	70	-1.58, 5.02	1.02	239
Syst BP	121.92	10.31	173	122.90	10.42	71	-3.85, 1.89	-.67	242
Dias BP	76.78	8.28	173	76.90	8.31	71	-2.42, 2.18	-.10	242

* $p < .05$ (2-tailed).

** $p < .01$ (2-tailed).

*** $p < .001$ level (2-tailed).

Table 6. Results of *t*-tests and Descriptive Statistics by Violent Offense Status

	Violent			Other			t	df	
	M	SD	n	M	SD	N			
PAI RxR	47.42	11.34	88	43.41	10.29	110	.974, 7.05	2.61*	196
PCLR	39.78	6.19	126	37.10	6.01	115	1.12, 4.22	3.40**	239
PAI Stress	59.60	10.46	128	63.15	11.80	117	-6.35, -.740	-2.49*	243
PAI NonSup	46.61	11.43	88	50.20	11.56	110	-6.83, -.342	-2.18*	196
SILS	51.14	7.99	125	51.40	7.77	112	-2.29, 1.76	-.26	235
CAGE	.72	1.19	127	.53	.98	118	-.083, .46	1.36	243
SASSI	.25	.44	126	.23	.42	117	-.09, .13	.42	241
SYM SASSI	3.31	2.91	87	2.77	2.18	111	-.18, 1.30	1.48	196
OBV SASSI	4.91	1.81	87	4.90	2.25	111	-.58, .59	.02	196
SUBT SASSI	3.13	1.13	87	4.90	2.25	111	-.41, .23	-.55	196
DEF SASSI	5.71	2.20	87	5.63	2.36	111	-.56, .73	.25	196
SUPADD SASSI	7.22	2.19	87	7.04	1.87	111	-.39, .75	.63	196
FAM SASSI	9.18	1.81	87	9.00	2.10	111	-.38, .74	.65	196
COR SASSI	5.64	2.87	87	4.95	2.61	112	-.07, 1.47	1.79	197
ASIQ	49.39	13.58	127	4.95	2.61	112	-5.41, 1.42	-1.15	242
AQ Aggreg	44.82	9.04	121	45.64	7.58	112	-2.99, 1.34	-.75	231
AQ PA	47.15	8.20	122	45.64	7.58	113	-.83, 3.12	1.14	233
AQ VA	45.69	7.97	124	46.22	6.90	113	-2.45, 1.38	-.55	235
AQ Anger	43.02	10.69	124	44.15	9.55	113	-3.74, 1.47	-.86	235
AQ Hostil	50.20	10.92	122	52.01	9.30	113	-4.43, .81	-1.36	233
AQIA	44.48	8.91	123	44.97	9.20	113	-2.82, 1.83	-.42	234
PCLM	29.84	14.43	81	29.54	12.23	59	-4.29, 4.88	.13	138
PAI Som	50.05	8.59	87	51.71	10.23	110	-4.36, 1.04	-1.22	195
PAI Anx	49.96	10.20	128	52.10	10.12	117	-4.70, .42	-1.65	243
PAI Ard	51.40	11.83	128	53.07	11.10	117	-4.56, 1.22	-1.14	243
PAI Dep	54.97	12.49	128	57.94	13.25	117	-6.21, .27	-1.81	243
PAI Mania	47.61	9.92	128	49.06	8.76	117	-3.81, .91	-1.21	243
PAI Bor	51.95	10.84	128	54.68	11.20	117	-5.51, .04	-1.94	243
PAI Anti	52.94	9.90	128	53.19	9.01	117	-2.64, 2.14	-.21	243
PAI AP	54.95	15.28	128	51.96	12.41	117	-.53, 6.52	1.68	243
PAI DP	51.02	10.01	127	50.04	9.13	117	-1.44, 3.40	.80	242
PAI Agg	46.78	10.72	128	45.75	9.59	117	-1.54, 3.60	.79	243
PAI SI	50.16	12.20	128	52.47	12.57	116	-5.43, .82	-1.45	242
PAI Dom	51.66	9.49	128	50.37	11.31	117	-1.33, 3.91	.97	243
PAI Warm	49.59	10.56	128	49.67	10.48	117	-2.72, 2.58	-.05	243
Heart Rate	73.12	11.96	125	73.77	11.67	116	-3.65, 2.36	-.43	239
Syst BP	121.54	9.69	127	122.93	10.98	117	-4.00, 1.21	-1.06	242
Dias BP	76.26	7.32	127	77.42	9.18	117	-3.25, .93	-1.09	242

* $p < .05$ (2-tailed).

** $p < .01$ (2-tailed).

*** $p < .001$ level (2-tailed).

Table 7. Results of *t*-tests and Descriptive Statistics by Violent-Sexual Offense Status

	Violent Sex			Non-Violent Sex			t	df	
	M	SD	n	M	SD	n			
PCLR	40.40	6.11	67	37.76	6.15	174	.83, 4.35	2.96**	239
SILS	50.43	7.40	67	51.59	8.05	170	-3.39, 1.08	-1.02	235
CAGE	.72	1.25	69	.60	1.03	176	-1.8, .44	.82	243
SASSI	.29	.46	68	.22	.42	175	-.05, .19	1.16	241
SYM SASSI	3.82	3.07	38	2.82	2.36	160	.10, 1.89	2.20	196
OBV SASSI	4.84	1.79	38	4.92	2.13	160	-.81, .66	-.21	196
SUBT SASSI	3.08	1.17	38	3.20	1.13	160	-.53, .28	-.59	196
DEF SASSI	5.61	2.33	38	5.68	2.28	160	-.89, .74	-.18	196
SUPADD SASSI	6.92	2.32	38	7.16	1.94	160	-.96, .48	-.66	196
FAM SASSI	9.11	1.71	38	9.08	2.04	160	-.68, .74	.09	196
COR SASSI	5.68	2.91	38	5.15	2.70	161	-.44, 1.51	1.08	197
ASIQ	49.71	14.28	69	50.61	13.27	175	-4.69, 2.90	-.47	242
AQ Aggreg	44.21	8.87	67	45.62	8.15	166	-3.80, .97	-1.17	231
AQ PA	46.43	8.10	67	46.67	7.50	168	-2.42, 1.95	-.21	233
AQ VA	45.33	8.25	69	46.19	7.13	168	-2.96, 1.25	-.80	235
AQ Anger	42.86	11.36	68	43.85	9.64	168	-3.85, 1.87	-.68	235
AQ Hostil	51.12	11.37	68	51.05	9.71	167	-2.83, 2.97	.05	233
AQIA	44.87	8.80	68	44.65	9.15	168	-2.35, 2.78	.16	234
PCLM	30.14	14.97	51	29.47	12.67	89	-4.04, 5.37	.28	138
PAI Som	50.53	9.11	38	51.08	9.68	159	-3.97, 2.85	-.32	195
PAI Anx	50.19	10.35	69	51.30	10.15	176	-3.96, 1.75	-.76	243
PAI Ard	50.81	11.78	69	52.74	11.36	176	-5.14, 1.29	-1.18	243
PAI Dep	55.72	13.81	69	56.65	12.59	176	-4.54, 2.70	-.50	243
PAI Mania	47.00	9.42	69	48.81	9.35	176	-4.44, .81	-1.36	243
PAI Bor	52.97	11.87	69	53.37	10.78	176	-3.50, 2.71	-.25	243
PAI Anti	53.13	10.42	69	53.03	9.10	176	-2.55, 2.76	.08	243
PAI AP	54.42	14.54	69	53.17	13.85	176	-2.68, 5.18	.63	243
PAI DP	50.14	8.16	69	50.71	10.12	175	-3.26, 2.12	-.42	242
PAI Agg	46.71	11.64	69	46.13	9.59	176	-2.27, 3.44	.40	243
PAI SI	50.14	12.64	69	51.70	12.32	175	-5.03, 1.92	-.88	242
PAI Stress	60.72	11.18	69	61.52	11.29	176	-3.94, 2.36	-.50	243
PAI No Sup	47.00	11.24	38	48.99	11.70	160	-6.12, 2.15	-.95	196
PAI RxR	45.87	10.12	38	48.99	11.70	160	-3.06, 4.73	.42	196
PAI Dom	50.80	9.25	69	51.14	10.84	176	-3.25, 2.58	-.23	243
PAI Warm	49.25	10.41	69	49.78	10.57	176	-3.48, 2.41	-.36	243
Heart Rate	74.40	11.22	67	73.06	12.03	174	-2.00, 4.69	.79	239
Syst BP	120.22	8.86	68	122.97	10.77	176	-5.64, .14	-1.88	242
Dias BP	75.49	6.88	68	77.33	8.71	176	-4.16, .48	-1.57	242

* $p < .05$ (2-tailed).

** $p < .01$ (2-tailed).

*** $p < .001$ level (2-tailed).

Discussion

The troubling increase in crimes committed by military Service-Members and Veterans since OIF and OEF placed an onus on the military to identify contributions to this rise. Special emphasis was given to the question of whether combat experience, PTSD, or some other factor (including personality, substance use) contributed to the likelihood of an individual to commit a crime. This study explored the differences between a sample of military offenders and non-offenders in an effort to understand the factors that differentiate them. The present study used a sample from the USDB alongside a control sample of non-offending Soldiers. Between the two samples, this study compared numerous biopsychosocial factors in order to explore relationships that distinguish criminals from non-criminals and to differentiate between types of criminals.

We first compared offenders to non-offenders across all variables. We found offenders endorsed higher suicide ideation and higher levels of pathology on measures of anxiety, PTSD, somatic issues, depression, borderline personality, substance use, and psychopathy than non-offenders. That offenders would endorse higher levels of psychological disorders than a sample of current Army Soldiers is as hypothesized; these findings are similarly supported by findings from civilian and military samples (e.g., Aharoni, Antonenko, & Kiehl, 2011; Carpenter & Dobkin, 2011; Moore & Penk, 2011; Shea & Fishback, 2012). Further, a study conducted by Nystrom and Mikkelsen (2013) found that psychopathy is often related to poor coping mechanisms related to shame. Nystrom and Mikkelsen (2013) explain that individuals with psychopathy often go to great lengths to camouflage emotions of shame from themselves and others and that a key characteristic of psychopathy is externalization of emotion, which may contribute to the likelihood to commit a crime. Additionally, offenders reported more stress than non-offenders did. This finding is supported by research conducted by Binswanger, Krueger, and Steiner (2009), who found when compared to the general population, incarcerated individuals were more likely to suffer from chronic hypertension along with a number of other physical ailments including myocardial infarction, and asthma, which may be exacerbated by high levels of stress. The higher levels of stress suffered by inmates could be caused by innumerable factors, including fear of the possibility of negative personal interactions with other inmates, being housed in close proximity with others at all times, remorse for crimes committed, and distress in personal relationships with individuals outside of prison, despite ample access to mental health care and medical professionals. General strain theory is often used in an attempt to understand the stressors that are most likely to cause an individual to commit a crime. Agnew (2001) outlines that general strain theory is often thought of in terms of two types of strains, objective and subjective. Objective strains include stressors that most individuals would find unpleasant. Subjective strains are the individual's subjective, emotional and behavioral reaction to an objective strain. Agnew (2001) clarifies that because of the vast differentiation of individual responses to stressors, it is impossible to delineate which stressors, or objective strains, specifically would cause an individual to commit a crime. Despite this, Agnew (2001) cites characteristics of objective strains that are likely to incite an individual to commit a crime, such as "...when they (1) are seen as unjust, (2) are seen as high in magnitude, (3) are associated with low social control, and (4) create some pressure or incentive to engage in criminal coping" (P.326). Agnew (2001) further clarifies that the likelihood of an individual to commit a crime is dependent on the individuals' personal character, social support, and coping mechanisms than it is on any stressor. It is impossible to say whether the increased stress levels exhibited in the

offender sample existed before incarceration and precipitated a criminal act, although it is a possibility that stress or lack of appropriate stress coping mechanisms contributed to the likelihood of the individuals to commit the crime for which they are incarcerated.

Our sample of military offenders were significantly lower on a measure of intelligence than non-offenders, which parallels civilian and military findings (Booth-Kewley et al., 2010; Hirschi et al., 1977; McGloin et al., 2004) but may also relate to occupation requirement differences between our control and offender sample. A large portion of the control group participants were recruited from a Non-Commissioned Officer's Academy. The advanced nature of their roles within the Military may contribute to the disparity between the roles of the USDB population and the control group population. The MOS's of the USDB population were not reported and are unknown, as that information, combined with crime type, may have caused information to become identifiable for some high profile inmates at the USDB. Some military MOS's, including Infantry, Armor, and other similar jobs require lower cut-off scores on the Armed Services Vocational Aptitude Battery (ASVAB) than other occupations. Further, individuals in these types of MOS's may be more likely to be deployed to a combat zone and may be more likely to see and/or participate in more combat related activities including experiencing live combat and firefight that may have greater potential mental health consequences (Packnett, Gubata, Cowan, & Niebuhr, 2012; Gubata, Piccirillo, Packnett, & Cowan, 2013). Individuals in more specialized MOS's that require higher skill-levels or more specialized job-training that rely on learned knowledge and cognitive flexibility more than physical prowess may therefore be less likely to experience firefight or combat. These types of individuals likely resemble our control sample more than our experimental sample. Additionally, personalities and individual strengths may predispose some individuals to choose different roles in the military. Thus, we are not able to determine the implications of finding differences in intelligence between offenders and non-offenders, since we did not control for MOS or education level.

Non-offenders scored significantly higher than offenders on scales related to aggression, dominance, and mania, which is contrary to what was hypothesized. Higher scores of aggression and dominance in the non-prisoner sample may be attributed to the lack of control over ones' actions while in police custody or hopelessness, as they would be completing the USDB intake battery shortly after being convicted of their crime and beginning their prison sentence. Increased levels of aggression and dominance in the non-offender control group compared to offenders may also be explained by the lack of awareness of the consequences of aggressive or dominant behavior. Further, individuals in the prisoner population may be medicated to mitigate the outward display of aggression. Another possible explanation for lower scores of aggression and dominance in the USDB prisoner population may be related to the environment. These individuals may also habituate to behaving in a more submissive fashion due to the structure of the prison environment, which might include a high likelihood of consequences for aggressive behavior, and could especially be effected by a lack of control over their activities in that their activities are dictated directly by prison personnel and the orders tare received. Although the offender population likely had not experienced the prison environment for a long period at the time of intake battery completion, it is likely that they had spent time in custody prior to and during their trial. In addition, feelings or fears of unknown dangers and behavioral protocols associated with entering prison may have had an effect on lowered aggression. Also, it could be possible that highly aggressive or dangerous individuals would be isolated in a prison

environment. Further, the stresses of co-habiting in a prison environment may contribute to stress. High levels of stress is thought to increase cortisol levels, which in turn decreases testosterone levels, thereby decreasing aggression in the USDB population (Batrinos, 2012). These findings could also be due to the possibility individuals housed at the USDB may be more likely to be receiving treatment by mental health professionals than the control group and therefore may be more likely to be prescribed mood inhibitors, antidepressants that work as selective serotonin reuptake inhibitors (SSRI), or medications to ease anxiety or PTSD symptoms. Wilper et al. (2009) explain that only about 25% of prison inmates in a federal prison were prescribed a psychiatric medication at their time of arrest and that that number increased to about 69% who were medicated to treat a psychiatric condition after their arrest.

Another possible explanation for the low aggression scores in the offender sample could be related to combat experience. Earlier in this paper, we established the connection between PTSD and internalizing behaviors that include withdrawn personal connections, depression, and anxiety (Shaw et al., 1987; Magyar, Edens, Lilienfeld, Douglas, Poythress, & Skeem, 2012). Since a larger number of individuals in the offender sample reported combat exposure than in the control group (72% and 59%, respectively), the decreased aggression in offenders could possibly be due to the PTSD symptom of internalizing. Although PTSD is commonly known as a contributor to aggressive behavior, it is important to note that this study looked at the inherent personality trait of aggression, rather than behavior or incidences. It is unknown whether individuals in this sample did display aggressive behavior towards others. Another interesting possible explanation for the decreased levels of aggression measured in the offender population could be related to age. Our offender sample had a higher percentage of individuals who were over the age of 30 than our non-offender sample (52% and 44%, respectively). Research has shown correlations between increased age and decreased aggressiveness. Specifically, O'Brien, Konrath, Gruhn, and Hagen (2013) found that as age increases, empathy increases, which is at its most heightened point in middle age. Increased empathy is associated with pro-social behavior, which would indicate a decrease of aggression (Eisenberg, Eggum, & Di Giunta, 2010). Thus, there may be several explanations for why the offender sample reported less aggressive tendencies than the non-offenders.

As mentioned above, our results indicated that the offender sample endorsed higher levels of suicidal ideation, pathology including PTSD, depression, anxiety, substance use, somatic issues, and psychopathy. Although it is unknown whether our sample displayed these symptoms prior to combat experience or if these symptoms were exacerbated by combat experience, literature indicates that combat experience may play a role in the likelihood of a SM to display some of these symptoms. For instance, studies in the recent past have linked the likelihood of antisocial behavior to combat exposure (Hartl et al., 2005; McFall et al., 1999; Miller et al., 2003; Miller et al., 2004). Studies have also linked anxiety and PTSD to combat exposure (Moore & Penk, 2011; Thompson, 2007; Tanielian & Jaycox, 2008; Hoge et al., 2004). Also, in line with our hypotheses, our results indicated that between offenders with and without combat experience, offenders with combat experience endorsed slightly higher scores than offenders without combat experience. Woodhead et al. (2011) found that combat exposure contributes to the likelihood of substance use. The long-term implications of these symptoms could be recidivism or an increased likelihood to repeat illegal behavior. This is supported by research findings that indicate that individuals with PTSD were shown to have decreased functioning in the Anterior Cingulate Cortex (ACC) area of the brain, which has been associated

with the symptoms described above and has been linked to recidivism in a criminal population (Bush, Luu, & Posner, 2000; Devinsky et al., 1995).

In reference to our hypothesis that the offender population would endorse higher levels of substance abuse, our results confirm this. Our offender group displayed significantly higher scores on scales of alcohol problems than non-offenders. Our offender group also endorsed significantly higher scores on scales of drug problems, as hypothesized. For endorsement of drug problems, there was no significant difference between offenders with and without combat experience. These differences between offenders and non-offenders mirror previous research. Specifically, as explored earlier in this paper, Carpenter and Dobkin (2011) explain alcohol is often a precursor to criminal behavior. Studies have shown alcohol use increases mood and may increase impulsivity and aggressive behavior. Further, Fazel et al. (2015) found when an individual arrested for a crime suffers from depression, which was discussed earlier as a likely factor in the commission of a crime, they are five times more likely to have consumed alcohol prior to committing a violent crime and four times more likely to have consumed drugs.

Non-offenders also scored significantly higher on the treatment rejection scale. The treatment rejection scale score refers to the likelihood of an individual to recognize some problem or issue within themselves and present a willingness to change. Higher scores indicate a higher likelihood the individual will reject treatment, have a lack of awareness or acknowledgement of faults or the presence of mental health issues, and have a lack of internal motivation to change (Edens & Ruiz, 2009). Lower scores on scales of treatment rejection in the prisoner population of this study could be attributed to the notion that individuals in the prisoner population may acknowledge their personal issues as they have directly confronted their wrongdoings by facing criminal charges and are currently facing punishment. These individuals may also be required to receive mental health treatment where they could be pressured to acknowledge their mental health issues and in the pursuit of correcting them. On the other hand, some offenders may be in denial about their wrongdoings or may equate accepting their actions to admitting to their crimes.

We also found non-offenders were likely to have higher scores on the Mania, Aggression, and Treatment Rejection scales of the PAI. However, participant scores were within a normal range. These findings appear to describe an individual one would expect to find within our control population, which was mostly recruited through an NCO Academy. Moreover, it may be expected for a group of Army Soldiers to have a certain level of testosterone, mental and physical fitness, and motivation to protect and defend, which may contribute to these effects.

When comparing SM with and without combat experience, we found significant differences in severity levels of PTSD symptoms and intelligence. Specifically, those with combat experience reported higher levels of posttraumatic symptoms. Although posttraumatic symptoms can develop after a variety of events, it is unsurprising to see those with combat experience reported higher levels of posttraumatic symptoms. This finding correlated with our hypothesis and with previous research. For instance, one study examined neurocognitive functioning in a group of Soldiers prior to deployment and measured PTSD symptoms following deployment to Iraq (Marx, Doron-Lamarca, Proctor, & Vasterling, 2009). Marx et al. (2009) found individuals with higher visual processing abilities prior to deployment were less likely to experience PTSD; they speculated that this is because individuals with higher visual processing

abilities were better able to visualize traumatic imagery increasing the likelihood of developing coping mechanisms to deal with said traumatic imagery. Another study examined records on over 3,000 Soldiers who were deployed to Vietnam with emphasis on ASVAB scores as well as pre- and post-deployment mental health issues, drug and alcohol use, and post deployment PTSD symptoms, which included a structured interview when the participants reached middle age (Gale et al., 2008). Gale et al. (2008) found that individuals who scored lower on tests of cognitive ability were more likely to have experienced drug or alcohol abuse at some point post-deployment, but not necessarily at the time the study took place. In the present study, those with combat experience scored lower on a test of intelligence than those who had not seen combat. Although the reason for this difference is not immediately clear, we speculate that differences in the requirements for different MOS's may play a role, as previously discussed. It is also possible that lower intelligence scores in those who have seen combat is a reflection of traumatic brain injury symptoms such as cognitive impairment, which also tend to be higher in those with combat exposure, and specifically in those with MOS's that may require more physical prowess and perhaps lower scores on the ASVAB, as previously discussed (Packnett et al., 2012; Gubata et al., 2013).

The comparison of criminality and combat experience provided a variety of interesting differences. These results showed a similar pattern of significance as the offender to non-offender comparison, suggesting that offender status may play a large role in explaining group differences even when combat exposure status is considered. It is evident military offenders at the USDB, especially those with combat experience, are more likely to experience higher levels of psychological distress than non-offending Soldiers, though none of the median scores met clinical diagnostic thresholds. Thus overall, the offender group was not as a whole in a state of clinical concern; this is perhaps a reassuring fact, given the medical attention these individuals receive before, during, and after their trials. Individuals with combat experience were more likely to endorse higher levels posttraumatic stress symptoms. Symptoms that could be related to posttraumatic stress and that were more likely to be endorsed by those with combat exposure include anxiety, depression, suicidal ideation, somatic complaints, stress, and posttraumatic symptoms, which coincides with our hypothesis that offenders with combat experience would display higher levels of mental health distress, across a variety of symptoms. It is unclear how much of this distress may be explained as a result of incarceration itself or from experiences prior to their incarceration; however, it is reasonable to assume, based on other literature on criminality, that much of the psychological pathology existed before and perhaps may have contributed to the criminal offense (e.g., Peterson et al., 2014). Although previous research has found that PTSD is not a predictor of criminality (Shaw et al., 1987), our study found that mental health issues related to posttraumatic stress in the offender sample who had combat experience is significant in the context of preventing future crime with improved post-deployment mental health care. Although it is possible that some mental health problems could have existed prior to deployment, which may contribute to criminality, it is apparent that offenders who suffered from high levels of posttraumatic stress and who had combat experience would benefit from increased mental health care. Future research in this area should look specifically at the coping skills of the offender population as well as social and familial aspects of the individuals to gain a better understanding of how to equip Soldiers with improved coping mechanisms and to strengthen mental health.

Within our prison sample, violent offenders scored significantly higher than other offenders on treatment rejection and psychopathy, but lower on stress and lack of support. The incidence of lower levels of stress in the offender sample could be explained by the results of research studies that have found that individuals who score high in psychopathology typically respond to social and/or environmental cues in a muted fashion due to an insufficient response system of the amygdala within the brain (Lovallo, 2012; Lovallo, 2005). Past research on this topic has had mixed findings. One study explored stress responses in individuals who scored high on measures of antisocial tendencies (McCann & Lussier, 2008). They found that individuals who display antisocial psychopathy had a significantly lower physiological stress response when tested for stress. McCann and Lussier (2008) indicate these findings are due to the decreased amount of grey matter present in the brains of individuals who are high in psychopathy and that there was a correlation between the amount of grey matter present, the level of psychopathy, and the decreased stress response through skin conductance. In contrast to McCann and Lussier, a study conducted by Cima, Smeets, and Jelicic (2008), which compared cortisol levels with crime type and a number of mental health factors, found psychopathic inmates who had experienced sexual abuse as children (making them more likely to have committed a sex-related crime, according to Jespersen, Lalumiere and Seto [2009]) were more likely to experience high stress compared to psychopathic inmates who did not experience such abuse. The findings of Jespersen et al. (2009) also found sexual offenders were more likely than non-sexual offenders to have been victims of sexual abuse in the past. That said, the literature indicates individuals who are high in psychopathy are likely to experience lower levels of stress than individuals low in psychopathy (Lovallo, 2012; Lovallo, 2005), except when the individual is a sexual offender, wherein the individual would possibly have a higher stress response (Cima et al., 2008). Our results indicated offenders who were convicted of non-violent sexual crimes scored higher on measures of stress than individuals who were convicted of violent sexual crimes, but not significantly so. If the violent offense was related to a tendency towards impulsivity, it might explain why these individuals scored higher on psychopathy and rejected treatment (or the need thereof) for their problems. Violent offenders were more often under the age of 25 (34% versus 21% of nonviolent offenders). Sexual offenders were found to be significantly older and scored higher on measures of stress than other types of offenders. Sexual offenders also scored lower on measures of treatment rejection than offenders who were not convicted of a sex-related crime, indicating that they are more likely to accept treatment for mental health issues and to acknowledge or attempt to change negative thinking and/or behavioral patterns. Finally, those who were incarcerated for a violent, sexual crime scored higher than all other offenders on psychopathy measures. This difference could be due to differences in the levels of psychopathy between violent, sexual offenders and non-violent, non-sex offenders. These findings also confirm our hypothesis that there would be a distinguishable difference between violent and sexual offenders compared to other offenders. Overall, both trait- and state-dependent factors delineated crime types in our sample: psychopathic traits, which are associated with violent behavior, and stress and lack of support, which may signify poor coping mechanisms. These findings mirror predictors of civilian criminality.

Limitations

Our study has several limitations worth noting. We cannot be certain of the representativeness of our sample. It is easy to imagine that many crimes have been committed but not successfully prosecuted, plea-bargained to avoid conviction, or have not been prosecuted

at all. It is also possible some individuals housed at the USDB may have been wrongly convicted and are innocent. Given the difficult nature of obtaining data from a verifiable criminal population, a convenience sample of archival de-identified prisoner data was utilized, with incarceration used as a measure of criminality. The design of the study also assumes non-incarcerated subjects are not a criminal population, even though control subjects may have committed crimes in the past or may have committed unpunished or undisclosed crimes. To minimize the effects of this limitation, we informed potential subjects before consent that a history of incarceration was an exclusionary factor, and any potential participant who met this exclusionary criterion was asked to exclude themselves. As a secondary measure, we included a direct question about incarceration history in the demographic surveys and excluded any individual who indicated a prior arrest or incarceration. As a tertiary measure, we also included a subtle screening of likely incarceration in the clinical variables (i.e., the Substance Abuse Subtle Screening Inventory – Correctional Score) and excluded those individuals who scored above the threshold score of 10 or more. This score measures the extent to which a respondent's answers are similar to those of a person with a relatively extensive history of problems with the legal system (Clements, 2002). This measure is not face-valid; therefore, responses are less likely to be false or exaggerated. Subjects in the non-criminal group who were statistical outliers on this item (indicating a high level of past criminal activities) were not included in the analysis. Thus, we attempted to address this potential limitation by using the three methods described.

Archival data naturally limits the ability to systematically control data collection procedures, and insuring the privacy of a vulnerable sample meant minimizing the amount of descriptive data available for analysis. The use of prisoner data required multiple safeguards to ensure the prisoners were not exploited or placed at any elevated risk as a result of the study. To minimize risk, all identifiable data was removed from archival records by authorized USDB mental health staff prior to its transfer to study investigators, and therefore the number of potentially confounding variables not included as controlled covariates was reduced. Interval age data was transformed to categorical age groups, which also limits the number of appropriate analysis procedures that can be utilized with the data, but protects subjects' privacy. We believe our sampling and analysis were the best option available given the concerns of subject privacy and the sensitive nature of the study population.

The study is also limited in that our target group (offenders) is located at the USDB, which houses only male inmates, so female offenders were excluded. However, this is typical with studies of criminality, especially of military studies. Literature also shows women are less likely to be incarcerated than males, and there is likely a much smaller proportion of women committing and/or being accused of crimes than men (e.g., Rosellini et al., 2015). As this was a preliminary study examining correlations in an offender sample, male prisoners were the focus of our study. The USDB houses individuals with sentences of 10 years or more, meaning we did not look at offenders with shorter sentences. Finally, our control group is not without limitations as well, as control group data was collected in a convenience-style through local recruitment at one military post. Our control sample is not representative of the entire Army in its proportion of Warrant Officers, Officers, Non-Commissioned Officers, and Enlisted Soldiers. Given our interest in the psychosocial factors influencing criminality, though, we do not expect that any skewedness in our control sample's demographics would affect the relationships we found. However, future research would benefit from considering a control sample from a more varied selection of job roles and military occupations. Future research might also benefit from matching

MOS of the control and experimental groups. As discussed previously, due to the possibility of identifying individuals housed at the USDB by examining MOS and crime type, MOS was not examined.

Our study also has limitations with regard to the analysis procedures for comparing offender status to combat experience. Because our hypotheses concerning differences in traits between offender and combat status were exploratory, we did not have planned contrasts and instead elected for pairwise comparisons. The results of the pairwise comparisons were not notably different from the results of nonparametric analyses, thus for ease and simplicity we chose to report the pairwise follow-ups. Our data was mostly normal but due to the high number of variables, a few perhaps would have been better suited for nonparametric analysis. The findings should be interpreted with this fact in mind. Had we proceeded with planned contrasts following the Kruskal-Wallis tests, it would have been difficult to minimize the inflation of error from performing so many tests. Hence, we chose to report the ANOVA results with subsequent main and interaction effects in order to reduce Type I error. There are certain cautions that should be made concerning the applicability of our findings. Because of our specific military population, it is difficult to generalize these results to civilian populations. In some ways, it is also difficult to certainly generalize our findings to other military inmate samples, given that our sample came from a site with specific rules and restrictions regarding the inmates it accepts. Nevertheless, our study is able to provide new information on some of the factors that distinguish military criminal populations.

Our study design does not support an interpretation into the predictors of criminal behavior, but rather explores factors that differentiate between offenders and non-offenders. Based on the findings of our study, future research to consider predictor variables for incarceration with and without combat experience based on the factors we have identified to relate to criminality is an important next step in exploring the propensity to commit crime. Heart rate and blood pressure data was collected but not analyzed in this report because it was beyond the scope of this initial, exploratory analysis. Future studies should consider this physiological data, particularly in how it may correlate with self-report measures. To the same end, this rich dataset from a unique, military prison sample presents further opportunities to explore psychosocial and diagnostic characteristics in a military sample. For example, it may be worthwhile to consider differences between all prisoner offense categories, namely, Violent, Sexual, Property, Drug, Public Order, Military, and Other.

Conclusion

The implications of this research are that individual characteristics appear to be associated with the likelihood to commit a crime in our military sample. Examining these characteristics in unison helps to describe the potential causes and contributing factors associated with criminal, deviant, and risky behaviors of military SMs. It is important to consider both the psychosocial similarities and differences when comparing associations within military samples to patterns found in civilian samples as well. Although our study was not designed to determine whether any factors cause criminality or directly increase the risk of criminal behaviors, we are still able to distinguish certain factors are specifically associated with criminality in our sample. The results of this study provide practical information on areas to increase focus and emphasize early intervention and/or treatment efforts. Specifically, it asserts the importance of Army-wide

if not DoD-wide training and support in particular areas of concern such as stress, substance use, and PTSD symptoms. Treating substance abuse and PTSD may decrease the psychological distress in individuals, and, based on these findings, may also reduce their likelihood to commit a crime. Future research should explore temporal relationships between the variables we explored, since causal findings have the potential to inform mental health screenings, recruitment, and identification of associated traits, pre-crime. Though we can only speculate on the directionality of these results, they nevertheless highlight the value in promoting healthy coping skills, stress management, distress tolerance, and social support networks. The results of this study garnered many key differences between the offender and non-offender populations examined. Most notably, these differences may help to understand the effects of combat experience, mental illness and the interaction between the two in SMs. The findings of this study that indicate that offenders and non-offenders report different levels of distress, psychological pathology, and personality characteristics may be informative for directing and focusing future research on the predictors of criminal propensity in the military. These findings may also be informative for military health providers in optimizing mental health care to SMs and Veterans who may become more aware of the risk factors for propensity to commit a crime or violent act and provide strategies of circumvention. These findings may also be informative for readers who may or may not be related or acquainted with a SM in that they might be more keen to recognize the characteristics that increase the likelihood to commit a crime or violent act. Further, the results of this research may encourage those associated with SMs and their families to seek mental health treatment prior to a potentially criminal act.

Future research in this area should include replications of this study. It would be beneficial to conduct longitudinal studies examining individuals before and after deployment as well as later in life to determine if they had become incarcerated to examine individuals who commit crimes post-military service to identify whether the characteristics identified in the USDB population mirror those individuals. It would be interesting to examine differences in the likelihood of criminality across MOS and rank to explore further the factors associated with socioeconomic status, intelligence, and criminality. It would also be beneficial to explore the variables used in this study over multiple periods of time during incarceration to examine the characteristics of offenders over time as well as before and after receiving mental health treatment. This type of study could also help to determine the efficacy of USDB mental health services and/or which mental health services are most beneficial to individuals of varying characteristics.

The overall findings of our study provide evidence offenders experience significantly more psychological distress, especially those with combat experience. However, we are not fully able to determine whether this distress existed prior to military service or prior to deployment. Future research would benefit from an examination of premorbid factors that we found to relate to criminality when explored post-incarceration. In particular, a past history of trauma prior to military service, personality traits including scales of borderline personality disorder, antisocial personality disorder, psychopathic traits, and pre-military substance use problems may put Soldiers at great risk of later offending, before and especially after they experience combat. It is also important to weigh the impact that this distress has on the individual, and to consider whether the distress is thought to contribute to an individual's propensity toward criminal behavior. We observed elevations in borderline personality and psychopathic traits in our sample, which we speculate were likely demonstrated by the individual prior to beginning their

military service. Whether those traits were exacerbated by military experiences, though, is beyond the scope of our study.

This study is intended to contribute to the body of knowledge and may impact not only future research, but positive outcomes for SMs and Veterans. This study examined psychosocial differences between a sample of USDB Military inmates and a control group of SMs without histories of incarcerations the differences between those who reported combat experience and those without combat experience. The main findings of this study were that between the USDB population and the control group, the inmates were more likely to have had combat experience, score higher on levels of posttraumatic stress, score lower overall on intelligence, score lower on scales of aggression and dominance, and to score lower on scales of treatment rejection and mania. Between those with and without combat experience, we found those with combat experience, across both offender and non-offender groups scored lower on intelligence and scored higher on levels of PTSD. In the offender sample, those with combat experience were found to be more likely to suffer from depression, anxiety, among other mental health issues. Also, in our control sample, those with combat experience were most likely to display higher levels of treatment rejection and dominance. We believe the findings of this study build on the body of knowledge related to criminality in military populations and should contribute to future research by laying an exploratory groundwork. The differences and similarities we found in our control and USDB sample between those with and without combat experience may be most notable and translatable to military mental health in that these characteristics could possibly contribute to mental health training and/or training in mental health post-combat.

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Appendix A. Study Materials

Participant Demographic Questionnaire

Please answer the following questions to the best of your ability. If you have any questions about these items, please feel free to ask a member of the research team for assistance. The questionnaires will be kept secure and confidential, and your name and information will NOT be kept with this form.

1) What is your current age? (Please circle an answer below)

18-24 years 25-29 years 30-34 years 35-39 years 40-44 years 45-49 years 50
years or older

2) Have you ever been deployed to a combat zone as a military service person?

Yes

No

3) Have you ever been incarcerated? (Please circle an answer below)

Yes

No

4) If you answered “yes” to Question 3, please feel free to provide any comments or explanations here

(Your response to this question is optional):

Medical Variable Collection Sheet

Heart Rate and Blood Pressure Information should be collected only by authorized research team members on the study protocol (Principal Investigators, Associate Investigators, or Research Technicians). Please document participant medical variables here in the appropriate places. If you have any questions about the collection or documentation of these medical variables, please contact CPT Stephanie Traynham (334-255-6823).

Subject Number	
Date of Collection	
Subject Heart Rate	
Subject Blood Pressure	

Please keep this form with the subject data folder (NOT with the subject consent form or HIPAA authorization form). Thank you!

ASIQ

Which of these thoughts have you had in the LAST MONTH.

This thought was in my mind.	Nearly every day	Couple of times a week	About once a week	Couple of times a month	About once a month	Had this thought before, not in past month	I never had this thought
1 I thought it would be better if I was not alive	A	B	C	D	E	F	G
2 I thought about killing myself	A	B	C	D	E	F	G
3 I thought about how I would kill myself	A	B	C	D	E	F	G
4 I thought about when I would kill myself	A	B	C	D	E	F	G
5 I thought about how to write a suicide note	A	B	C	D	E	F	G
6 I thought about telling people I plan to kill myself	A	B	C	D	E	F	G
7 I thought people would be happier if I was not around	A	B	C	D	E	F	G
8 I thought about how people would feel if I killed myself	A	B	C	D	E	F	G
9 I wished I were dead	A	B	C	D	E	F	G
10 I thought about how easy it would be to end it all	A	B	C	D	E	F	G
11 I thought that killing myself would solve my problems	A	B	C	D	E	F	G
12 I thought that others would be better off if I was dead	A	B	C	D	E	F	G
13 I wished I had the nerve to kill myself	A	B	C	D	E	F	G
14 I wished that I had never been born	A	B	C	D	E	F	G
15 I thought if I had the chance I would kill myself	A	B	C	D	E	F	G
16 I thought about ways people kill themselves	A	B	C	D	E	F	G
17 I thought about killing myself, but would not do it	A	B	C	D	E	F	G
18 I thought about having a bad accident	A	B	C	D	E	F	G
19 I thought that life was not worth living	A	B	C	D	E	F	G
20 I thought that my life was too rotten to continue	A	B	C	D	E	F	G
21 I thought that the only way to be noticed was to kill myself	A	B	C	D	E	F	G
22 I thought that if I killed myself people would realize I was worth caring about	A	B	C	D	E	F	G
23 I thought that no one cared if I lived or died	A	B	C	D	E	F	G
24 I wondered if I had the nerve to kill myself	A	B	C	D	E	F	G
25 I thought that if things did not get better I would kill myself	A	B	C	D	E	F	G

Hare PCL-R 2nd Edition

Circle the appropriate rating to the left of each item if you or anyone who knows you would describe you or your behavior as the following.

No	Maybe	Yes	Omit	
0	1	2	x	1. Glibness/Superficial Charm
0	1	2	X	2. Grandiose Sense of Self Worth
0	1	2	X	3. Need for Stimulation/Proneness to Boredom
0	1	2	X	4. Pathological Lying
0	1	2	X	5. Conning/Manipulative
0	1	2	X	6. Lack of Remorse or Guilt
0	1	2	X	7. Shallow Affect
0	1	2	X	8. Callous/Lack of Empathy
0	1	2	X	9. Parasitic Lifestyle
0	1	2	X	10. Poor Behavioral Controls
0	1	2	X	11. Promiscuous Sexual Behavior
0	1	2	X	12. Early Behavioral Problems
0	1	2	X	13. Lack of Realistic/Long-Term Goals
0	1	2	X	14. Impulsivity
0	1	2	X	15. Irresponsibility
0	1	2	X	16. Failure to Accept Responsibility for Own Actions
0	1	2	X	17. Many Short-Term Marital Relationships*
0	1	2	X	18. Juvenile Delinquency**
0	1	2	X	19. Revocation of Conditional Release**
0	1	2	X	20. Criminal versatility***

INSTRUCTIONS

Read each statement and decide whether it is an accurate statement about you.

- If the statement is **FALSE, NOT AT ALL TRUE**, circle **F**.
- If the statement is **SLIGHTLY TRUE**, circle **ST**.
- If the statement is **MAINLY TRUE**, circle **MT**.
- If the statement is **VERY TRUE**, circle **VT**.

Give **your own opinion** of yourself. Be sure to answer every statement. Erase completely any answer you wish to change. Begin with the first statement and respond to every statement.

- | | |
|--|---|
| <p>1. My friends are available if I need them. F ST MT VT</p> <p>2. I have some inner struggles that cause problems for me. F ST MT VT</p> <p>3. My health condition has restricted my activities. F ST MT VT</p> <p>4. I am so tense in certain situations that I have great difficulty getting by. F ST MT VT</p> <p>5. I have to do some things a certain way or I get nervous. F ST MT VT</p> <p>6. Much of the time I'm sad for no real reason. F ST MT VT</p> <p>7. Often I think and talk so quickly that other people cannot follow my train of thought. F ST MT VT</p> <p>8. Most of the people I know can be trusted. F ST MT VT</p> <p>9. Sometimes I cannot remember who I am. F ST MT VT</p> <p>10. I have some ideas that others think are strange. F ST MT VT</p> <p>11. I was usually well-behaved at school. F ST MT VT</p> <p>12. I've seen a lot of doctors over the years. F ST MT VT</p> <p>13. I'm a very sociable person. F ST MT VT</p> <p>14. My mood can shift quite suddenly. ... F ST MT VT</p> <p>15. Sometimes I feel guilty about how much I drink. F ST MT VT</p> <p>16. I'm a "take charge" type of person. ... F ST MT VT</p> <p>17. My attitude about myself changes a lot. F ST MT VT</p> <p>18. People would be surprised if I yelled at someone. F ST MT VT</p> <p>19. My relationships have been stormy. F ST MT VT</p> <p>20. At times I wish I were dead. F ST MT VT</p> <p>21. People are afraid of my temper. F ST MT VT</p> | <p>22. Sometimes I use drugs to feel better. ... F ST MT VT</p> <p>23. I've tried just about every type of drug. F ST MT VT</p> <p>24. Sometimes I let little things bother me too much. F ST MT VT</p> <p>25. I often have trouble concentrating because I'm nervous. F ST MT VT</p> <p>26. I often fear I might slip up and say something wrong. F ST MT VT</p> <p>27. I feel that I've let everyone down. F ST MT VT</p> <p>28. I have many brilliant ideas. F ST MT VT</p> <p>29. Certain people go out of their way to bother me. F ST MT VT</p> <p>30. I just don't seem to relate to people very well. F ST MT VT</p> <p>31. I've borrowed money knowing I wouldn't pay it back. F ST MT VT</p> <p>32. Much of the time I don't feel well. F ST MT VT</p> <p>33. I often feel jittery. F ST MT VT</p> <p>34. I keep reliving something horrible that happened to me. F ST MT VT</p> <p>35. I hardly have any energy. F ST MT VT</p> <p>36. I can be very demanding when I want things done quickly. F ST MT VT</p> <p>37. People usually treat me pretty fairly. F ST MT VT</p> <p>38. My thinking has become confused. F ST MT VT</p> <p>39. I get a kick out of doing dangerous things. F ST MT VT</p> <p>40. My favorite poet is Raymond Kertezc. F ST MT VT</p> <p>41. I like being around my family. F ST MT VT</p> <p>42. I need to make some important changes in my life. F ST MT VT</p> <p>43. I've had illnesses that my doctors could not explain. F ST MT VT</p> <p>44. I can't do some things well because of nervousness. F ST MT VT</p> |
|--|---|

F = FALSE, NOT AT ALL TRUE,	ST = SLIGHTLY TRUE,	MT = MAINLY TRUE,	VT = VERY TRUE
45. I have impulses that I fight to keep under control.	F	ST	MT VT
46. I've forgotten what it's like to feel happy.	F	ST	MT VT
47. I take on so many commitments that I can't keep up.	F	ST	MT VT
48. I have to be alert to the possibility that people will be unfaithful.	F	ST	MT VT
49. I have visions in which I see myself forced to commit crimes.	F	ST	MT VT
50. Other people sometimes put thoughts into my head.	F	ST	MT VT
51. I've deliberately damaged someone's property.	F	ST	MT VT
52. My health problems are very complicated.	F	ST	MT VT
53. It's easy for me to make new friends.	F	ST	MT VT
54. My moods get quite intense.	F	ST	MT VT
55. I have trouble controlling my use of alcohol.	F	ST	MT VT
56. I'm a natural leader.	F	ST	MT VT
57. Sometimes I feel terribly empty inside.	F	ST	MT VT
58. I tell people off when they deserve it.	F	ST	MT VT
59. I want to let certain people know how much they've hurt me.	F	ST	MT VT
60. I've thought about ways to kill myself.	F	ST	MT VT
61. Sometimes my temper explodes and I completely lose control.	F	ST	MT VT
62. People have told me that I have a drug problem.	F	ST	MT VT
63. I never use drugs to help me cope with the world.	F	ST	MT VT
64. Sometimes I'll avoid someone I really don't like.	F	ST	MT VT
65. It's often hard for me to enjoy myself because I am worrying about things.	F	ST	MT VT
66. I have exaggerated fears.	F	ST	MT VT
67. Sometimes I think I'm worthless.	F	ST	MT VT
68. I have some very special talents that few others have.	F	ST	MT VT
69. Some people do things to make me look bad.	F	ST	MT VT
70. I don't have much to say to anyone.	F	ST	MT VT
71. I'll take advantage of others if they leave themselves open to it.	F	ST	MT VT
72. I suffer from a lot of pain.	F	ST	MT VT
73. I worry so much that at times I feel like I am going to faint.	F	ST	MT VT
74. Thoughts about my past often bother me while I'm thinking about something else.	F	ST	MT VT
75. I have no trouble falling asleep.	F	ST	MT VT
76. I get quite irritated if people try to keep me from accomplishing my goals.	F	ST	MT VT
77. I seem to have as much luck in life as others do.	F	ST	MT VT
78. My thoughts get scrambled some-times.	F	ST	MT VT
79. I do a lot of wild things just for the thrill of it.	F	ST	MT VT
80. Sometimes I get ads in the mail that I don't really want.	F	ST	MT VT
81. If I'm having problems, I have people I can talk to.	F	ST	MT VT
82. I need to change some things about myself, even if it hurts.	F	ST	MT VT
83. I've had numbness in parts of my body that I can't explain.	F	ST	MT VT
84. Sometimes I am afraid for no reason.	F	ST	MT VT
85. It bothers me when things are out of place.	F	ST	MT VT
86. Everything seems like a big effort.	F	ST	MT VT
87. Recently I've had much more energy than usual.	F	ST	MT VT
88. Most people have good intentions.	F	ST	MT VT
89. Since the day I was born, I was destined to be unhappy.	F	ST	MT VT
90. Sometimes it seems that my thoughts are broadcast so that others can hear them.	F	ST	MT VT
91. I've done some things that weren't exactly legal.	F	ST	MT VT
92. It's a struggle for me to get things done with the medical problems I have.	F	ST	MT VT
93. I like to meet new people.	F	ST	MT VT
94. My mood is very steady.	F	ST	MT VT
95. There have been times when I've had to cut down on my drinking.	F	ST	MT VT
96. I would be good at a job where I tell others what to do.	F	ST	MT VT

F = FALSE, NOT AT ALL TRUE,		ST = SLIGHTLY TRUE,	MT = MAINLY TRUE,	VT = VERY TRUE
97. I worry a lot about other people leaving me.	F	ST	MT	VT
98. When I get mad at other drivers on the road, I let them know.	F	ST	MT	VT
99. People once close to me have let me down.	F	ST	MT	VT
100. I've made plans about how to kill myself.	F	ST	MT	VT
101. Sometimes I'm very violent.	F	ST	MT	VT
102. My drug use has caused me financial strain.	F	ST	MT	VT
103. I've never had problems at work because of drugs.	F	ST	MT	VT
104. I sometimes complain too much.	F	ST	MT	VT
105. I'm often so worried and nervous that I can barely stand it.	F	ST	MT	VT
106. I get very nervous when I have to do something in front of others.	F	ST	MT	VT
107. I don't feel like trying anymore.	F	ST	MT	VT
108. My plans will make me famous someday.	F	ST	MT	VT
109. People around me are faithful to me.	F	ST	MT	VT
110. I'm a loner.	F	ST	MT	VT
111. I'll do most things if the price is right.	F	ST	MT	VT
112. I am in good health.	F	ST	MT	VT
113. Sometimes I feel dizzy when I've been under a lot of pressure.	F	ST	MT	VT
114. I've been troubled by memories of a bad experience for a long time.	F	ST	MT	VT
115. I rarely have trouble sleeping.	F	ST	MT	VT
116. Sometimes I get upset because others don't understand my plans.	F	ST	MT	VT
117. I've given a lot, but I haven't gotten much in return.	F	ST	MT	VT
118. Sometimes I have trouble keeping different thoughts separate.	F	ST	MT	VT
119. My behavior is pretty wild at times.	F	ST	MT	VT
120. My favorite sports event on television is the high jump.	F	ST	MT	VT
121. I spend most of my time alone.	F	ST	MT	VT
122. I need some help to deal with important problems.	F	ST	MT	VT
123. I've had episodes of double vision or blurred vision.	F	ST	MT	VT
124. I'm not the kind of person who panics easily.	F	ST	MT	VT
125. I can relax even if my home is a mess.	F	ST	MT	VT
126. Nothing seems to give me much pleasure.	F	ST	MT	VT
127. At times my thoughts move very quickly.	F	ST	MT	VT
128. I usually assume people are telling the truth.	F	ST	MT	VT
129. I think I have three or four completely different personalities inside of me.	F	ST	MT	VT
130. Others can read my thoughts.	F	ST	MT	VT
131. I used to lie a lot to get out of tight situations.	F	ST	MT	VT
132. My medical problems always seem to be hard to treat.	F	ST	MT	VT
133. I am a warm person.	F	ST	MT	VT
134. I have little control over my anger.	F	ST	MT	VT
135. My drinking seems to cause problems in my relationships with others.	F	ST	MT	VT
136. I have trouble standing up for myself.	F	ST	MT	VT
137. I often wonder what I should do with my life.	F	ST	MT	VT
138. I'm not afraid to yell at someone to get my point across.	F	ST	MT	VT
139. I rarely feel very lonely.	F	ST	MT	VT
140. I've recently been thinking about suicide.	F	ST	MT	VT
141. Sometimes I smash things when I'm upset.	F	ST	MT	VT
142. I never use illegal drugs.	F	ST	MT	VT
143. I sometimes do things so impulsively that I get into trouble.	F	ST	MT	VT
144. Sometimes I'm too impatient.	F	ST	MT	VT
145. My friends say I worry too much.	F	ST	MT	VT
146. I'm not easily frightened.	F	ST	MT	VT
147. I can't seem to concentrate very well.	F	ST	MT	VT
148. I have accomplished some remarkable things.	F	ST	MT	VT
149. Some people try to keep me from getting ahead.	F	ST	MT	VT
150. I don't feel close to anyone.	F	ST	MT	VT
151. I can talk my way out of just about anything.	F	ST	MT	VT

F = FALSE, NOT AT ALL TRUE,		ST = SLIGHTLY TRUE,	MT = MAINLY TRUE,	VT = VERY TRUE
152. I seldom have complaints about how I feel physically.	F	ST	MT	VT
153. I can often feel my heart pounding.	F	ST	MT	VT
154. I can't seem to get over something from my past.	F	ST	MT	VT
155. I've been moving more slowly than usual.	F	ST	MT	VT
156. I have great plans and it irritates me that people try to interfere.	F	ST	MT	VT
157. People don't appreciate what I've done for them.	F	ST	MT	VT
158. Sometimes it feels as if somebody is blocking my thoughts.	F	ST	MT	VT
159. If I get tired of a place, I just pick up and leave.	F	ST	MT	VT
160. Most people would rather win than lose.	F	ST	MT	VT
161. Most people I'm close to are very supportive.	F	ST	MT	VT
162. I'm curious why I behave the way I do.	F	ST	MT	VT
163. There have been times when my eyesight got worse and then better again.	F	ST	MT	VT
164. I am a very calm and relaxed person.	F	ST	MT	VT
165. People say that I'm a perfectionist.	F	ST	MT	VT
166. I've lost interest in things I used to enjoy.	F	ST	MT	VT
167. My friends can't keep up with my social activities.	F	ST	MT	VT
168. People generally hide their real motives.	F	ST	MT	VT
169. People don't understand how much I suffer.	F	ST	MT	VT
170. I've heard voices that no one else could hear.	F	ST	MT	VT
171. I like to see how much I can get away with.	F	ST	MT	VT
172. I've had only the usual health problems that most people have.	F	ST	MT	VT
173. It takes me a while to warm up to people.	F	ST	MT	VT
174. I've always been a pretty happy person.	F	ST	MT	VT
175. Drinking helps me get along in social situations.	F	ST	MT	VT
176. I feel best in situations where I am the leader.	F	ST	MT	VT
177. I can't handle separation from those close to me very well.	F	ST	MT	VT
178. I always avoid arguments if I can.	F	ST	MT	VT
179. I've made some real mistakes in the people I've picked as friends.	F	ST	MT	VT
180. I have thought about suicide for a long time.	F	ST	MT	VT
181. I've threatened to hurt people.	F	ST	MT	VT
182. I've used prescription drugs to get high.	F	ST	MT	VT
183. When I'm upset, I typically do something to hurt myself.	F	ST	MT	VT
184. I don't take criticism very well.	F	ST	MT	VT
185. I don't worry about things any more than most people.	F	ST	MT	VT
186. I don't mind driving on freeways.	F	ST	MT	VT
187. No matter what I do, nothing works.	F	ST	MT	VT
188. I think I have the answers to some very important questions.	F	ST	MT	VT
189. There are people who want to hurt me.	F	ST	MT	VT
190. I enjoy the company of other people.	F	ST	MT	VT
191. I don't like being tied to one person.	F	ST	MT	VT
192. I have a bad back.	F	ST	MT	VT
193. It's easy for me to relax.	F	ST	MT	VT
194. I have had some horrible experiences that make me feel guilty.	F	ST	MT	VT
195. I often wake up very early in the morning and can't get back to sleep.	F	ST	MT	VT
196. It bothers me when other people are too slow to understand my ideas.	F	ST	MT	VT
197. Usually I've gotten credit for what I've done.	F	ST	MT	VT
198. My thoughts tend to quickly shift around to different things.	F	ST	MT	VT
199. The idea of "settling down" has never appealed to me.	F	ST	MT	VT
200. My favorite hobbies are archery and stamp-collecting.	F	ST	MT	VT
201. People I know care about me.	F	ST	MT	VT
202. I'm comfortable with myself the way I am.	F	ST	MT	VT
203. I've had episodes when I've lost the feeling in my hands.	F	ST	MT	VT

F = FALSE, NOT AT ALL TRUE,		ST = SLIGHTLY TRUE,	MT = MAINLY TRUE,	VT = VERY TRUE
204. I often feel as if something terrible is about to happen.	F	ST	MT	VT
205. I'm usually aware of objects that have a lot of germs.	F	ST	MT	VT
206. I have no interest in life.	F	ST	MT	VT
207. I feel like I need to keep active and not rest.	F	ST	MT	VT
208. People think I'm too suspicious.	F	ST	MT	VT
209. Every once in a while I totally lose my memory.	F	ST	MT	VT
210. There are people who try to control my thoughts.	F	ST	MT	VT
211. I was never expelled or suspended from school when I was young.	F	ST	MT	VT
212. I've had some unusual diseases and illnesses.	F	ST	MT	VT
213. It takes a while for people to get to know me.	F	ST	MT	VT
214. I've had times when I was so mad I couldn't do enough to express all my anger.	F	ST	MT	VT
215. Some people around me think I drink too much alcohol.	F	ST	MT	VT
216. I prefer to let others make decisions.	F	ST	MT	VT
217. I don't get bored very easily.	F	ST	MT	VT
218. I don't like raising my voice.	F	ST	MT	VT
219. Once someone is my friend, we stay friends.	F	ST	MT	VT
220. Death would be a relief.	F	ST	MT	VT
221. I've never started a physical fight as an adult.	F	ST	MT	VT
222. My drug use is out of control.	F	ST	MT	VT
223. I'm too impulsive for my own good.	F	ST	MT	VT
224. Sometimes I put things off until the last minute.	F	ST	MT	VT
225. I don't worry about things that I can't control.	F	ST	MT	VT
226. I don't mind heights.	F	ST	MT	VT
227. I think good things will happen to me in the future.	F	ST	MT	VT
228. I think I would be a good comedian.	F	ST	MT	VT
229. People seldom treat me badly on purpose.	F	ST	MT	VT
230. I like to be around other people if I can.	F	ST	MT	VT
231. I don't like to stay in a relationship very long.	F	ST	MT	VT
232. I have a weak stomach.	F	ST	MT	VT
233. When I'm under a lot of pressure, I sometimes have trouble breathing. ...	F	ST	MT	VT
234. I keep having nightmares about my past.	F	ST	MT	VT
235. I have a good appetite.	F	ST	MT	VT
236. I have no patience with people who try to hold me back.	F	ST	MT	VT
237. People who are successful generally earned their success.	F	ST	MT	VT
238. Sometimes I wonder if my thoughts are being taken away.	F	ST	MT	VT
239. I like to drive fast.	F	ST	MT	VT
240. I don't like to have to buy things that are overpriced.	F	ST	MT	VT
241. In my family, we argue more than we talk.	F	ST	MT	VT
242. Many of my problems are my own doing.	F	ST	MT	VT
243. I've had times when my legs became so weak that I couldn't walk.	F	ST	MT	VT
244. I seldom feel anxious or tense.	F	ST	MT	VT
245. People see me as a person who pays a lot of attention to detail.	F	ST	MT	VT
246. Lately I've been happy much of the time.	F	ST	MT	VT
247. Recently I have needed less sleep than usual.	F	ST	MT	VT
248. Things are rarely as they seem on the surface.	F	ST	MT	VT
249. Sometimes my vision is only in black and white.	F	ST	MT	VT
250. I have a sixth sense that tells me what is going to happen.	F	ST	MT	VT
251. I've never been in trouble with the law.	F	ST	MT	VT
252. For my age, my health is pretty good.	F	ST	MT	VT
253. I try to include people who seem left out.	F	ST	MT	VT
254. Sometimes I have an alcoholic drink first thing in the morning.	F	ST	MT	VT
255. My drinking has caused me problems at home.	F	ST	MT	VT
256. I say what's on my mind.	F	ST	MT	VT

F = FALSE, NOT AT ALL TRUE,		ST = SLIGHTLY TRUE,	MT = MAINLY TRUE,	VT = VERY TRUE
257. I usually do what other people tell me to do.	F	ST	MT	VT
258. I have a bad temper.	F	ST	MT	VT
259. It takes a lot to make me angry.	F	ST	MT	VT
260. I've thought about what I would say in a suicide note.	F	ST	MT	VT
261. I can't think of reasons to go on living.	F	ST	MT	VT
262. I've had health problems because of my drug use.	F	ST	MT	VT
263. I spend money too easily.	F	ST	MT	VT
264. I sometimes make promises I can't keep.	F	ST	MT	VT
265. I usually worry about things more than I should.	F	ST	MT	VT
266. I will not ride in airplanes.	F	ST	MT	VT
267. I have something worthwhile to contribute.	F	ST	MT	VT
268. Lately I feel so confident that I think I can accomplish anything.	F	ST	MT	VT
269. People have had it in for me.	F	ST	MT	VT
270. I make friends easily.	F	ST	MT	VT
271. I look after myself first; let others take care of themselves.	F	ST	MT	VT
272. I get more headaches than most people.	F	ST	MT	VT
273. I get sweaty hands often.	F	ST	MT	VT
274. Since I had a very bad experience, I am no longer interested in some things that I used to enjoy.	F	ST	MT	VT
275. I often wake up in the middle of the night.	F	ST	MT	VT
276. At times I am very touchy and easily annoyed.	F	ST	MT	VT
277. I'm not the type of person to hold a grudge.	F	ST	MT	VT
278. Thoughts in my head suddenly disappear.	F	ST	MT	VT
279. I'm not a person who turns down a dare.	F	ST	MT	VT
280. Most people look forward to a trip to the dentist.	F	ST	MT	VT
281. I spend little time with my family.	F	ST	MT	VT
282. I can solve my problems by myself.	F	ST	MT	VT
283. At times parts of my body have been paralyzed.	F	ST	MT	VT
284. I am easily startled.	F	ST	MT	VT
285. I keep myself under tight control.	F	ST	MT	VT
286. I'm almost always a happy and positive person.	F	ST	MT	VT
287. I hardly ever buy things on impulse.	F	ST	MT	VT
288. People have to earn my trust.	F	ST	MT	VT
289. I don't have any good memories from my childhood.	F	ST	MT	VT
290. I don't believe that there are people who can read minds.	F	ST	MT	VT
291. I've never taken money or property that wasn't mine.	F	ST	MT	VT
292. I like to talk with people about their medical problems.	F	ST	MT	VT
293. I'm an affectionate person.	F	ST	MT	VT
294. I never drive when I've been drinking.	F	ST	MT	VT
295. I hardly ever drink alcohol.	F	ST	MT	VT
296. People listen to my opinions.	F	ST	MT	VT
297. If I get poor service from a business, I let the manager know about it.	F	ST	MT	VT
298. My temper never gets me into trouble.	F	ST	MT	VT
299. My anger never gets out of control.	F	ST	MT	VT
300. I've thought about how others would react if I killed myself.	F	ST	MT	VT
301. I have a lot to live for.	F	ST	MT	VT
302. My best friends are those I use drugs with.	F	ST	MT	VT
303. I'm a reckless person.	F	ST	MT	VT
304. There have been times when I could have been more thoughtful than I was.	F	ST	MT	VT
305. Sometimes I get so nervous that I'm afraid I'm going to die.	F	ST	MT	VT
306. I don't mind traveling in a bus or train.	F	ST	MT	VT
307. I'm pretty successful at what I do.	F	ST	MT	VT
308. I could never imagine myself being famous.	F	ST	MT	VT
309. I'm the target of a conspiracy.	F	ST	MT	VT
310. I keep in touch with my friends.	F	ST	MT	VT
311. When I make a promise, I really don't need to keep it.	F	ST	MT	VT
312. I frequently have diarrhea.	F	ST	MT	VT
313. I have very steady hands.	F	ST	MT	VT

F = FALSE, NOT AT ALL TRUE,		ST = SLIGHTLY TRUE,		MT = MAINLY TRUE,		VT = VERY TRUE					
314.	I avoid certain things that bring back bad memories.	F	ST	MT	VT	330.	I'm a sympathetic person.	F	ST	MT	VT
315.	I have little interest in sex.	F	ST	MT	VT	331.	Close relationships are important to me.	F	ST	MT	VT
316.	I have little patience with those who disagree with my plans.	F	ST	MT	VT	332.	I'm very impatient with people.	F	ST	MT	VT
317.	Being helpful to other people pays off in the end.	F	ST	MT	VT	333.	I have more friends than most people I know.	F	ST	MT	VT
318.	I can concentrate now as well as I ever could.	F	ST	MT	VT	334.	My drinking has never gotten me into trouble.	F	ST	MT	VT
319.	I never take risks if I can avoid it.	F	ST	MT	VT	335.	My drinking has caused problems with my work.	F	ST	MT	VT
320.	In my free time I might read, watch TV, or just relax.	F	ST	MT	VT	336.	I don't like letting people know when I disagree with them.	F	ST	MT	VT
321.	I have a lot of money problems.	F	ST	MT	VT	337.	I'm a very independent person.	F	ST	MT	VT
322.	My life is very unpredictable.	F	ST	MT	VT	338.	When I get mad, it's hard for me to calm down.	F	ST	MT	VT
323.	There have been many changes in my life recently.	F	ST	MT	VT	339.	People think I'm aggressive.	F	ST	MT	VT
324.	There isn't much stability at home. ...	F	ST	MT	VT	340.	I'm considering suicide.	F	ST	MT	VT
325.	Things are not going well in my family.	F	ST	MT	VT	341.	Things have never been so bad that I thought about suicide.	F	ST	MT	VT
326.	I'm happy with my job situation.	F	ST	MT	VT	342.	My drug use has never caused problems with my family or friends. ..	F	ST	MT	VT
327.	I worry about having enough money to get by.	F	ST	MT	VT	343.	I'm careful about how I spend my money.	F	ST	MT	VT
328.	My relationship with my spouse or partner is not going well.	F	ST	MT	VT	344.	I rarely get in a bad mood.	F	ST	MT	VT
329.	I have severe psychological problems that began very suddenly.	F	ST	MT	VT						

Aggression Questionnaire

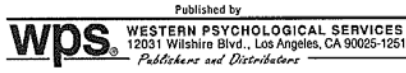
Circle one response number for each statement.

Not at all like me	A little like me	Somewhat like me	Very much like me	Completely like me	
1	2	3	4	5	1. My friends say that I argue a lot.
1	2	3	4	5	2. Other people always seem to get the breaks.
1	2	3	4	5	3. I flare up quickly, but get over it quickly.
1	2	3	4	5	4. I often find myself disagreeing with people.
1	2	3	4	5	5. At times I feel I have gotten a raw deal out of life.
1	2	3	4	5	6. I can't help getting into arguments when people disagree with me.
1	2	3	4	5	7. At times I get very angry for no good reason.
1	2	3	4	5	8. I may hit someone if he or she provokes me.
1	2	3	4	5	9. I wonder why sometimes I feel so bitter about things.
1	2	3	4	5	10. I have threatened people I know.
1	2	3	4	5	11. Someone has pushed me so far that I hit him or her.
1	2	3	4	5	12. I have trouble controlling my temper.
1	2	3	4	5	13. If I'm angry enough, I may mess up someone's work.
1	2	3	4	5	14. I have been mad enough to slam a door when leaving someone behind in the room.
1	2	3	4	5	15. When people are bossy, I take my time doing what they want, just to show them.
1	2	3	4	5	16. I wonder what people want when they are nice to me.
1	2	3	4	5	17. I have become so mad that I have broken things.
1	2	3	4	5	18. I sometimes spread gossip about people I don't like.
1	2	3	4	5	19. I am a calm person.
1	2	3	4	5	20. When people annoy me, I may tell them what I think of them.
1	2	3	4	5	21. I sometimes feel that people are laughing at me behind my back.
1	2	3	4	5	22. I let my anger show when I do not get what I want.
1	2	3	4	5	23. At times I can't control the urge to hit someone.
1	2	3	4	5	24. I get into fights more than most people.
1	2	3	4	5	25. If somebody hits me, I hit back.
1	2	3	4	5	26. I tell my friends openly when I disagree with them.
1	2	3	4	5	27. If I have to resort to violence to protect my rights, I will.
1	2	3	4	5	28. I do not trust strangers who are too friendly.
1	2	3	4	5	29. At times I feel like a bomb ready to explode.
1	2	3	4	5	30. When someone really irritates me, I might give him or her the silent treatment.
1	2	3	4	5	31. I know that "friends" talk about me behind my back.
1	2	3	4	5	32. Some of my friends think I am a hothead.
1	2	3	4	5	33. At times I am so jealous I can't think of anything else.
1	2	3	4	5	34. I like to play practical jokes.

SHIPLEY INSTITUTE OF LIVING SCALE

Administration Form

Walter C. Shipley, Ph.D.



Name: _____ Sex: M F Age: _____
 Education: _____ Usual Occupation: _____ Today's Date: _____

Part I

Instructions: In the test below, the first word in each line is printed in capital letters. Opposite it are four other words. Circle the *one word* which means the *same thing*, or most nearly the same thing, as the first word. If you don't know, guess. Be sure to circle the *one word* in each line that means the same thing as the first word.

EXAMPLE:

LARGE	red	<u>big</u>	silent	wet
-------	-----	------------	--------	-----

- | | | | | | |
|-----------------|-------------|------------|------------|-------------|--------------------------|
| (1) TALK | draw | eat | speak | sleep | <input type="checkbox"/> |
| (2) PERMIT | allow | sew | cut | drive | <input type="checkbox"/> |
| (3) PARDON | forgive | pound | divide | tell | <input type="checkbox"/> |
| (4) COUCH | pin | eraser | sofa | glass | <input type="checkbox"/> |
| (5) REMEMBER | swim | recall | number | defy | <input type="checkbox"/> |
| (6) TUMBLE | drink | dress | fall | think | <input type="checkbox"/> |
| (7) HIDEOUS | silvery | tilted | young | dreadful | <input type="checkbox"/> |
| (8) CORDIAL | swift | muddy | leafy | hearty | <input type="checkbox"/> |
| (9) EVIDENT | green | obvious | skeptical | afraid | <input type="checkbox"/> |
| (10) IMPOSTOR | conductor | officer | book | pretender | <input type="checkbox"/> |
| (11) MERIT | deserve | distrust | fight | separate | <input type="checkbox"/> |
| (12) FASCINATE | welcome | fix | stir | enchant | <input type="checkbox"/> |
| (13) INDICATE | defy | excite | signify | bicker | <input type="checkbox"/> |
| (14) IGNORANT | red | sharp | uninformed | precise | <input type="checkbox"/> |
| (15) FORTIFY | submerge | strengthen | vent | deaden | <input type="checkbox"/> |
| (16) RENOWN | length | head | fame | loyalty | <input type="checkbox"/> |
| (17) NARRATE | yield | buy | associate | tell | <input type="checkbox"/> |
| (18) MASSIVE | bright | large | speedy | low | <input type="checkbox"/> |
| (19) HILARITY | laughter | speed | grace | malice | <input type="checkbox"/> |
| (20) SMIRCHED | stolen | pointed | remade | soiled | <input type="checkbox"/> |
| (21) SQUANDER | tease | belittle | cut | waste | <input type="checkbox"/> |
| (22) CAPTION | drum | ballast | heading | ape | <input type="checkbox"/> |
| (23) FACILITATE | help | turn | strip | bewilder | <input type="checkbox"/> |
| (24) JOCOSE | humorous | paltry | fervid | plain | <input type="checkbox"/> |
| (25) APPRISE | reduce | strew | inform | delight | <input type="checkbox"/> |
| (26) RUE | eat | lament | dominate | cure | <input type="checkbox"/> |
| (27) DENIZEN | senator | inhabitant | fish | atom | <input type="checkbox"/> |
| (28) DIVEST | dispossess | intrude | rally | pledge | <input type="checkbox"/> |
| (29) AMULET | charm | orphan | dingo | pond | <input type="checkbox"/> |
| (30) INEXORABLE | untidy | involatile | rigid | sparse | <input type="checkbox"/> |
| (31) SERRATED | dried | notched | armed | blunt | <input type="checkbox"/> |
| (32) LISSOM | moldy | loose | supple | convex | <input type="checkbox"/> |
| (33) MOLLIFY | mitigate | direct | pertain | abuse | <input type="checkbox"/> |
| (34) PLAGIARIZE | appropriate | intend | revoke | maintain | <input type="checkbox"/> |
| (35) ORIFICE | brush | hole | building | lute | <input type="checkbox"/> |
| (36) QUERULOUS | maniacal | curious | devout | complaining | <input type="checkbox"/> |
| (37) PARIAH | outcast | priest | lentil | locker | <input type="checkbox"/> |
| (38) ABET | waken | ensue | incite | placate | <input type="checkbox"/> |
| (39) TEMERITY | rashness | timidity | desire | kindness | <input type="checkbox"/> |
| (40) PRISTINE | vain | sound | first | level | <input type="checkbox"/> |

DO NOT WRITE IN THIS AREA

Turn over this sheet and continue with Part II when instructed to do so.

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W-177A

Vocabulary raw score _____	

Part II

Instructions: Complete the following by filling in either a number or a letter for each dash (____). Do the items in order, but don't spend too much time on any one item.

EXAMPLE: A B C D E

- (1) 1 2 3 4 5 ____
- (2) white black short long down ____
- (3) AB BC CD D ____
- (4) Z Y X W V U ____
- (5) 1 2 3 2 1 2 3 4 3 2 3 4 5 4 3 4 5 6 ____
- (6) NE/SW SE/NW E/W N/ ____
- (7) escape scape cape ____
- (8) oh ho rat tar mood ____
- (9) A Z B Y C X D ____
- (10) tot tot bard drab 537 ____
- (11) mist is wasp as pint in tone ____
- (12) 57326 73265 32657 26573 ____
- (13) knit in spud up both to stay ____
- (14) Scotland landscape scapegoat ____ ec
- (15) surgeon 1234567 snore 17635 rogue ____
- (16) tam tan rib rid rat raw hip ____
- (17) tar pitch throw saloon bar rod fee tip end plank ____ meals
- (18) 3124 82 73 154 46 13 ____
- (19) lag leg pen pin big bog rob ____
- (20) two w four r one o three ____

DO NOT WRITE IN THIS AREA

Summary Scores			
V: Raw	T	A: Raw	T
Total: Raw		T	
CQ:	AQ:	Est. IQ:	

Abstraction raw score	_____
-----------------------	-------

CAGE Assessment for Alcohol Abuse

1) Have you felt the need to **Cut down** on your drinking? (Please circle an answer below)

Yes

No

2) Do you feel **Annoyed** by people complaining about your drinking? (Please circle an answer below)

Yes

No

3) Do you ever feel **Guilty** about your drinking?

Yes

No

4) Do you ever drink an **Eye-opener** in the morning to relieve shakes?

Yes

No

PTSD Checklist-Military Version						
Instructions: Below is a list of problems and complaints that veterans sometimes have in response to a stressful military experience. Please read each one carefully, put an "X" in the box that applies to you.						
		Not at all	A little bit	Moderately	Quite a bit	Extremely
1.	Repeated, disturbing memories, thoughts, or images of a stressful military experience?					
2.	Repeated, disturbing dreams of a stressful military experience?					
3.	Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?					
4.	Feeling very upset when something reminded you of a stressful military experience?					
5.	Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful military experience?					
6.	Avoid thinking about or talking about a stressful military experience or avoid having feelings related to it?					
7.	Avoid activities or talking about a stressful military experience or avoid having feelings related to it?					
8.	Trouble remembering important parts of a stressful military experience?					
9.	Loss of interest in things that you used to enjoy?					
10.	Feeling distant or cut off from other people?					
11.	Feeling emotionally numb or being unable to have loving feelings for those close to you?					
12.	Feeling as if your future will somehow be cut short?					
13.	Trouble falling or staying asleep?					
14.	Feeling irritable or having angry outbursts?					
15.	Having difficulty concentrating					
16.	Being "super alert" or watchful on guard?					
17.	Feeling jumpy or easily startled?					

SASSI

If a statement tends to be TRUE for you, mark the box under the T Column with an X.

If a statement tends to be FALSE for you, mark the box under the F Column with an X.

	T	F	
1			Most people would lie to get what they want.
2			Most people make some mistakes in their life.
3			I usually "go along" and do what others are doing.
4			I have never been in trouble with the police.
5			I was always well behaved in school.
6			My troubles are not all my fault.
7			I have not lived the way I should.
8			I can be friendly with people who do many wrong things.
9			I do not like to sit and daydream.
10			No one has ever criticized or punished me.
11			Sometimes I have a hard time sitting still.
12			People would be better off if they took my advice.
13			At times I feel worn out for no special reason.
14			I think I would enjoy moving to an area I've never been before.
15			It is better not to talk about personal problems.
16			I have had days, weeks, or months when I couldn't get much done because I felt I wasn't up to it.
17			I am very respectful of authority.
18			I like to obey the law.
19			I have been tempted to leave home.
20			I often feel that strangers look at me with disapproval.
21			Other people would fall apart if they had to deal with what I handle.
22			I have avoided people I did not wish to speak to.
23			Some crooks are so clever that I hope they get away with what they've done.
24			My school teachers had some problems with me.
25			I have never done anything dangerous just for fun.
26			I need to have something to do just so I don't get bored.
27			I have sometimes drunk too much.
28			Much of my life is uninteresting.
29			Sometimes I wish I could control myself better.
30			I believe that people sometimes get confused.
31			Sometimes I am no good for anything at all.
32			I break more laws than many people do.
33			If some friends and I were in trouble together, I would rather take the whole blame than tell on them.
34			Crying does not help anything.
35			I think there is something wrong with my memory.
36			I have sometimes been tempted to hit people.
37			My most important successes are not a direct result of my effort.
38			I always feel sure of myself.
39			I have never broken a major law.
40			There have been times when I have done things I couldn't remember.
41			I think carefully about all my actions.
42			I have used alcohol or "pot" too much or too often.
43			Nearly everyone enjoys being picked on or made fun of.

44		I know who is to blame for most of my troubles.
45		I frequently make lists of things to do.
46		I guess I know some pretty undesirable types.
47		Most people will laugh at a joke at times.
48		I have rarely been punished.
49		I smoke cigarettes regularly.
50		At times, I have been so full of energy that I felt I didn't need sleep for days at a time.
51		I have sometimes sat about when I should have been working.
52		I am often resentful.
53		I take all my responsibilities seriously.
54		I have neglected obligations to family or work because of drinking or using drugs.
55		I have had a drink first thing in the morning to steady my nerves or get rid of a hangover.
56		While I was a teenager, I began drinking or doing other drugs regularly.
57		My father was/is a heavy drinker or drug user.
58		When I drink or use drugs I tend to get in trouble.
59		My drinking or other drug use causes problems between me and my family.
60		I do most of the drinking or drug using away from home.
61		At least once a week I use some no-prescription antacid and/or diarrhea medicine.
62		I have never felt sad over anything.
63		I am rarely at a loss for words.
64		I am usually happy.
65		I am a restless person.
66		I like doing things on the spur of the moment.
67		I am a binge drinker/drug user.

Appendix B. Median (Interquartile Ranges) for Mann-Whitney U Tests

The data between offenders and non-offenders did not meet assumptions of normality; therefore, non-parametric analyses were performed. Mann-Whitney U tests were used to compare offenders versus non-offenders and those with combat experience versus those without across all variables. A Bonferroni correction was performed to determine the confidence interval ($p = .002$). The results of these tests are shown below in Table 4. Offenders were significantly more likely to score higher than non-offenders on scales related to suicide ideation, post-traumatic symptoms, substance use, somatic complaints, anxiety, anxiety related disorders, depressive symptoms, stress, borderline symptoms, psychopathy, and problematic drug use. Non-offenders were significantly more likely to score higher on scales related to intelligence, aggression (as measured by the PAI), mania, dominance, and treatment rejection (all $p \leq .002$). Those with combat experience scored significantly higher than those without combat experience on measures of post-traumatic symptoms but lower on measures of intelligence, both $p \leq .002$. Differences were approaching significance (i.e., $p < .01$) on measures of aggression (as measured by the PAI), dominance, and alcohol problems, with those having combat experience scoring higher on all factors than those without combat experience.

Table B1. Median (Interquartile Range) for Mann-Whitney U tests

	No Combat	Combat	Sig.	Non- Offender	Offender	Sig.
SILS	57 (11)	55 (11)	.000*	58 (6)	52 (11)	.000*
CAGE	0(0)	0(1)	.053	0(0)	0(1)	.007
SASSI	0(0)	0(0)	.036	0(0)	0(0)	.000*
SYM SASSI	2(2)	2(3)	.001*	2(2)	2(3)	.000*
OBV SASSI	4(3)	4(4)	.644	3(2)	5(3)	.000*
SUBT SASSI	3(1)	3(2)	.004	3(1)	3(2)	.000*
DEF SASSI	6(2)	6(3)	.073	6(2)	6(3)	.216
SUPADD SASSI	5(3)	6(3)	.007	5(2)	7(2)	.000*
FAM SASSI	9(2)	9(2)	.985	9(3)	9(3)	.078
COR SASSI	4(4)	4(3)	.436	3(3)	5(4)	.000*
ASIQ	43 (3)	43 (3)	.885	43 (0)	44 (11)	.000*

AQ	45.5 (10)	47 (10)	.268	47 (9)	45 (11)	.093
AQ PA	47(9)	48(7)	.106	49(6)	47(8)	.000*
AQ VA	47(15)	47(9)	.752	47(12)	47(11)	.032
AQAnger	46(14)	46(11)	.146	46(8)	43(13)	.000*
AQHostil	49(13)	49(13)	.994	47(10)	51(14)	.000*
AQIA	46(16)	45(10)	.681	46(12)	44(23)	.000*
PCLM	19 (5)	24 (14)	.000*	20 (9)	25 (18)	.000*
PAI Som	45 (7)	46 (9)	.012	44 (6)	48 (11)	.000*
PAI Anx	46 (10)	47 (11)	.600	45 (10)	50 (14)	.000*
PAI ARD	46 (14)	46 (13)	.405	44.5 (9)	50 (19)	.000*
PAI Dep	47 (16)	49 (16)	.015	43 (10)	54 (16)	.000*
PAI Man	50 (13)	50 (13)	.877	52 (13)	48 (12)	.000*
PAI Bor	47 (15)	49 (13)	.603	46 (9)	52 (16)	.000*
PAI Anti	51 (12)	51 (12)	.996	51 (12)	51 (12)	.848
PAI AP	47 (11)	49 (11)	.008	49 (9)	49 (14)	.322
PAI DP	48 (12)	48 (12)	.940	48 (10)	48 (12)	.001*
PAI Agg	44 (14)	47 (11)	.006	48 (11)	44 (13)	.002*
PAI SI	45 (6)	43 (6)	.656	43 (6)	45.5 (11)	.000*
PAI Stress	50 (15)	53 (18)	.192	46 (9)	59 (18)	.000*
PAI NonSup	45 (17)	45 (14)	.882	45 (11)	45 (14)	.024
PAI RxR	53 (15)	53 (15)	.329	59 (10)	44 (15)	.000*
PAI Dom	53 (13)	54 (11)	.008	56 (11)	53 (13)	.000*
PAI Warm	53 (15)	49 (16)	.020	50 (18)	51 (15)	.692

PCLR	31 (12)	33 (15)	.029	25 (7)	38 (9)	.000*
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*Significance ($p \leq .002$)

Appendix C. List of Acronyms

Acronym	Meaning
ACC	Anterior Cingulate Cortex
AQ	Aggression Questionnaire
ARDEC	United States Army, Research Development and Engineering Command
ASIQ	Adult Suicide Ideation Questionnaire
ASVAB	Armed Services Vocational Aptitude Battery
CAGE	Cut Down, Annoyed, Guilty, Eye Opener
DOD	Department of Defense
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders-IV
IRB	Institutional Review Board
MOS	Military Occupational Specialty
MRMC	Medical Research and Materiel Command
OEF	Operation: Enduring Freedom
OIF	Operation: Iraqi Freedom
PAI	Personality Assessment Inventory
PCL-M	PTSD Checklist-Military Version
PCL-R	Psychopathy Checklist-Revised
PTS	Post-traumatic Stress
PTSD	Post-traumatic Stress Disorder
SASSI	Substance Abuse Subtle Screening Inventory
SILS	Shipley Institute of Living Scale
SPSS	Statistical Package for the Social Sciences
SSRI	Selective Serotonin Reuptake Inhibitor
TBI	Traumatic Brain Injury
USDB	United States Disciplinary Barracks
WAIS	Wechsler Adult Intelligence Scale



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