UNIVERSITY OF CALIFORNIA

Santa Barbara

Trauma and the Justice-Involved Veteran

A dissertation submitted in partial satisfaction of the

requirements for the degree Doctor of Philosophy

in Counseling, Clinical, and School Psychology

by

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Committee in charge:

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September 2014

The dissertation of Jessica Lynn Larsen is approved.

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Merith Cosden, Committee Chair

June 2013

Trauma and the Justice-Involved Veteran

ACKNOWLEDGEMENTS

I have many to thank for their contributions to this achievement. First, without doubt, I would not be here without my two loving parents, Jane and Joe. They have supported me throughout my life and encouraged me to "dream big". I want to thank my mother for encouraging me to pursue an education and "keep going" in the face of adversity. Her feminist ideals have shaped me as an intellect, and I thank her for instilling values of freedom, justice, and equality in from an early age. For my father who worked tirelessly so that his children could benefit. Even as the world changed, his consistency never wavered. Thank you Mom and Dad for always making your children your first priority and for teaching me persistence.

Second, I would like to thank my husband, Chris. He is the person for whom I wake up and continue marching on. Our Army life inspired me to find a way to ameliorate suffering. Our love is the joy of my life and inspires me to keep on going every day. Thank you for supporting my goals and for continuing to love me despite the fact that examining these questions have only inspired me to ask more questions.

For those in Santa Barbara who made this possible. To my advisor, Dr. Merith Cosden, I could not have done this without your presence, guidance, and support. Thank you for helping me realize my path forward into this profession. To friends, thank you for the laughter, camaraderie, and collaboration. To Donnie and Cookie, thank you for being my family away from home. Thank you to the judge and court team who courageously invited this research. Finally, thank you to all the veterans and families who have selflessly served this great nation to protect our freedom.

VITA OF JESSICA LYNN LARSEN
JULY 2014

EDUCATION

September 2009 – August 2014 **University of California, Santa Barbara (UCSB)**

Department of Counseling, Clinical, and School Psychology
***Ph.D.**, Clinical Psychology* - **APA Accredited**
Dissertation: Trauma in the Justice Involved Veteran
Dissertation Advisor: Merith Cosden, Ph.D.

Department of Education
***M.A.**, Research Methodology (Applied Statistics)*
Thesis: Latent Transition Analysis Models with Covariates For Social Science Research Estimated in MPlus
Thesis Advisor: Karen Nylund-Gibson, Ph.D.

January 2006 – June 2008 **Rutgers University**
Graduate School of Education
Department of Educational Psychology
***M.Ed.**, Counseling Psychology*
Advisor: Caroline Clauss-Ehlers, Ph.D.

August 2001 – May 2005 **New York University (NYU)**
College of Arts and Sciences

***B.A.,** Psychology*

CLINICAL TRAINING AND EXPERIENCE

July 2013- present **Oklahoma City Veterans Affairs Medical Center**
University of Oklahoma Health Sciences Center
*Pre-doctoral Internship - **APA Accredited***
Primary Supervisors: Michelle Sherman, Ph.D. and Alan Doerman, Psy.D.,ABPP Rotation Supervisors: Elizabeth Bard, Ph.D, Beverly Funderburk, Ph.D. Michael Gomez, Ph.D., Deborah Hecht, Ph.D., Lauren Ridener, Ph.D., Susan Schmidt, Ph.D., Bryan Stice,Ph.D., Kristen Sorocco, Ph.D, and John Tassey, Ph.D.

Rotations: Child Study Center/Center for Child Abuse and Neglect, Family Mental Health Program, Suicide Prevention Program, Geropsychology, Home-Based Primary Care, Inpatient Rehabilitation, Palliative Care, and Health Psychology.

Provide psychological assessment and individual, family, and group intervention to a patient population ranging in age from youth to older adult with a wide range of diagnoses and presenting concerns. Formally trained and experienced in evidence based psychotherapy models including Parent-Child Interactive Therapy (PCIT), Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Emotionally Focused Couples Therapy (EFT), Integrative Behavioral Couples Therapy (IBCT) and Cognitive Processing Therapy (CPT). Experience working on interdisciplinary teams, including medicine, nursing, social work, occupational therapy, and nutrition. Conduct psychological consultations, including brief clinical interviews and assessments, differential diagnosis, suicide risk assessment, and referral. Conduct in-depth psychological evaluations for children and adults. Facilitate psychotherapy group treatments. Provide family therapy to medical patients undergoing a variety of treatments, including inpatient treatment and end-of-life comfort care. Supervise psychology and medical students conducting mental health consultations and treatment.

August 2011 - August 2012 **Child Abuse Listening & Mediation,** Santa Barbara, CA

Psychology Practicum Clinician
Clinical Supervisor: Jessica Adams, Ph.D.
Provided individual, family, and group psychotherapy for a culturally diverse patient population of children and adults affected by post traumatic stress disorder, substance abuse disorders, and intimate partner violence. Conducted clinical assessment and differential diagnosis. Developed and implemented treatment plans utilizing cognitive-behavioral, systems, and person-centered approaches. Specialty clinical areas included military families and adjudicated offenders.

November 2011 – July 2013 **Veterans Treatment Court,** Santa Maria, CA
Consultant
Clinical Supervisor: Merith Cosden, Ph.D.
Provided psychological services to the Veterans Treatment Court, a jail diversion program targeting justice-involved veterans with psychiatric and/or substance abuse disorders. Conducted in-depth clinical evaluation assessment of veterans, using empirically-supported assessments including the Addiction Severity Index. Provided program evaluation and consultation with peers, supervisors, and county stakeholders. Evaluated implementation of evidence-based interventions, including Seeking Safety, with community treatment providers. Provided consultation services to inform program development and improvement through the use of

real-time, local data analysis and integration of findings from empirical research. Assisted court in applying for a Substance Abuse and Mental Health Services Administration (SAMHSA) grant by providing salient research findings, local data analyses, and empirically-based recommendations. County successfully acquired grant funding totaling over $400,000 in 2013.

January 2010 – June 2013 **Psychology Assessment Center, UCSB,** Santa Barbara, CA
Assessment Practicum Clinician
Clinical Supervisor: Erik Lande, Ph.D.
Administered, scored, interpreted, integrated, and reported findings from cognitive, neuropsychological, and personality assessments for a variety of client populations including adults, adolescents, and children suffering from traumatic brain injury, cognitive disorders, and neurodevelopmental disorders. Integrated relevant research findings into reports. Effectively communicated assessment results, relevant psychoeducation, and specific recommendations to patients during feedback sessions.

September 2012- June 2013 **Hosford Clinic, UCSB,** Santa Barbara, CA
Advanced Practicum Supervisor
Clinical Supervisor: Merith Cosden, Ph.D.
Provided individual and group supervision to graduate students providing psychotherapy to community-based clients with a variety of presenting concerns, including mood disorders, adjustment disorders, substance abuse disorders, stress and trauma related disorders, and personality disorders. Provided didactic training in cognitive-behavioral and systems theory and intervention techniques. Provided oversight and guidance to students in assessment, diagnosis, case conceptualization, treatment planning using empirically-based treatment approaches, and intervention techniques. Reviewed video-taped sessions and provided real-time feedback during live supervision sessions.

September 2010 – June 2011 **Hosford Clinic, UCSB,** Santa Barbara, CA
Advanced Practicum Clinician
Clinical Supervisor: Merith Cosden, Ph.D.
Provided individual and family psychotherapy to a general community population with a range of presenting concerns, including mood disorders, adjustment disorders, substance abuse disorders, stress and trauma related disorders, and personality disorders. Conducted clinical assessment and differential diagnoses. Developed treatment plans and implemented interventions utilizing empirically based treatments, including cognitive-behavioral, person-centered,

strengths-based, and systems based approaches. Conducted ongoing assessment of patient progress with empirically supported psychological instruments. Reviewed video-taped sessions with supervisors during three hours of weekly group supervision. Received ongoing live supervision from student supervisors during all sessions.

September 2010 – August 2011 **Child Abuse Listening & Mediation,** Santa Barbara, CA
Assessment Specialist
Psychological Technician- Scored and interpreted psychological assessments addressing psychopathology, behavioral symptoms, parenting behaviors, and traumatic stress for adults, adolescents, and children. Reported findings (i.e. patient presenting symptoms, provisional diagnoses, and progress) in written reports to clinicians.
Program Evaluator- Assisted the Associate Director of Clinical Services in state funded grant administration. Streamlined data collection procedures to an online platform. Designed databases and implemented integration, analysis, and reporting protocols. Provided statistical analyses to ensure compliance with reporting standards set forth by state officials.

June 2004 – October 2005 **Carrier Clinic**, Belle Meade, NJ
Mental Health Technician
Provided patient care, supervision, interaction, and role modeling for patients on a psychiatric inpatient unit ranging in age from adolescence to older adulthood**.** Trained and experienced in Handle With Care (a passive patient restraint technique) and CPR**.** Co-facilitated psycho-educational groups.

RESEARCH TRAINING AND EXPERIENCE

July 2013- present **Veteran Parenting Project,** Oklahoma City, OK
Co- Investigator, Clinical Education Grant from the South Central Mental Illness Research, Education and Clinical Center (MIRECC)
Principal Investigator: Michelle Sherman, Ph.D.
Focus: Mixed methods inquiry of phenomenological experiences of veteran parents living with PTSD.
Funded by VISN 16 MIRECC grant totaling $10,000.
Contributions: Conceptualize project and contribute to selection of measures, development of research plan, IRB submission, grant writing, and development of focus group interview protocol. Use clinical skills to interview veterans regarding a

	sensitive topic, parenting. Conduct grounded-theory analysis of transcripts. Author manuscript of study findings.
November 2011 – September 2014	**Veterans Treatment Court,** Santa Maria, CA *Program Evaluation & Dissertation* Focus: Mixed methods program evaluation examining the outcomes of a jail diversion treatment program for justice involved veterans. Findings contributed to a successful SAMSHA-CSAT grant for Santa Barbara County Alcohol and Drug Programs totaling $400,000 in funds (2013-2016). Contributions: Serve as primary evaluator for a newly developed court program. Conceptualize and design research questions and methods, select measures, and develop procedures. Maintain Institutional Review Board approval and compliance with ethical practice. Conduct data collection via in-person interviews. Conduct qualitative and quantitative data analysis and provide written feedback to the court in a timely manner. Present findings to various local and national groups. Provide technical writing and analytics for federal grant proposal. Author manuscript of study findings.
September 2009- June 2013	**Project Military Families** Focus: Study of military family coping and resilience in the context of repeated deployments. Research partially funded by the Hosford Research Fellowship. Contributions: Primary responsibilities include conceptualizing research questions and study design, data collection via in-person, in-depth interviews in the participant's home, transcribing audio files, and conducting data analysis with qualitative, grounded-theory methods. Present findings at local and national conferences. Author manuscript of study findings.
September 2009 - June 2013	**University of California,** Santa Barbara, CA *Department of Counseling/Clinical/School Psychology* *Graduate Research Assistant* Focus: California Department of Alcohol and Drug Programs (ADP) funded Substance Abuse Treatment Court grant. Substance Abuse and Mental Health Services Administration (SAMSHA) funded grants

	including Methamphetamine Addiction Recovery Services and Sober Women Healthy Families. Contributions: Maintained databases and conducted analysis for bi-annual report. Ensured timely data submission by grantees. Interfaced with court officials and treatment providers. Applied latent variable models to dataset. Presented findings at local and national conferences. Author manuscript of study findings.
September 2008- August 2009	**Trinity University**, San Antonio, TX *Department of Institutional Research, Research Analyst* Focus: Institutional characteristics. Student financial aid and achievement. Faculty involvement and satisfaction.
January 2006 – June 2008 Brunswick, NJ	**Rutgers Graduate School of Education,** New *Department of Educational Psychology Research Assistant* Focus: Cross-cultural manifestations of resilience in children and adolescents.
September 2004 – June 2005	**NYU College of Arts and Sciences,** New York, NY *Department of Psychology Research Assistant* *Advisor: Dr. Susan Andersen, Ph.D.* Focus: Significant other mental representations and emotional transference.

PEER-REVIEWED PUBLICATIONS

Larsen, J.L, Nylund-Gibson, K., & Cosden, M. (2014). Using latent class analysis to identify offender typologies in a drug treatment court. *Drug and Alcohol Dependence, 138, 75-82*.

Sherman, M.D., & Larsen, J.L. (2013). Review of The Family Guide to Mental Health Care. *The Family Psychologist.*

Larsen, J.L. (2010). Parental attachment. Entry in Clauss-Ehlers, C.S. (Ed.*). Encyclopedia of cross-cultural school psychology.* New York, NY: Springer.

Larsen, J. (2010). Private schools. Entry in Clauss-Ehlers, C.S. (Ed.). *Encyclopedia of cross-cultural school psychology.* New York, NY: Springer.

Larsen, J.L. (2010). Public schools. Entry in Clauss-Ehlers, C.S. (Ed.). *Encyclopedia of cross-cultural school psychology.* New York, NY: Springer.

Larsen, J.L. (2010). Resilience building prevention programs. Entry in Clauss-Ehlers, C.S. (Ed.). *Encyclopedia of cross-cultural school psychology.* New York, NY: Springer.

MANUSCRIPTS UNDER REVIEW OR IN PREPARATION

Cosden, M., Larsen, J., Donahue, M., & Nylund-Gibson, K. (under review). Gender variations in trauma treatment response: A latent transition analysis.

Larsen, J., Clauss-Ehlers, C.S., Cosden, M., & Schock, C. (under review). Experiencing wartime deployment of a spouse: An exploration of Army wives' cultural resilience.

Newman, J.J.E., Larsen, J.L., Burkhart, B.R., & Cunningham, K. (under review). An examination of the factor structure of the Million Adolescent Clinical Inventory (MACI) in a detained adolescent male sample.

Bernard, J.F., Larsen, J.L., & Smith, B.W. (in preparation). Coping strategies mediate the relationship between alexithymia and health: How do men and women differ?

Larsen, J.L., Newman, J.J.E., & Burkhart, B.R. (in preparation). Trajectories of clinical symptoms of an incarcerated sample of sex offenders.

Larsen, J., & Nylund-Gibson, K. (in preparation). Latent transition analysis models with covariates for social science research estimated in MPlus.

Larsen, J., Cosden, M., & Gauthier, J. (in preparation). Diverse trauma experiences as predictors of mental health symptoms in justice-involved veterans.

Newman, J.J.E., Larsen, J.L., & Burkhart, B.R. (in preparation). Heterogeneity among juvenile sex offenders: Do subgroups exist?

Sherman, M.D., Larsen, J.L., & Kuhl, M.W. (in preparation). Anticipating the Landscape in the Years Ahead: Military Members Transition to a Post-War Mission

PEER-REVIEWED CONFERENCE PRESENTATIONS

Larsen, J. L (2013, July). *Veteran's treatment court: Theoretical underpinnings and early findings*. Paper presentation at the annual conference for the American Psychological Association, Honolulu, HI.

Larsen, J. L. (2013, July). *Identifying offender typologies in a treatment drug court*. Paper presentation at the annual conference for the American Psychological Association, Honolulu, HI.

Larsen, J.L. & Binmoeller, C.L. (2013, March). *Examination of the cross-cultural validity of the Brief Symptom Inventory-18 in low-income women*. Poster session at the annual conference for the Society for Personality Assessment, San Diego, CA.

Gauthier, J., Larsen, J.L., & Cosden, M. (2013, March). *Evaluating the use of the Addiction Severity Index for emerging adults in a drug treatment court*. Poster session at the annual conference for the Society for Personality Assessment, San Diego, CA.

Larsen, J.L., Gauthier, J., Cosden, M., & Lopez, A. (2012, May). *Veterans treatment courts: partnering to provide specialized services for justice involved veterans.* Presentation at the annual conference for California State Alcohol and Drug Programs, Sacramento, CA.

Larsen, J.L., Gauthier, J., Hughes, J., & Cosden, M. (2012, March). *Do the needs of veterans and civilians differ in a drug treatment court?* Poster session presented at the annual conference for the Society of Psychological Science, Chicago, IL.

Tawalbeh, S., Sullivan, K., Cosden, M., Larsen, J.L., & Pitts, M. (2011, August). *Web-based surveys or personal interviews. Methods triangulation: what measures college students' alcohol and drug use?* Poster session presented at the annual conference for the American Psychological Association, Washington, DC.

Kia-Keating, M., Kia-Keating B., Larsen, J. L., & Schock, C. (2011, August). *Examining the mediating influence of maternal psychopathology on children's positive behaviors in the context of domestic violence.* Poster session presented at the annual conference for the American Psychological Association, Washington, DC.

Larsen, J.L., Schock, C., & Kia-Keating, M. (2010, August). *Resilience based ecological model of military family coping during deployment.* Poster session presented at the annual conference for the American Psychological Association Division 19, San Diego, CA.

Kia-Keating, M., Kia-Keating, B., Larsen, J.L, & Schock, C. (2010, August). *Parent trauma and psychopathology, child self-regulation, and longitudinal behavioral outcomes.* Poster session presented at the annual conference for the American Psychological Association, Division 7, San Diego, CA.

Larsen, J.L. & Clauss-Ehlers, C.S. (2009, September). *Promoting success for military children through a trauma-informed school organizational model.* Paper presented at the annual conference for the Center for School Mental Health, Minneapolis, MN.

Larsen, J.L. & Clauss-Ehlers, C.S. (2008, September). *Global issues of children affected by war.* Paper presented at the annual conference for the Center of School Mental Health, Phoenix, AZ.

Larsen, J.L. & Clauss-Ehlers, C.S. (2008, September). *A sociocultural approach to school-based intervention for trauma*. Poster session presented at the annual conference for the Center of School Mental Health, Phoenix, AZ.

EDITORIAL ACTIVITIES

Reviewer, *Psychological Services*, 2014
Assistant Reviewer, *Drug and Alcohol Dependence*, 2013
Assistant Reviewer, *Medical Education*, 2013

TEACHING EXPERIENCE

September-December, 2012	**Teaching Assistant, UCSB,** Santa Barbara, CA *Professional Organizations*
July-September, 2011	**Teaching Associate, UCSB,** Santa Barbara, CA *Practicum in Applied Psychology*
September 2010- June 2011	**Graduate Teaching Assistant, UCSB,** Santa Barbara, CA *Introduction to Psychology*

CLINICAL TRAININGS

May, 2014	Trauma Focused Cognitive Behavioral Therapy- Advanced Course, Oklahoma City, OK
April, 2014	Motivational Interviewing Training, Oklahoma City, OK
March, 2014	Cognitive Processing Therapy 2-day Seminar with Patricia Resick, Tulsa, OK
Nov 2013- Feb 2014	Parent-Child Interaction Therapy Training, Oklahoma City, OK
August, 2013	Trauma Focused Cognitive Behavioral Therapy- Basic Course, Oklahoma City, OK

CONFERENCES ATTENDED

July, 2013	Annual Conference of the American Psychological Association, Honolulu, HI
March, 2013	The Society for Personality Assessment, San Diego, CA
August, 2012	California State Alcohol and Drug Programs Conference, Sacramento, CA
July, 2012	National Drug Court Training Institute on Veterans Treatment Courts, Irvine, CA
May, 2012	Annual Conference of the Society of Psychological Science, Chicago, IL
June, 2010	Annual Conference of the American Psychological Association, San Diego, CA
September, 2009	Annual Conference for the Center for School Mental Health, Minneapolis, MN
September, 2008	Annual Conference for the Center for School Mental Health, Phoenix, AZ

GUEST LECTURES / PRESENTATIONS

Larsen, J.L. (2014, January). *Psychotherapy Integration*. Presentation at the psychotherapy case conference at OUHSC.

Larsen, J.L. (2012, August). *Duty in a Changing World: Military Culture in 2012*. Invited presentation to the Santa Maria Court District: Santa Maria, CA.

Larsen, J. L. & Hughes, J. (2012, January). *Military Families: Research and Practice.* Invited presentation at Child Abuse Listening and Mediation: Santa Barbara, CA.

Hughes, J., Thomat, A., & Larsen, J.L. (2011, August). *The Administration and Clinical Utility of the Addiction Severity Index*. Training provided to the treatment court community treatment providers in Santa Barbara, CA.

Larsen, J. L. (2011, April). *Military Loved Ones Workshop.* Workshop presented at UCSB.

Larsen, J.L. (2010, November). *Coping and Resilience in Military Families*. Presentation at the Annual Counseling, Clinical, and School Psychology Doctoral Student Research Festival, UCSB.

Larsen, J.L (2010, November). *Parent Behavior Training for ADHD.* Presented in Pedagogy in Applied Psychology course, UCSB.

Larsen, J.L. (2010, November). *Trauma Focused Cognitive Behavioral Therapy: Research and Practice*. Presented in Child and Family Therapy course, UCSB.

TECHNICAL REPORTS

Larsen, J.L. & Cosden, M. (2013). *Veterans Treatment Court of Santa Maria: Findings from the First Year of Implementation.*

Cosden, M. & Larsen, J.L. (2012). *Annual Report on the Substance Abuse Treatment Courts of Santa Barbara County.*

Cosden, M., Hopsicker, R., & Larsen, J.L. (2012). *Final report to the Substance Abuse and Mental Health Services Administration (SAMHSA) on the Sober Women Healthy Families Program in Santa Barbara County.*

Cosden, M., Sullivan, K., Larsen, J. (2011). *A decade of drug treatment courts in Santa Barbara County*.

Saphire, D., & Larsen, J. (2009). *Trinity University Factbook: 2008-2009.* Retrieved from http://iraa.trinity.edu/Documents/ir_docs/FACTBOOK%202008-09.pdf

PROFESSIONAL AFFILIATIONS

American Psychological Association, Student Affiliate
- APA Division 05, Evaluation, Measurement, Statistics
- APA Division 12, Clinical Psychology
- APA Division 20, Adult Development & Aging
- APA Division 43, Family Psychology

APA Society of Clinical Geropsychology
Oklahoma Psychological Association

SERVICE

University of California, Santa Barbara
Department of Counseling/Clinical/School Psychology

September 2010- June 2011	*Division 43 correspondent*
September 2010-June 2011	*Veterans Resource Team*
September 2010-June 2011	*Student Representative to the Faculty (Elected Seat)*

GRANTS, HONORS, AND AWARDS

2013	*South Central Mental Illness Research, Education and Clinical Center (MIRECC) Clinical Education Grant/Research Award*
2012	*MOSAIC Inc-University of California Educational Evaluation Center Innovation Evaluation Research Award*
2012	*UCSB Academic Senate Graduate Student Research Travel Grant*
2011	*Hosford Fellowship Research Award, UCSB*
2010	APA *"Graduate Superstar" Datablitz Presenter*
2010	*APA Division 19 Graduate Student Travel Grant*
2010	*Military Spouse Portable Career Scholarship*
2010-2011	*Graduate Student Travel Grant, UCSB*
2009-2010	*Block Grant, UCSB*
2008	*Rutgers Graduate School of Education Commencement Student Speaker*
2007-2008	*Kappa Delta Pi Honor Society*
2004-2005	*NYU Dean's List*
2004-2005	*Order of Omega National Honor Society*
2003	*University Athletic Association Women's Foil Fencing Champion*
2001-2005	*College of Arts and Sciences Trustees Scholarship*
2001-2002	*NYU Chancellor's Grant*

ABSTRACT

Trauma and the Justice-Involved Veteran

by

Jessica Lynn Larsen

This research focused on the experiences of veterans in two jail diversion programs, a traditional drug court and a new specialized variant of drug court, Veterans Treatment Court (VTC). VTC is similar to a traditional drug court with the addition of specialized components for veterans, including the addition of a Veterans Affairs (VA) justice outreach specialist, who serves as the conduit between the VA and the court. This new approach to intervention with justice-involved veterans has not previously been subject to empirical testing. In order to provide an empirical basis for the need of the VTC program and an understanding of the effects of this program, two sets of analyses were conducted. First, an analysis of seventy participants in a traditional drug court examined differences between matched pairs of veterans and civilians in regards to their drug and alcohol problems and psychiatric symptoms. Veterans were found to have significantly more severe lifetime drug histories than did their civilian counterparts, suggesting that veterans have different needs than civilians, which might be addressed in a specialized program.

In the second study, 41 participants in a Veterans Treatment Court (VTC) were assessed on measures of psychopathology, substance abuse, and employment problems and interviewed regarding their trauma histories and experiences while in the program. Hierarchical linear regression analyses revealed the effects of

differential traumas on the expression of treatment needs at intake, including psychological symptoms and substance abuse disorders. Combat trauma significantly, independently predicted post-traumatic stress disorder (PTSD), depression, and drug abuse symptoms at intake. While PTSD and depression were highest among those with the most severe combat exposure, drug abuse was highest among those exposed to moderate levels of combat. This suggests that even milder forms of combat exposure can have detrimental effects on functioning. Additionally, for PTSD, post-deployment trauma contributed in unique ways to symptoms above and beyond combat trauma, indicating that non-military stressors have deleterious effects on mental health among veterans.

Overall, Veteran's Treatment Court participation was associated with reductions in mental health symptoms, drug abuse severity, and employment problems over time. The particular aspects of the program that contributed to this change did not differ by combat status and appeared to be additional access to services and a streamlined referral process to the VA, as well as increased participant motivation through judicial interactions and engagement with program staff. This study suggests the importance of providing trauma-informed care to ensure responsive treatment for justice-involved veterans, and underscores the notion that Veteran's Treatment Courts can be used to effectively treat the trauma-associated symptoms of combat and non-combat justice-involved veterans alike. The implications of the findings for future research and jail diversion programs development are discussed.

Chapter I

Introduction

Since the attacks of September 11, 2001, approximately 1.7 million service members of the United States armed services have deployed to war in Afghanistan (Operation Enduring Freedom; OEF) and Iraq (Operation Iraqi Freedom; OIF/ Operation New Dawn; OND) (Ramchand, Schell, Jaycox, & Tanielian, 2011). The deployments were longer and more frequent than those in any previous war in modern U.S. history and thus placed significant demands on U.S. military members and their families. For military members, multiple and repeat deployments with limited recovery time at home became common at the height of the wars (Wadsworth & Riggs, 2011). In response to these circumstances, research documenting the psychological toll of the OIF/OEF wars on veterans showed significant increases in rates of posttraumatic stress disorder and traumatic brain injury (Jaycox & Tanielian, 2008). In addition, improvements in battlefield medical care led to an increase in the numbers of veterans returning from OIF and OEF with catastrophic physical injuries (Okie, 2005). As a result, there has been a growth in the numbers of veterans living with significant physical and psychological distress in the United States today.

Large epidemiological studies reveal that approximately one in four veterans are diagnosed with a mental health condition in the twelve months following deployment to Iraq (Hoge et al., 2004; Thomas et al., 2010). In particular, traumatic brain injury (TBI) and posttraumatic stress disorder (PTSD) have been identified as the "signature wounds" of the OIF and OEF wars (Tanielian & Jaycox, 2008). Similar

to increases of PTSD and TBI, increases in the rates of alcohol misuse and suicide have been documented among samples of returning OIF/OEF veterans (Black, Gallaway, Bell, Richie, 2011; Browne et al., 2008; Milliken et al., 2006).

In addition to increases in psychological distress following deployment, rates of aggression have been shown to be elevated among veterans following deployment. In a sample of help-seeking Vietnam veterans, Beckham, Feldman, Kirby, Hertzberg, and Moore (1997) found that approximately three-fourths of individuals diagnosed with combat related PTSD engaged in acts of physical aggression twelve months prior to the study. Consistent with the pattern of general aggression, rates of intimate partner violence (IPV) have been shown to be elevated among veterans with PTSD, as compared to those without a PTSD diagnosis (Kulka et al., 1990). Among a sample of help seeking veterans, 39% of non-partnered and 32% of partnered veterans reported an incidence of physical aggression including "throwing something," "pushing," "shoving," "grabbing," "kicking," and "slamming against a wall" in the year prior to the study (Taft et al., 2009). Further, heightened rates of aggression and anger have also been documented in samples with sub-clinical symptoms of PTSD, suggesting that the problem is widespread among veterans (Jakupcak et al., 2007).

Given the multitude of the challenges following deployment, veterans tend to surface in the legal system for substance abuse and/or aggression related charges, such as public intoxication, driving under the influence, battery, and domestic violence. Indeed, research from The National Vietnam Veterans Readjustment Study (Kulka et al., 1990) showed that approximately 35% of Vietnam veterans were

arrested and 11% were convicted of a felony following their service. Further, the same study found rates to be higher among veterans with active PTSD than rates for those without PTSD. Specifically, nearly half of the male veterans with active PTSD in the study had previously been arrested or placed in custody more than once. Early indicators suggest that these trends are beginning to emerge for veterans of the modern wars. A 2012 study from the Department of the Army showed a 31% increase in violent felonies committed by active duty Army members from the period from 2006-2011. Further, a recent report by researchers in the United Kingdom showed that deployment to Iraq or Afghanistan was associated with a 21% increase in criminal offenses among male service members (MacManus et al., 2013).

In response to these trends, national and state legislators have called for courts to assess the mental health statuses of veterans in the legal system. The Veterans Treatment Courts (VTC) model has emerged in response to these calls with the intention to divert eligible veteran defendants with substance abuse problems and and/or mental illness to a specialized criminal court. The underlying assumption of the VTC model is that a veteran's criminal behavior can be directly tied to their experiences in the military. Thus, these courts aim to treat their underlying mental health symptoms stemming from military service in an effort to reduce criminal behavior (Cavanaugh, 2010). These courts adhere to standards set by the drug court movement including rigorous treatment and personal accountability with the end goal of breaking the cycle of addiction and criminal behavior.

Due to the lack of a unifying model nationally, VTC's vary across sites. Enrollment criteria and program guidelines are determined locally by individual program stakeholders and policymakers. Despite this, some common characteristics among VTC's have been observed by scholars (Cavanaugh, 2010; Hawkins, 2010). In most VTC's, veterans enter and are required to plead guilty of their crime. In exchange for a suspended sentence, defendants agree to undergo a strict rehabilitation program that includes regular court visits, probations supervision, mental health treatment, and random drug testing (when applicable to their offense). Defendants are required to appear in court throughout their treatment, and the judge retains supervision over the defendant's adherence to the treatment plan through the duration of the program. Typically, programs range from 12 to 18 months. Hearings may result in alterations in the treatment plan and regularly include coaching and encouragement from the court (Cavanaugh, 2010; Hawkins, 2010).

The VTC model promotes a policy of close collaboration between the courts and the United States Department of Veterans Affairs (VA), as well as local veterans' organizations, police agencies, probation, researchers, and mental health treatment providers to provide rehabilitative services to participants. The Veteran's Justice Outreach specialist (VJO), a new position within the VA, serves as the liaison between the VA and the courts. The VJO assists VTC defendants in gaining access to benefits at the VA, including medical and mental health treatment, substance abuse treatment, medical evaluations for disorders associated with military service, housing, and vocational rehabilitation and employment assistance (Cavanaugh, 2010;

Hawkins, 2010). With access to VA records, the VJO provides ongoing status updates on VTC participants to the court.

One issue that remains unsettled among policy makers is whether to limit VTC enrollment to combat veterans. Combat veterans are those veterans who served on active duty in a theater of combat operations (US Department of Veterans Affairs, 2010). However, all veterans, who have been discharged from the service "under [other than dishonorable] conditions," are eligible for healthcare benefits (Department of Veterans Affairs, 2013), and the California penal code states any veteran "who was a member of the military forces and suffers from post-traumatic stress disorder, traumatic brain injury, substance abuse, military sexual trauma, or psychological problems as a result of their service," should be provided special consideration in the legal system. Because the state of California does not have any statutes that regulate veteran courts specifically, the definition of "as a result of their service" leaves open the possibility for individual jurisdictions to interpret the law as they deem appropriate. Some courts have opted to limit access to only combat veterans, while others enroll both combat and non-combat veterans. As the state of California has no particular authorizing statute for veteran courts, this ambiguity has yet to be resolved.

To date, one published study has reported outcomes associated with the VTC program. Smith (2012) reported a 45% three year recidivism rate among graduates of the Veterans Court program in Anchorage, Alaska from July 2004 through December 2010; this as compared to a 50.4% recidivism rate for all court proceedings in Alaska. Further, according to an early 2011 news article, the Buffalo Veteran's Court had a

zero recidivism rate during the first three years of operations (Gulley, 2011). Both the Anchorage and Buffalo Veterans Courts enrolled combat and non-combat veterans. This data suggest that VTC's reduce recidivism among justice-involved veterans.

Purpose and Hypotheses

This study examines the experiences of military veterans in the criminal justice system. In study one, the treatment needs of veterans presenting to an adult treatment court will be compared to non-veterans to examine whether veterans' treatment needs diverge from the needs of their civilian counterparts. In study two, veterans' treatment needs will be further examined in a sample of those participating in a VTC, specifically in regards to the effect of trauma on psychological functioning and substance abuse problems. Of particular interest is the incremental predictive nature of pre-deployment, deployment/post-deployment, and combat traumas on veterans' psychological functioning and substance misuse. Study two will also explore the extent to which the VTC program responds to the veterans' presenting concerns by examining changes in psychopathology and substance abuse over the first three months in the program. Finally, study two will examine the functionality of the VTC program for veterans with varying combat histories by examining barriers and access to care, as well as treatment motivation and program satisfaction, between combat and non-combat veteran groups.

Question One. The justification for a specialized treatment program is rooted in the assertion that a specific group has a distinctive set of needs or characteristics that are best addressed by specialized intervention. This study will examine how

veterans in the treatment court setting differ from civilians along dimensions of treatment needs. More specifically, this study poses the question, do military veterans report more baseline psychiatric problems than do their civilian counterparts? Further, do veterans have higher baseline levels of alcohol and drug abuse than do civilians? Do military veterans have higher levels of employment problems than do their civilian counterparts? In other words, do veterans present to a treatment court with needs that are unique from that of their civilian counterparts?

Hypothesis 1.1. Based on past veteran research, it is predicted that veterans will present with more baseline psychiatric problems than will their civilian counterparts as measured by the psychiatric composite scores, severity scores, and clinical indices of the Addiction Severity Index (ASI; McLellan et al., 1992), a semi-structured clinical interview.

Hypothesis 1.2. Because of the research on the prevalence of alcohol abuse among veterans, it is hypothesized that veterans will have higher baseline levels of alcohol abuse problems than will their civilian counterparts as measured by the alcohol composite scores, severity ratings, and clinical indices of the ASI.

Hypothesis 1.3. Because of the research on the prevalence of drug abuse among veterans, it is hypothesized that veterans will have higher baseline levels of drug abuse problems than will their civilian counterparts as measured by the drug composite scores, severity ratings, and clinical indices of the ASI.

Question Two. There is currently no consensus statement regarding eligibility criteria for VTC's in regards to combat status. At the heart of this issue is whether life traumas, including combat, contribute in a unique and/or cumulative manner to symptoms among veterans. Such an understanding could help to inform policy by expanding knowledge on the nature of the mental health and substance abuse problems among justice-involved veterans with varying combat statuses. Based on prior research linking PTSD symptoms to veterans' military and non-military trauma exposures, this study aims to answer the question: do pre-deployment, combat, and post-deployment traumas predict veteran's symptom levels at intake to a VTC?

Hypothesis 2.1. Pre-military, combat trauma, and post-deployment trauma, as measured by the Trauma History Screen (THS, Carlson et al., 2011) and the Combat Exposure Scale (CES; Lund, Foy, Sipprelle & Strachan, 1984) will predict severity of PTSD symptoms, as measured by the PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993), at intake.

Hypothesis 2.2. Pre-military, combat trauma, and post-deployment trauma, as measured by the CES and the THS, will predict the severity of depression, as measured by the Patient Health Questionnaire (PHQ; Kroenke, Spitzer & Williams, 2001), at intake**.**

Hypothesis 2.3. Pre-military, combat trauma, and post-deployment trauma, as measured by the CES and THS, will predict the severity of alcohol abuse at intake, as measured by the alcohol composite scores of the ASI, at intake.

Hypothesis 2.4. Pre-military, combat trauma, and post-deployment trauma, as measured by the CES and THS, will predict the severity of drug abuse at intake, as measured by the drug composite scores of the ASI, at intake.

Question Three. The mission of the VTC intervention is to assist justice- involved veterans to improve their life functioning (Santa Maria Veterans Treatment Court Handbook, 2013). While traditional treatment courts have shown success in this area by reducing mental health symptoms and substance misuse among civilians (Mitchell, Wilson, Eggers, & MacKenzie, 2012), do VTC's achieve this goal?

Hypothesis 3.1. Participants will report fewer symptoms of PTSD 3 months into treatment as compared to baseline, as measured by the PCL.

Hypothesis 3.2. Participants will report reduced symptoms of depression 3 months into treatment as compared to baseline, as measured by the PHQ.

Hypothesis 3.3. Participants will report reduced alcohol abuse severity 3 months into treatment as compared to baseline, as measured by the alcohol abuse composite scores of the ASI.

Hypothesis 3.4. Participants will report reduced drug abuse severity 3 months into treatment as compared to baseline, as measured by the drug abuse composite scores of the ASI.

Hypothesis 3.5. Participants will report reduced employment problems 3 months into treatment as compared to baseline, as measured by the employment problems composite scores of the ASI.

Question Four. It is unclear whether or not the VTC intervention functions differentially for groups of veterans. One aim of the program is to help veterans overcome barriers and gain access to treatment services to treat their underlying mental health conditions. This process may unfold differentially for combat and non-combat veterans due to differences in levels of care within the Veteran's Administration. Therefore, this study will ask, what factors obstruct combat and non-combat veterans in accessing treatment prior to their involvement with the court? Further, the study will explore the mechanisms in which the VTC program hinders/facilitates combat and non-combat veterans in overcoming barriers and gaining access to treatment. Finally, to explore any subjective differences in program experiences between combat and non-combat veterans, motivations for treatment and program satisfaction will be examined. This will be accomplished through a grounded-theory analysis of textual responses to open-ended questions administered during the intake and follow-up interviews.

Chapter II

Literature Review

Introduction

Since the attacks of September 11, 2001, approximately 1.7 million service members of the United States armed services have deployed to war in Afghanistan (Operation Enduring Freedom; OEF) and Iraq (Operation Iraqi Freedom; OIF/ Operation New Dawn; OND) (Ramchand, Schell, Jaycox, & Tanielian, 2011). The deployments have been longer and more frequent than those in any previous war in modern U.S. history and have thus placed significant demands on U.S. military members and their families. For military members, multiple and repeat deployments with limited recovery time at home became common at the height of the wars (Wadsworth & Riggs, 2011). In response of these circumstances, research documenting the psychological toll of the OIF/OEF wars on veterans showed significant increases in rates of Posttraumatic stress disorder and traumatic brain injury (Jaycox & Tanielian, 2008). In addition, improvements in battlefield medical care led to an increase in the numbers of veterans returning from OIF and OEF with catastrophic physical injuries (Okie, 2005). As a result, there has been a growth in the numbers of veterans living with significant physical and psychological distress in the United States today.

This review will cover the psychosocial outcomes following war that have been established in the literature, including mental illness, substance abuse, aggression, and criminal behavior. Next, this review will explore the development of

a new treatment approach for criminally offending veterans, Veteran Treatment Courts (VTC), and will follow with an application of risk-needs-responsivity theory to offenders enrolled in VTC.

Mental Illness

Research on veterans has shown significant increases in mental health problems following deployment to war. Large epidemiological studies reveal that approximately one in four veterans are diagnosed with a mental health condition in the 12 months following a deployment to Iraq (Hoge et al., 2004; Thomas et al., 2010). Traumatic brain injury (TBI) and posttraumatic stress disorder (PTSD) have shown to be a considerable concern among OIF and OEF veterans (Tanielian & Jaycox, 2008). Further, combat trauma and PTSD have been linked to increases in the rates of depression, alcohol misuse, aggression, and suicide observed among samples of OIF/OEF veterans (Black, Gallaway, Bell, Richie, 2011; Browne et al., 2008; Milliken et al., 2006).

Traumatic Brain Injury (TBI) and mild traumatic brain injury (mTBI or concussions) are considered to be "signature wounds" of OIF/OEF (Jaycox & Tanielian, 2008). In particular, mTBI has gained attention from researchers due to the insurgency's reliance on improvised explosive devices to attack U.S. forces in these conflicts. Over 25% of veterans report head and neck injuries, including severe brain trauma, after being evacuated from Iraq and Afghanistan (Okie, 2005). Estimates of clinician- confirmed mTBI among the veterans of OIF/OEF range from 11% to 23%. MTBI has been associated with various post-concussive symptoms, including

depression, PTSD, and personality changes commonly reported in veterans (Brenner et al., 2010).

By definition, PTSD is an anxiety disorder that develops following exposure to a traumatic event. It is characterized by a combination of re-experiencing, avoidance, and increased alertness following the trauma (DSM IV-TR). PTSD was first studied in war veterans of earlier wars. In the past, researchers referred to PTSD as "shell shock," "war neurosis," and "combat fatigue." In 1980, PTSD became fully recognized by the medical community when it was added to the Diagnostic Statistical Manual (DSM-III) by the American Psychiatric Association. This followed research efforts of the Department of Veterans Affairs on veterans of the Vietnam War, which showed increases in the rates of mental illness, homelessness, and substance abuse following their service (Cavanaugh, 2010).

PTSD can be enduring and have long term effects. Kulka and colleagues' (1990) study found that 30.6% of male Vietnam veterans and 26.9% of female veterans developed clinically significant PTSD at some point following their war experiences. Further, a full 15.2% of male veterans and 8.5% of female veterans continued to suffer clinical PTSD more than a decade after the end of the Vietnam War, suggesting that PTSD can be long-lasting. Research on civilian samples has also replicated the finding that PTSD is long-lasting. A survival analyses on civilians with PTSD found that more than one-third of people with PTSD fail to recover even after many years (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). These numbers may be misleading as researchers have suggested that estimates of the PTSD

incidence among Vietnam veterans may drastically underestimate the true incidence, as many veterans may remain silent, marred by shame about their experiences. Clearly, PTSD has shown to be a significant and enduring concern for those exposed to trauma.

The dose-response theory of PTSD posits that the severity of symptoms is predicted by the duration and intensity of the trauma exposures (Kaysen, Rosen, Bowman, & Resick, 2010). Research on military personnel supports this hypothesis. Researchers have consistently found that rates of PTSD and suicide among veterans are directly predicted by the amount and severity of combat exposure (Hoge et al., 2004; Milliken et al., 2007; Thomas et al., 2010). Specifically, researchers have determined that symptoms of self-reported PTSD are two to three times higher among previously deployed, combat-exposed veterans than among those with no combat exposure (Hoge et al., 2004; Leardmann, Smith, Smith, Wells, & Ryan, 2009; Rona et al., 2007; Smith et al., 2007). The specific types of combat exposure that have been found to be predictive of PTSD include: "being shot at," "handling dead bodies," "knowing someone who was killed," or "killing enemy combatants" (Hoge et al., 2004).

Indeed, research examining cumulative trauma has supported the dose-response theory of PTSD. Smith et al. (2007) found that baseline levels of psychological symptoms were predictive of post-deployment PTSD, in that individuals who had psychological symptoms before deployment to OIF/OEF were more likely to show signs of PTSD after deployment than those who do not have

symptoms before deployment. They argued that immediate combat experiences trigger previous traumas leading to heightened levels of PTSD morbidity among veterans following deployment. In one study, Cabrera, Hoge, Castro, and Messer (2007) found that childhood adversity was predictive of later PTSD diagnosis in a sample of over 6000 military members. These studies contribute to mounting evidence which supports the cumulative effect of trauma exposure to the development of PTSD and suggests that the experience of multiple, repeated deployments may be particularly detrimental to veterans' well-being.

Several studies have examined correlates to new onset PTSD in an attempt to identify risk factors. In a survey of over 50,000 veterans, Smith et al. (2007) found that new onset PTSD was proportionally higher among those who were female, younger, less educated, never married or divorced, Hispanic, enlisted, and in the Army vs. other service branches. Suicide has been found to be more likely for male, older (35+), divorced, enlisted, and active duty veterans (Black, Gallaway, Bell, & Ritchie, 2011; Kang & Bullman, 2008). It is likely that suicide is a result of untreated mood and anxiety disorders. One explanation of these observed differences in profiles is that those who commit suicide had untreated PTSD. These veterans, mostly older males in active duty units, failed to self-identify for PTSD treatment, and in turn used suicide as means of pain reduction. This may be reflective of their entrenchment in a hyper masculine military culture.

Rates of depression have also been studied in groups of returning veterans. The estimated prevalence of depression in returning OIF/OEF veterans has ranged

across studies, from approximately 14% (Tanielian & Jaycox, 2008) to 38% (Lapierre, Schwegler, & LaBauve, 2007). Tanielian and Jaycox (2008) found that service personnel were two times more likely to have comorbid PTSD and depression than depression alone. In longitudinal studies, rates of depression have been found to increase approximately 10% as time from returning from deployment increases (Grieger et al., 2006; Milliken et al., 2007). Clearly, depression is a considerable concern for recently returned veterans.

Given the increases in PTSD, depression, and suicide, researchers have expanded upon previous understandings of the barriers to care within the military system. Mental health stigma has been identified as one of the major culprits and has received considerable attention by researchers. The results of a large scale study suggest that stigma plays a significant role in limited service seeking behaviors among active duty military personnel. Of 700 Army soldiers and Marines meeting criteria for PTSD, 65% reported that they did not seek mental health treatment because, "I would be seen as weak" and 63% reported that, "my unit leadership might treat me differently" as a reason for not seeking services. The results indicated that soldiers believed seeking mental health care would be detrimental to their career trajectories in the military (Hoge et al., 2004). Unfortunately, it appears that stigma is strongest among those most impaired. Soldiers who met screening criteria for mental health problems were twice as likely as those soldiers who did not meet screening criteria to endorse stigmatized beliefs (Hoge et al., 2004). Additionally, active duty soldiers were more likely to report issues of stigma than were their reserve and

National Guard counterparts, which may be explained by the ties between career advancement and mental health in the active duty components (Kim, Thomas, Wilk, Castro, & Hoge, 2010).

Substance Abuse

Alcohol misuse is a significant concern for military veterans. A recent population based study of soldiers returning from Iraq found that of the 50,000 deployed Army soldiers from the active duty component surveyed, 25% of Army soldiers and 35% of Marines reported using "more alcohol than they intended to use." Other studies have shown similar rates; approximately 20% to 36% of military personnel meet criteria for severe alcohol problems following deployment to OIF/OEF (Rona et al., 2007; Zeigler et al., 2011). Wilk et al. (2010) surveyed recently returned Army soldiers and found 25% screen positive for alcohol misuse and 12% met criteria for alcohol misuse and impaired occupational functioning. In a study of the United Kingdom armed forces, Milliken et al. (2007) found that while 12% of active soldiers screened positive for alcohol misuse following deployment, only 0.2% had been referred to treatment for these problems. These problems appear to be enduring, as one study showed that alcohol consumption was elevated for over 3 years following deployment to OIF/OEF among UK Armed Forces (Hooper et al., 2008).

Given the high degree of alcohol problems following deployment, researchers have explored factors associated with this negative outcome. The most salient predictors appear to be duration of the deployment and the severity of combat

exposure. Rona et al. (2007) found that duration of deployment was significantly associated with problem drinking, in that soldiers who were deployed longer had worse problems following deployment. Specific combat exposures also appear to be associated with problem drinking. A study of over 3000 male UK military members found that "thinking you might be killed" was associated with heavy drinking post deployment (Browne et al., 2008). Similarly, Hooper et al. (2008) found "thoughts of being killed" and "levels of experienced hostility from civilians" while on deployment significantly predicted alcohol consumption three years after deployment. Another study of over 1000 U.S. Army infantry soldiers found that "threat of death/injury" and "exposure to atrocities during war" were predictive of later alcohol misuse (Wilk et al., 2010). Jacobson and colleagues (2008) compared deployed reservists and National Guard members with combat exposures to those with no deployment or combat history and found that those exposed to combat were more likely to engage in heavy weekly drinking (9% versus 5%) and binge drinking (26% versus 17%). They were also more likely to develop alcohol related problems (7% versus 3%) than those without combat experiences. These findings taken together provide strong empirical support for the connection between traumatic combat exposures and alcohol misuse.

Self-medication theory (SMT) is one potential explanation for the increased rates of alcohol misuse among veterans following deployment (Kushner, Sher, & Beitman, 1990). Research has shown that those anxiety disorders and alcohol dependence are highly comorbid (Hasin, Stinson, Ogburn, & Grant, 2007). SMT

explains this relationship in terms of tension-reduction properties of alcohol and the negative reinforcement resulting from alcohol-induced tension reduction. Drawing from these concepts, SMT posits that negative reinforcement of drinking results from alcohol induced anxiety reduction and promotes the increase of alcohol consumption among anxiety disorder individuals. This increase in alcohol consumption, places anxiety disordered individuals at increased risk for the development of substance abuse disorders.

SMT has gained the attention of researchers in recent years. In a review of the literature, Carrigan and Randall (2003) concluded that a significant portion of individuals with social anxiety disorder consume alcohol with the intent to cope. Support for SMT has also been garnered from various laboratory studies which demonstrate that alcohol intoxication results in reduced tension states and anxiety symptoms setting (Abrams, Kushner, Medina, & Voight, 2002). Community-based research has also provided evidence for SMT. Researchers found that community participants with anxiety disorders were motivated to drink for self-medication purposes (Robinson, Sareen, Cox, & Bolton, 2009); the finding was replicated at a higher rates among a clinical sample (Robinson, Sareen, Cox & Bolton, 2009). Finally, Menary, Kushner, Maurer, and Thuras (2011) found that nearly 20% of drinkers with a diagnosis of anxiety disorder reported using alcohol with the explicit purpose of coping with their anxiety. They argue that for many individuals, this behavior may be below their level of conscious awareness and state that 20% may vastly underestimate the true proportion of individuals who drink for coping

purposes. Repeatedly studies have demonstrated the association between alcohol consumption and anxiety reduction, thus providing strong empirical support for SMT.

Aggression

Studies have shown increases in rates of aggressive behavior among veterans with PTSD and substance abuse problems. Among Vietnam veterans, PTSD has been linked to hostility and interpersonal difficulties (Beckham et al., 1996). In a sample of help-seeking Vietnam veterans, Beckham, Feldman, Kirby, Hertzberg, and Moore (1997) found that approximately three fourths of those with a PTSD diagnosis had engaged in general physical aggression over the previous twelve months. Heightened rates of aggression and anger have also been found among those with sub-threshold PTSD (Jakupcak et al., 2007). Taft et al. (2009) examined a multigenerational sample of help-seeking veterans and found that 87% of non-partnered veterans and 80% of partnered veterans reported either physical or psychological aggression in the twelve months prior to the study. Further, 39% of non-partnered and 32% of partnered veterans report an incidence of physical aggression including "throwing something," "pushing/shoving," "grabbing," "kicking," and "slamming against a wall." These findings suggest that aggression is common among veterans with PTSD.

Researchers have also paid considerable attention to a specific type of aggression, intimate partner violence (IPV). Kulka et al. (1990) found that IPV rates were elevated among veterans with PTSD as compared to those without PTSD. Taft et al. (2009) found that 91% of partnered veterans reported partner aggression in the past twelve months including "shouting or yelling," "stomping out of the room," and

"insulting or swearing." Of those veterans, 33% reported physical aggression toward their partners. Theoretical links between PTSD and anger and interpersonal violence in veterans have been postulated by scholars who have considered both neurobiological and trauma related pathways (for a review, see Beckham, Moore, & Reynolds, 2000). Also, research indicates that increases in alcohol problems are significantly associated with moderate to severe intimate partner violence among the military population (Rosen, Kaminiski, Parmley, Knudson, & Fancher, 2003). Indeed, when comparing substance using and non-substance using offenders of intimate partner violence, those who used substances are more likely to engage in severe/moderate physical and sexual abuse than those who are not using substances (Martin et al., 2010).

Criminal Offending

The confluence of problems following military deployment, including increases in mental illness, substance abuse, and aggression, is likely to place veterans at increased risk for criminal offending. The National Vietnam Veterans Readjustment Study (Kulka et al., 1990) estimated that approximately 35% of Vietnam veterans had been arrested following their service and 11% had been convicted with a felony. The Bureau of Justice Statistics (BJS) has published two reports on the prevalence of military veterans in local jails and prisons. Mumola (2000) reported that the rates of incarcerated veterans rose 46% between 1985 and 1998; however, the rate of increase was far less than that observed in the non-veteran population during the same period. A later study showed that the proportion of

incarcerated veterans in the state and federal prisons steadily declined from 20% in 1986 to 10% in 2001 (Noonan & Mumola, 2007).

Research has demonstrated the associated between PTSD, criminal offending, and incarceration. According to the Vietnam Veteran's Readjustment Study, half of the male Vietnam veterans under study with active PTSD had been arrested or placed in custody more than once during their lifetime (Kulka et al., 1990). Researchers posit that PTSD symptoms impair an individual's ability to react with appropriate intensity to environmental stimuli; specifically, veterans suffering with PTSD are more likely to overreact or respond violently to what they perceive as threatening. This hyper-reactivity may result in the veteran harming another person or engaging in other criminal behavior (Hafemeister & Stockey, 2010).

Early indicators suggest that this historical pattern may be repeated among veterans of the modern wars. In a recent report published by the Department of the Army (2012), the Army reported a two-fold increase in arrests for intimate partner violence among active duty soldiers. Further, a recent report by researchers in the United Kingdom showed that deployment to Iraq or Afghanistan was associated with a 21% increase in criminal offending among male service members (MacManus et al., 2013). Specifically, the study showed that 11% of service personnel returned from deployment to commit violent offenses (i.e. assault, battery, homicide) and 6% committed alcohol-related or drug related offenses. Increases in criminal offending behaviors among returning veterans are likely to translate into increases in the proportion of veterans in the civilian criminal justice system.

Military training and criminal behavior. Several scholars have linked military training to later acts of violent and aggressive behavior. Military training is used to prepare soldiers for combat but may also account for some acts of later violence. Military training reinforces soldiers to confront and react to threatening situations through aggression. Soldiers are conditioned to survive harsh, threatening and violent environments. They are taught to attack an enemy target dispassionately, quickly, and without hesitation. Further, they are trained to suppress various normal instincts including the flight response in the face of threat (Levin, 1993).

Military training also reduces a person's resistance to dehumanize and kill others perceived as the enemy. This type of military training is achieved through operant conditioning, stimulus-response training and psychological inoculation (Grossman, 1993). Positive and negative reinforcement techniques are used to reduce resistance and desensitize military personnel to the act of killing. Personnel are trained to automatically take another's life when a given a set of circumstances are met and to follow a commander's orders without hesitating to ensure that combat responsibilities are carried out without question. This training can also promote veterans being less focused on human suffering and more attuned to accomplishing an assigned military objective (Levin, 1993).

This mindset, while adaptive in a warzone, can be rendered maladaptive when a veteran returns to a civilian society. While the military has developed highly effective means of training soldiers how to survive in combat and complete a mission, the conditioning associated with this training often remains intact even after the

soldier returns from their service commitment. The military has yet to implement counter-conditioning training (which might include extinguishing techniques) to reverse the effects of combat training. Therefore, many of the behaviors associated with survival in the combat zone remain with the veteran when they return to the civilian context where they are no longer confronted with life or death situations. These behaviors may be particularly problematic when a combat veteran suffers from PTSD. They may act impulsively and aggressively due to hyper-arousal or impaired judgment and decision making abilities (Levin, 1993).

Veterans in the U.S. criminal justice system. In response to growing concerns, national and state legislators have called for courts to assess the mental health of veterans in the legal system (Cavanaugh, 2010). The Veterans Treatment Courts (VTC) model has emerged in response to these calls with the intention to divert eligible veteran defendants with substance abuse and and/or mental illnesses to a specialized criminal court. The underlying assumption of the Veterans Treatment Court model is that that veterans' criminal behavior can be directly tied to their experiences in the military. Thus, these courts aim to treat the underlying mental health difficulties associated with their service to reduce recidivism (Cavanaugh, 2010).

VTC's rose out of the infrastructure that existed within the treatment court model and reflect many of their principles. As such, VTCs advocate for rigorous treatment and personal accountability with the goal of breaking the cycle of drug use and criminal behavior. There is a vast literature on traditional treatment courts. Since

the VTC model shares a common theoretical grounding with the traditional treatment court model, this literature may provide some insight into the future operations and outcomes of VTCs.

Adult Treatment Courts

The treatment court model has existed for nearly two decades in the United States. Early in its tenure, founders drafted a consensus statement about how drug courts should operate and what essential components should be included. The resulting 10 key components represent broad ideas about how a drug court differs from traditional criminal courts. They are grounded in principles of therapeutic jurisprudence, which is concerned with the law's role as a therapeutic agent (Winick & Wexler, 2001).

The key components of drug courts are: (1) integration of alcohol and other drug treatment services with justice system case processing; (2) use of non-adversarial approach; (3) early identification of eligible participants and prompt placement in the program; (4) provision of access to a continuum of alcohol, drug and other related treatment and rehabilitation services; (5) frequent monitoring by alcohol and other drug testing; (6) coordinated strategy to encourage participants' compliance; (7) ongoing judicial interaction with drug court participants; (8) monitoring and evaluation to measure the achievement of program goals and effectiveness; (9) continued interdisciplinary education to promote effective drug court planning, implementation, and operations; and (10) forging partnerships among drug courts, public agencies, and community-based organization to generate local support and

enhance drug court effectiveness (Hiller et al., 2010; Office of Justice Programs, 2004).

In just over 20 years, the drug court movement has grown considerably in both number and type throughout the United States (Huddleston & Marlowe, 2011). Drug courts were the first of the aptly named "problem solving courts," and the key components have served as the model for these other problem -solving courts. In recent years the model has been applied to non-traditional populations including juvenile illicit substance users, repeat Driving While Intoxicated (DWI) offenders, and now veterans (Mitchell, Wilson, Eggers, & MacKenzie, 2012).

A tremendous volume of research has been directed at examining the effectiveness of these problem solving courts. Research has demonstrated that drug courts are the most effective intervention for offenders suffering with substance dependence and abuse (see Marlowe, 2010 for a review). The two key criminal justice outcomes typically evaluated are drug use and criminal recidivism. Research has reliably shown significant reductions in these two outcomes to support the claim that drug courts do indeed work (DeMatteo, Filone, & LaDuke, 2011). Indeed, several meta-analyses conducted by independent researchers all concluded that adult drug courts significantly reduce recidivism rates. Recidivism rates for graduates were determined to be on average, 8 to 26 percentage points lower than for comparison groups. Further, these effects have shown to be enduring, lasting 12 months after graduation from the court intervention (Downey & Roman, 2010; MacKenzie, 2006; Wilson et al., 2006).

The research evidence supporting problem solving courts' effectiveness has been brought into question. Specifically, scholars have questioned the methodological rigor of past evaluations that have shown positive outcomes (Hoffman, 2002). They cite the lack of studies with randomized controlled trial (RCT) designs and an over reliance on quasi-experimental research. Such research opens the possibility for selection biases and maturation effects to inflate the actual effects of the intervention.

There is a relative paucity of RCT research on drug courts. A recent meta-analyses of drug court evaluation research showed that only 3% of studies on adult drug court followed a randomized experimental design and the remainder were quasi-experimental (Mitchell, Wilson, Eggers, & MacKenzie, 2012). Further, the analyses revealed smaller effects for the more rigorous designs as compared to the quasi-experimental designs, supporting the critiques that the effects of this intervention may be inflated due to design issues. The researchers reported that the means- odds-ratio for the three identified experimental designs was not statistically significant, supporting a null effect for drug court on general recidivism. The authors cautioned that the findings were driven by inconsistent results across the three evaluations and low statistical power. More RCT designed research is needed to bring clarification to this debate.

Despite the aforementioned call by researches, contextual constraints of the legal setting often limit a researcher's ability to conduct more rigorous research. One major challenge is resistance from judges to permit offenders under their jurisdiction to be randomly assigned to study conditions that provide divergent treatments and

services. Additionally, random assignment raises several ethical and legal questions and could pose a threat to public safety if high risk offenders receive fewer services (DeMatteo, Filone, & LaDuke, 2011; Peters, 1996). DeMatteo, Filone and LaDuke (2011) recommend the use of quasi-experimental designs when randomization is not feasible. In drug court research, the use of pre-existing groups (e.g., drug court clients versus drug court eligible offenders in standard court) may represent the best alternative for researchers and stakeholders.

Risk-Needs-Responsively Theory

The Risk-Need-Responsively (RNR) Model is a model of risk assessment and intervention for use with offenders in the criminal justice system. Drawing from literature on the most salient predictors of criminal conduct, the model posits that there are major, moderate, and mild risk/need factors for treatment. This model is used as a guide for treatment in that it prioritizes risk/need to address in treatment. It assumes that these factors can be influenced in a therapeutic context and reduce the likelihood of a repeat occurrence of criminal activity. The focus of the model is on matching treatment with the specific needs of the individual offender.

Central to RNR theory are three core principles presented by Andrews, Bonta, and Hoge (1990). The first is the principle of human service which states that the legal and justice principles of deterrence, restoration, and due process are not adequate in terms of offender risks and needs. Second is the risk principle, which states criminal behavior can be predicted and that services should be matched to the risk level of the offender. Matching is dependent upon accurate assessment and

effective treatment. More precisely, high risk offenders are in need of more intensive and extensive services than are low-risk offenders, for whom low level or no intervention may be sufficient to prevent future offending. Past research has highlighted the importance of the matching aspect of the risk principle. Reduction in recidivism for high risk offenders has been shown only in circumstances where high levels of services were provided. Further, some studies have shown a detrimental effect when low-risk offenders are mandated to intensive services. Generally, there is a small positive effect in this situation (Andrews & Dowden, 2006).

The second principle is the need principle. This states that most offenders, especially high risk offenders, have multiple needs. For instance, they "need" somewhere to live and work and/or they "need" to abstain from substances. Some suffer from mental and physical illnesses. These are all needs or problematic circumstances. The criminologic need principle draws a distinction between criminogenic and noncriminogenic needs. Criminogenic needs are dynamic risk factors that, when changes are associated with changes in the probability of recidivism. Non criminogenic needs are also dynamic and changeable, but they are weekly associated with recidivism. Criminogenic needs are the locus of intervention, in that treatment services must be offered with the intention of changing criminogenic need factors. Addressing noncriminogenic needs is unlikely to alter future recidivism significantly unless doing so indirectly impacts on criminogenic needs. At times, non criminogenic needs can be targeted for motivational purposes or on humanitarian

grounds. It may help the offender feel better, but may not reduce recidivism (Andrews & Bonta, 2011).

The responsivity principle refers to the delivery of treatment programs in such a manner that it is consistent with the offender's ability and learning style. The general responsivity principle holds that offenders, regardless of their offense, are best influenced with cognitive-behavioral and cognitive social learning strategies, including modeling, reinforcement, role playing, skill building, modification of thoughts and emotions through cognitive restructuring, and practicing new, low risk alternative behaviors repeatedly until they become proficient. The specific responsivity principle holds that treatment can be matched to offender characteristics, such as personality, culture, ethnicity, age, gender and cognitive styles, as well as characteristics of the setting of the service (Andrews & Bonta, 2011). Issues related to amenability or motivations to treatment are also considered (Proschaska, DiClemente & Norcross, 1992).

Based on meta-analyses of criminal offending, Bonta and Andrews (2006) propose the "Central Eight" criminologic needs. The "Central Eight" include the "Big Four", the major predictor variables and indeed the major causal variables in the analysis of criminal behavior of individuals. The "Big Four" include a history of antisocial behavior, antisocial personality pattern, antisocial cognition, and antisocial associates. The "Central Eight" expand upon the previously mentioned factors with family/martial circumstances, school/work circumstances, leisure/recreation circumstance, and substance misuse (Andrews & Bonta, 2006).

Researchers have elaborated on the implementation of the RNR model in the drug courts. Taxman and Marlowe (2006) advocate for matching clinical interventions to the needs of offenders and then evaluating the effects of matching strategies in prospective, experimental studies. They draw from research which suggests drug courts are differentially effective across different groups. In one study, Marlowe, Festinger, Lee, Dugosh, and Benasutti (2006) randomly assigned drug offender to attend either frequent high-dose status hearings before a judge in drug court or infrequent ad hoc hearings. The experiments yielded no main effects for the sample as a whole; however, when the analyses were broken down by risk level (high risk offenders and low risk offenders) the researchers found that high risk offenders benefited substantially more from the intensive contacts with the judge. The interaction effect was replicated in four sequential experimental studies, including one study utilizing a randomized design. The evidence is thus very strong that drug court is an appropriate intervention for extension of the RNR model.

Veteran Treatment Courts

VTC are a hybrid of drug and mental health courts, which promote sobriety, recovery, and stability through a coordination of responses involving community collaboration with service providers, the Department of Veterans Affairs health care networks, the Veterans Benefits Administration, State Departments of Veterans Affairs, volunteer veteran advocates, and veterans family support organizations.

The first known veterans' court was established in Anchorage, Alaska in 2004 (Ruggeri, 2009), the result of an effort of two judges, veterans themselves, who

observed increases in the numbers of veterans appearing before them. The Anchorage Veterans Court handled mostly misdemeanor cases, including those reduced from felony charges. In the Alaska model, defendants facing charges found amenable to veterans court processing were referred to the court, whether in pretrial determination or out of custody. Either by motion of the defendant or the prosecutor, an application was submitted to determine if the defendant was eligible to participate in the veteran's court. The judge set the conditions of bail and pretrial release for an approved defendant and referred the individual to the Veteran Service Representative (VSR). The VSR, also a veteran, collaborated with the defendant and counsel to determine the treatment plan. Treatment plans could include referrals to alcohol and drug treatment or to mental health counseling. Following court approval of the treatment plan, defense counsel and prosecution negotiate a plea agreement. The agreement, which may have provided for eventual reduction, consolidation or dismissal of the charges incorporates and typically mandated compliance with the treatment plan. The defendant then opted in or out of veterans' court participation. If they opted out they were referred to normal criminal court proceedings (Hawkins, 2010).

The participant was then enrolled in the court and expected to make regular appearances in the court, typically with the audience of the fellow participants and in the presence of the same judge. The hearings resulted in adjustments to the participant's treatment plan or modified bail conditions. Coaching and encouragement from the court was regularly included in the hearings. Non-adherence to the treatment

plan typically resulted in a sentence to the defendant's uncompleted term and successful completion resulted in a "graduation" ceremony.

One of the most widely cited treatment courts was established in Buffalo, New York in 2008. In collaboration with the local Veteran's Affairs hospital, Judge Russell established a procedure for handling misdemeanor cases involving veterans presenting to the court. This court had no formal structure or funding stream and case referrals were controlled by the District Attorney. Similar to the Anchorage model, the program required frequent court appearances. Unique to the Buffalo model was the inclusion of veteran mentors to support the defendant through the program (Thompson, 2008). Mentors were community volunteers who were either veterans or active-duty officers. Mentors served a variety of roles, including coach, facilitator, advisor, sponsor, and supporter. Mentors assisted participants in overcoming challenges, acted as active problem solvers, and assisted the participants in following through with action plans. They provided feedback and highlighted strengths and successes. Of vital importance, mentors acted as a culturally relevant support to the veteran participant (Russell, 2009).

Following the lead of Anchorage and Buffalo, VTC's emerged across the country. In addition, more courts and states have expressed interest in developing VTC’s and are in various stages of development. While there is currently no unifying model, VTC's share some commonalities. Typically, VTC’s involve treatment-intensive, peer-intervention oriented protocols that have proven effective in drug and mental health courts. Intervention is early in the criminal justice process dealing

largely with non-violent offenses, mostly at the misdemeanor level. Finally, they typically operate as a function of collaboration with local, community partners as well as state and federal agencies (Hawkins, 2010).

The VTC model promotes a policy of close collaboration between the courts and the United States Department of Veterans Affairs (VA), as well as local veterans' organization, police agencies, probation, researchers, and mental health treatment providers to provide rehabilitative services to participants. All veterans who have been discharged from the service "under [other than dishonorable] conditions" are eligible for veterans benefits (Department of Veterans Affairs, 2013), including medical and mental health treatment; substance abuse treatment; medical evaluation for disorders associated with military service; housing; and vocational rehabilitation and employment assistance (Cavanaugh, 2010; Hawkins, 2010). Thus, access to VA services is a key aspect of the program. For the court, the Veteran's Justice Outreach (VJO) specialist assists participants in gaining access to services at the VA. The VJO is a VA employee who serves as the liaison between the VA and the courts. With access to VA records, the VJO provides referrals to participants and provides the court with ongoing status updates on VTC participants' progress.

One area of contention among scholars and policymakers is the eligibility criteria for entrance into the VTC program. For instance, varying degrees of veteran status are deemed admissible across different courts. In the Denton County, Texas Court veterans are only eligible if their "criminal behavior occurred because of a brain injury (TBI), mental illness, mental disorder, or PTSD that occurred while they

were in military service, in a combat zone, or a hazardous duty area"(Lewis, 2009). It is Denton County's view that veterans should not be provided privilege above others in the legal system due to their military service alone, rather special accommodations should only be offered to those whose criminal conduct was caused by an underlying physical or psychological injury that was incurred during military service in a combat zone (Cavanaugh, 2010). However, the guideline that combat injury be a prerequisite for entrance into the program is not common across all VTCs.

California penal code formerly restricted special consideration of prior military service in the criminal sentencing process to combat veterans only (Cal Penal Code 1170.9, 2009). In 2011, this was overturned to include any veteran "who was a member of the military forces and suffers from post-traumatic stress disorder, traumatic brain injury, substance abuse, military sexual trauma, or psychological problems as a result of their service." Because the state of California does not have any statues that regulate veteran courts specifically, the definition of "as a result of their service" leaves open the possibility for individual jurisdictions to include veterans with either combat or non-combat status.

To date, one published study has reported outcomes associated with the VTC program. Smith (2012) reported a 45% three year recidivism rate among graduates of the Veterans Court program in Anchorage, Alaska from July 2004 through December 2010; this as compared to a 50.4% recidivism rate for all court proceedings in Alaska. Journalists have also reported promising statistics. According to an early 2011 article published by Reuters, The Buffalo Veteran's Court had a zero recidivism rate during

the first three years of operations (Gulley, 2011). Anchorage and Buffalo Veterans Courts enrolled combat and non-combat veterans. These results are promising and suggest that VTC's work to reduce recidivism among combat and non-combat veterans; however, they do little to inform the field about the presenting mental health symptoms among VTC participants or the potential beneficial effect the VTC program has on these symptoms.

It is theorized that several core program components may be responsible for the positive outcomes associated with the VTC model, including its resemblance to a military organization, the presence of an authority figure, and the cohesion that develops among defendants. Similar to the military, VTC provides a highly structured environment with specific rules and guidelines and prearranged rewards and punishments. Further, the court is run by an authority figure, in this case a judge. The judge's ability to interface with the defendants to provide directives and feedback is similar to processes within the military system. The court also taps into veterans' military competencies, including discipline and obedience in following orders. These proficiencies likely transfer directly to veterans' engagement in VTC treatment (Cavanaugh, 2010; Smith, 2012). Finally, unit cohesion is likely fostered among VTC participants through shared experiences in the courtroom. Past research has shown the protective mechanism that unit cohesion serves as for veterans, and thus it may be a culturally relevant source of motivation to complete treatment for VTC participants (Brailey, Vasterling, Proctor, Constans, & Friedman, 2007).

R-N-R and the Veteran Offender. Scholars have yet to extend the RNR model to the veteran criminal offender or to Veteran Treatment Courts. Such an undertaking is a worthy venture and may provide a theoretical understanding of unique combination of risks/needs veterans present with to the criminal justice system. Further, as VTC courts develop across the country, this RNR framework specific to the veteran offender could be used to better inform the development of a unifying VTC model. Research has shown matching offender risk/needs with treatment is best practice (Andrews & Bonta, 2011). To promote effectiveness of the VTC movement, theoretical understandings needs to be elaborated and incorporated into the model.

Based on the review of the literature on both veteran outcomes and RNR theory, several key dynamic risk/factors warrant elaboration for use with the veteran community. First, a history of antisocial behavior is considered a dynamic risk/need factor. Typically, this includes early involvement in a number of antisocial activities and prior offenses. The number of individuals with a history of antisocial behavior in the military has increased in recent years due to loosening of standards in enlistment criteria. From September 2006 to September 2007, the Army granted conduct waivers for prior felonies and misdemeanor offenses to 18% of its new recruits. This statistic represents an increase of 3% from the prior year (Alvarez, 2008). As the military contracts in size, these individuals will filter back into their civilian communities. Antisocial histories place these veterans at greater risk for criminal offending (Macmanus et al., 2013).

The next of the "big four" is an antisocial personality pattern, which includes impulsive, adventurous pleasure-seeking, aggression, and callous disregard for others (Andrews & Bonta, 2010). Bollinger, Riggs, Blake and Ruzek (2000) document an antisocial personality disorder prevalence rate of 15% among a clinical sample of inpatients with PTSD. It is unclear whether antisocial traits are prevalent in the military due to the individual or combined effects of self-selection biases, combat exposure or military training. First, individuals who are adventure seeking and aggressive may be more inclined towards a career in the armed services, where such activities are considered socially acceptable. Second, military training aims to depersonalize enemy combatants to enable service members to engage in violent acts (Grossman, 1993). Finally, research has shown that individuals with antisocial personality patterns are more likely to be discharged from the military than remain on active duty (Fiedler, Oltmanns, & Turkheimer, 2004). Taken together, there may be more incidence of antisocial personality traits among military veterans than among civilians and active duty personnel.

Antisocial cognitions are considered the third major risk/need factor. This includes values, beliefs, rationalizations, and personal identity that is favorable to crime. In the veteran offender, this may present as anger and frustration with governmental systems, civilians, and society. This may take the form of resentment over their exposure to atrocities and feelings of irritation when presented with mundane routines of daily life. Further, these cognitions may underlie increases in aggressive acts documented in the literature.

Finally two of the "moderate four," family/marital circumstances and substance abuse, are important factors for the veteran who is an offender. War time deployment has been shown to be a substantial stress factor for military spouses and children (Chandra, et al., 2010; Mansfield et al., 2010). When veterans return home, they may find their family dynamics have changed dramatically, in particular children have grown and relationships have changed (Wadsworth & Riggs, 2011). Further, PTSD symptoms of avoidance and emotional blunting have been shown to have particularly caustic effects on marital satisfaction and intimacy, placing veterans with PTSD at greater risk for marital problems (Riggs, Byrne, Weathers, & Litz, 1998). Veterans may be entering into the criminal justice system with significantly impaired family functioning and strained interpersonal relationships stemming from their war time deployments.

Substance abuse is also considered a moderate risk factor. The increase in substance misuse has been well documented in the veteran population following deployment (Milliken, Auchterlonie, & Hoge, 2007). Veterans' crimes may be directly related to their substance abusing (such as in driving under the influence charges), for others, their substance abuse problems may be tangentially related to their crime. As a portion of veterans likely enter Veteran Treatment Court with undetected substance abuse problems, thorough screening for substance abuse is critical to providing responsive treatment.

Finally, one factor related to risk-responsivity among veteran offenders but not considered as one of the "big eight" is motivation (Ward, Mesler, & Yates, 2007).

Indeed, when considering veteran offenders, motivation issues related to veterans aversion to mental health may be particularly relevant to the criminal justice system. Stigma related to mental health treatment has been well documented in the literature (Hoge et al., 2004) and may translate to resistance to treatment in the VTC context. Interventions should be matched to the stage of change (Proschaska & Norcross, 2001) with which the veteran presents to court.

Conclusion

Overall, it appears that military service and combat exposure place veterans at risk for developing PTSD, substance abuse disorders, and problems with aggression and interpersonal violence. These issues may contribute to an increased risk for veterans to engage in criminal behavior. Once in the criminal justice system, veterans may pose unique needs that are best addressed through specialized care. The VTC model has emerged to meet the needs of an increasing number of veterans entering the civilian justice system. The VTC movement will likely continue to expand to meet this increasing need as more military veterans return home with physical and psychological symptoms following repeated combat deployments. Research is needed to assess the degree to which the VTC model meets the unique needs of military veterans for program improvement and to better serve the growing veteran community.

Chapter III

Methods

This is a two-part study. Part one is an archival study of participants in a traditional treatment court program in central California spanning the years of 2001-2012. Part two is focused on a jail diversion program for justice-involved veterans, a Veteran's Treatment Court (VTC), in central California. The study examines the treatment needs and short term outcomes of participants enrolled during the initial eighteen months of the VTC program.

Part I- Archival Data Analyses

This is a study of data drawn from a drug court in central California. Using an archival dataset, this study compared the treatment needs of veterans and civilians enrolled in the programs. Drug court programs adhere to a non-adversarial approach to judicial processes and to the 10 core components recommended for drug courts by the National Association of Drug Court Professionals (Office of Justice Programs, 2004). These programs utilize an integrated treatment approach involving cooperation among court personnel, probation, and community treatment providers with the goal to promote a stable, substance free graduate.

Participants

This study included 70 participants who entered a drug court program between 2001 and 2012. Data was drawn on all veterans enrolled between 2001 and 2011 from archival datasets. Data was then screened for completeness and those with complete data were used in the study. Veterans were matched on a case-by-case basis

to a civilian control group. Matching was done on the basis of program cohort and the following demographic variables: sex, age, and ethnicity.

The comparison group was selected to ensure that each matched comparison subject was enrolled on or about the same date to the same general environment as the veteran group subject. The purpose for doing so is to ensure that matched subjects are enrolled into the drug court in a relatively similar political and community climate.

The demographics (gender, age, and ethnicity) of each group are presented in Table 1. Ninety-seven percent of the samples were male in both the veteran and non-veteran groups. The majority of both groups (71% of veterans and 74% of non-veterans) identified as European American. The compositions of the veterans and non-veterans groups did not differ in terms of ethnicity, χ^2 (1, 3; n=70) = 0.78, p = .80, or gender, χ^2 (1, 1; n=70) = .00, p = 1.0. The ages ranged from 21-69 for the veterans and 21-60 for the non-veterans, with a mean of 41 (SD = 10.9) for the veterans and 40 (SD = 9.3) for the non-veterans. The groups did not differ significantly in terms of age, t (68) = -.62, p = .54.

Program

During the course of the 12 to 18 month program, participants were expected to adhere to the requirements set forth by the court. Participants were obligated to attend regular court appearances, comply with random drug testing, attend mental health treatment, and comply with probation orders. Court appearances provided the judge with opportunities for regular supervision and encouragement and to ensure

compliance with the treatment plan. Both sanctions and positive reinforcements were used to motivate participants. Sanctions for noncompliance included being mandated to additional meetings or brief stays in jail. Positive reinforcement included praise from the judge during regular court appearances and graded progression to less intensive levels of treatment and supervision.

Table 1
Study One: Demographics

		Veterans (n = 35)		Non-Veterans (n = 35)	
		n	%	*n*	%
Sex					
	Male	34	97	34	97
	Female	1	3	1	3
Age					
	18-24	2	6	2	6
	25-34	10	29	9	26
	35-44	10	29	9	26
	45+	13	37	15	43
Ethnicity					
	European-American	25	71	26	74
	Latino/a	7	20	7	20
	African American	2	6	2	6
	Asian American	1	3	0	0
	Native American/Alaska	0	0	0	0

Although varying treatment providers were involved over time, all followed a standardized protocol established by a countywide drug treatment court Policy Committee. This committee was comprised of several stakeholders, including the treatment court judge, district attorney, public defender, and probation officer as well

as representatives from each treatment facility. Treatment providers were licensed by the State of California and contracted by the County Alcohol and Drug Programs (ADP). Providers were trained in "best practices" for the treatment of substance use-related problems including two evidence based models, *the Matrix Model* and *Seeking Safet*y (Najavits, 2002; Rawson et al., 1995;). These treatments were offered at multiple treatment sites throughout the local surrounding area.

The *Matrix Model* is a manualized substance abuse treatment program that integrates cognitive behavioral therapy, contingency management, motivational interviewing, 12-step facilitation, and family involvement (Rawson et al., 1995). Over 25 years of research has supported its effectiveness and supports its use as an evidence-based practice by the Substance Abuse Mental Health Services Administration (SAMHSA) for reduction of alcohol and drug use.

Participants also received weekly trauma focused group interventions through *Seeking Safety* (Najavits, 2002). *Seeking Safety* is a cognitive-behavioral intervention designed to support abstinence and increase healthy coping skills for adults with substance abuse problems with a history of trauma. The program aims to build clients' understanding of the co-occurrence of substance abuse and trauma and the impact both have on their current functioning. Clients are taught to view substance abuse as an attempt to cope with the pain of trauma and instructed in how to use adaptive coping skills that apply to both problems. The *Seeking Safety* program includes 24 modules on topics such as, *Asking for Help, Coping with Triggers*, and *Detaching from Emotional Pain*. Each group is structured to encourage group interaction and

discussion. The focus of the group is on current behavior, and clients are directed to process personal traumas in individual psychotherapy.

Studies have supported the use of *Seeking Safety* to reduce trauma symptoms and substance use. In a study by Gatz and colleagues (2007), women receiving *Seeking Safety* programming demonstrated significantly greater improvement on posttraumatic stress symptoms and coping skills and better retention of treatment gains than women in substance abuse treatment without the *Seeking Safety* curriculum. Similarly, Desai, Harpaz-Rotem, Najavits, and Rosenheck (2008) reported that women who received *Seeking Safety* experienced reduced psychiatric distress and PTSD symptoms over the course of a year than did controls. Although *Seeking Safety* was designed to be gender neutral, few studies have empirically examined men's outcomes. Pilot research on men suggests that they find the intervention appropriate and helpful (Najavits, Schmitz, Johnson, Smith, North, Hamilton et al., 2009).

Procedure and Measures

Addiction Severity Index (*ASI;* McLellan et al., 1992). The ASI is a structured interview instrument designed to capture client problems across seven domains: drug use, alcohol use, legal problems, medical problems, family/social functioning, employment, and psychiatric status. Assessments were conducted by community treatment providers. Using client responses, composite scores were calculated for each domain, which represents problem acuity during the 30 days prior to treatment. The ASI has also been used with both civilian and veteran samples to

measure substance use and in evaluating substance dependence and severity and treatment outcomes (McLellan, Metzger, Woody, & O'Brien, 1993). The scales have been shown to have excellent in-rater reliability, high concurrent inter-subscale validity(r =.94 - .99), and high test-retest reliability (r = .92) among psychiatric and substance abusing clients (Cacciola, Koppenhaver, McKay, & Alterman, 1999; Leonhard, Mulvey, Gastfriend, & Shwartz, 2000). Among a sample of 210 substance abusing veterans, the internal consistencies were 0.86, 0.71, 0.87, 0.77, 0.62, 0.72, and 0.83 for medical, employment, alcohol, drug, legal, family/social, and psychiatric composite scales (Rosen, Henson, Finney, & Moos, 2000). Further, the psychiatric composite scale has shown good concurrent reliability with other measures of mental health and the medical and psychiatric composite scales accurately detect impairment (Calsyn et al., 2004).

Data Analysis

This study is a quantitative descriptive, ex post facto design study. It focuses on between-group differences between participants who self-identified veterans and non-veterans (Heppner, Wampold, & Kivlighan, 2008). To achieve this, a series of independent samples *t*-tests are used to examine differences between civilians and veterans on the ASI composite scores, severity ratings, and clinical indices.

Findings from study one were used to establish how veterans compared to civilians in the criminal court context prior to moving on to study two, where veterans were examined in more detail. In addition, part one of the study was meant to provide an empirical understanding of the unique needs of veterans presenting the justice

system to inform the implementation of the new VTC, which was then the subject of an outcome evaluation in study two.

Part II- Evaluation of a Veterans Treatment Court

The mission of the VTC under study was to assist justice-involved veterans and their families improve their quality of life through a collaborative effort among justice partners, community based organizations, and veterans services, thereby enhancing public safety while leaving no veteran behind" (Santa Maria Veteran's Treatment Court Handbook, 2013; pp.). This evaluation focused on the 18 months of initial implementation of the program.

Participants

The study includes forty-one veterans who were enrolled in a VTC between November 2011 and April 2013 in central California. Study participants were enrolled in the VTC prior to inclusion in the study and were recruited during one of their regularly scheduled court appearances. The specific criteria for inclusion in the VTC included: (1) having served in the U.S. military; (2) being charged with a criminal offense; and (3) pleading guilty to charges. Veterans were permitted to enter the VTC regardless of their military combat and discharge statuses.

Participant demographics are displayed in Table 2. The majority of participants were male, white (non-Hispanic), with a high school education. The mean age was 45 (*SD*=13.7). Nearly a third of the sample was divorced.

In regards to military service, a majority of the sample were Active Duty, enlisted (see Table 3). Approximately half of the sample was deployed during their

military service. The sample spanned several generational cohorts from Vietnam through Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF).

Table 2
Study Two: Demographics

	n	%
Gender		
Male	40	98
Female	1	2
Age		
18-24	2	2
25-34	11	27
35-44	9	22
45-59	13	32
60+	7	17
Ethnicity		
White (not Hisp)	19	58
Hispanic-Mexican	8	24
Other Hispanic	3	9
American Indian	2	6
Black (not Hisp)	1	3
Education		
High School	23	56
Some College	6	15
Associates	10	24
College	2	5
Graduate/Post-Graduate	0	0
Marital Status		
Divorced	11	31
Never Married	10	29
Married	8	23
Separated	6	17

Prior to their involvement with VTC, a majority (66%) of the sample had received services at the VA. Fifteen percent were eligible but had never accessed treatment, and 20% were ineligible for services due to their discharge statuses. 20% of the sample had been discharged dishonorably or "other than honorably". Self-reported reasons for not-honorable discharges centered on noncompliance with military regulations. Sixty three percent of those with an not-honorable discharge self-reported that they were removed from the military for substance related reasons.

Program

To enroll in VTC, veterans were required to plead guilty to their crime. In exchange for a suspended sentence, defendants agreed to undergo a strict rehabilitation program, which included regular court visits, counseling, and random drug testing (when applicable). The requirements were based on the individualized needs of the defendant and were specified in the participant's treatment plan, as agreed upon by the Judge, the Public Defender, and the District Attorney. Defendants were required to appear in court throughout their treatment, and the judge retained supervision over the defendant’s adherence to treatment plan during the duration of the program. The program ranged from 12 to 18 months. Hearings resulted in alterations in the treatment plan and regularly included coaching and encouragement from the court. Following successful completion of the program, the remaining portion of the defendant's sentence was typically waived, and charges were expunged from the record.

Table 3
Study Two: Military Demographics

Description	*n*	%
Service		
Active Duty	39	95
Reserve	1	2
National Guard	1	2
Branch		
Army	16	39
Navy	14	34
Marines	9	22
Air Force	2	5
Coast Guard	0	0
Highest Rank		
Enlisted[a]	17	41
Non-Commissioned Officer[b]	23	56
Commissioned Officer	1	2
Service Era		
Vietnam	7	17
Lebanon/Grenada	4	10
Persian Gulf War	4	10
OIF/OEF	13	32
Other	13	32
Years of Service		
Less than 3	15	37
3 to 4.9	15	37
5 to 9.9	10	24
10 or more	1	2
Ever Deployed?		
Yes	23	56
No	18	44
Discharge Status		
Honorable	33	81
Dishonorable	4	10
Other than Honorable	4	10

[a] *Note.* Enlisted personnel includes E1-E3 (Army: Private; Air Force: Airman; Marines: Private & Lance Corporal; Navy/Coast Guard: Seaman).

[b] *Note.* Non-Commissioned Officer includes E4-E5 (i.e. Army: Corporal & Sergeant; Air Force: Sergeant; Marine: Corporal and Sergeant; Navy/Coast Guard: Petty Officer)

To achieve the goal of improving the veteran's quality of life, the program targeted each veteran's mental health symptoms, substance abusing behavior, and employability. Further, the program aimed to connect veterans to VA benefits through interaction with a Veteran Justice Outreach Specialist (VJO). Other goals of the program included reducing recidivism among veterans and reducing the tax burden of veterans on the local community. A complete logic model, describing the programs theory of change and multiple program initiatives, can be found in the appendix. Due to limited resources, this study focused on program goals related to mental health, substance abuse, and employability and defers the exploration of the other goals to future evaluations.

The VTC aimed to reduce the mental health issues that underlay the veterans offending behavior. As such, interventions targeted reducing symptoms of depression and PTSD. An array of services and treatments were available to the court to provide for veterans needs in their specific treatment plan. These services included treatment services at the VA, both residential and outpatient mental health and drug and alcohol treatment; community outpatient drug and alcohol treatment, utilizing the *Matrix Model* and *Seeking Safety*; Alcohol Awareness and Education Classes; anger management classes; batter intervention programs; sober living; and peer support groups, including Alcoholics Anonymous/ Narcotics Anonymous. These treatments were ordered by the court as part of the each individualized treatment plan.

Community outpatient drug and alcohol treatment. Veterans who presented to the court with substance abuse problems were referred to one of several

community treatment providers. Treatment across these programs was standardized and included two evidenced based treatments, the *Matrix Model* (Rawson et al., 1995) and *Seeking Safety* (Najavits, 2002), for the treatment of dually diagnosed patients.

Veterans Affairs residential and outpatient programs. Veterans with access to VA benefits (i.e. those with honorable or "other than honorable" discharge statuses) were referred to Veterans Affairs programs in the local and surrounding counties. These programs include residential treatment for dually diagnosed patients and outpatient mental health and substance abuse programs at the local Community Based Outpatient Center (CBOC). In January of 2013, the VJO began providing cognitive behaviorally oriented therapy group exclusively to VTC participant's at the local CBOC.

Alcohol awareness and education classes. Veterans with Driving While Intoxicated (DWI) or Driving Under the Influence (DUI) charges were referred to Alcohol Awareness and Education Classes. Veterans were placed in one of two programs, which varied in intensity and type of treatment, based on the blood alcohol level at time of offense. The first was for BAC of .09 and below and included 6 weeks of alcohol education (12 hours total). The second (BAC of .08-.19) was a 15 week course consisting of 31.5 hours of participation, including 1 hour intake interview, 16 hours of alcohol/drug education sessions, 145 hours of group awareness sessions, and 3 individual counseling sessions.

Batter intervention program. Veterans charged with Intimate Partner Violence (IPV) offenses attended a 52-week treatment program which met standards

set by California Penal Code 1203.097. The California penal code required the programs to address "strategies to hold the defendant accountable for the violence" and provide "educational programming that examines, at a minimum, gender roles, socialization, the nature of violence, the dynamics of power and control, and the effects of abuse on children and others" (California Penal Code 1203.097).

Sober living housing. Homeless veterans without access to VA benefits were referred to a local shelter for sober living. The facility is a 90-bed, 90 day facility that provides shelter, basic hygiene facilities, meals, case management, service referrals, and mental health care to clients.

Peer support programs. Veterans with substance abusing problems were referred to community based, peer support groups such as AA and NA. The goal of these groups is to support sobriety through a combination of structured weekly meetings, peer encouragement, and working through the twelve step program of spiritual and character development. Research on the effectiveness of AA and NA has been debated due to the nature of self-selection into the program and inability for researchers to randomize samples. One study showed that AA increased adherence to treatment (Montgomery, Miller, & Tonigan, 1995). A meta-analysis of the program found no empirical evidence for the effectiveness of AA and called for more research utilizing control groups (Tonigan, Toscova, & Miller, 1995).

Measures and Procedures

Survey administration. All VTC participants were administered intake and follow-up (3 month) surveys. Participants received their intake surveys within 4 weeks of entering the program and the follow-up surveys 3-5 months after entering the program. All surveys were administered during in person interviews in a private area outside of the court. The participants were incentivized with a $5 gift certificate for their participation in the follow-up survey. Participants are assigned a unique participant ID number by the court administrator which followed them throughout the study. In this way, participants' anonymity was protected while ensuring each participant received and completed their own intake and follow-up surveys. Two participants were unavailable for follow-up due to termination from the program prior to the three month follow-up point.

Intake questionnaire. Measures were selected through a review of relevant literature on military veterans and a review of publically available VA forms to ensure culturally relevant terms and thoroughness in regards to military history. Further, survey development included a member check by active duty military personnel. The intake questionnaire contained demographic and background questionnaires as well as measures of depression and PTSD, alcohol and drug abuse severity, employment problems. Additionally, trauma inventories for both non-military related, combat-related, and post-deployment related traumas were included in the survey. A final set of open ended questions targeted barriers and access to

mental health care, as well as motivations for treatment and program satisfaction. A copy of the intake questionnaire can be found in the appendix.

Demographics and military background information. The intake questionnaire included items regarding basic demographics, significant relationships, housing, previous education, and military history, including deployment information.

The Patient Health Questionnaire *(PHQ;* Kroenke, Spitzer & Williams, 2001*).* The PHQ is a validated clinical scale for depression based on the DSM-IV (American Psychiatric Association, 2000) criteria that is widely used in primary care and specialty mental health settings. The PHQ includes nine items and consists of the criteria upon which the diagnoses of DSM-IV depressive disorders are based. The scale targets both the presence of symptoms and their duration over the past 2 weeks. Scores correspond to varying levels depression from major depression to depressed mood or adhedonia. The PHQ also includes an item for functional impairment, defined as the decrease in functioning at work or at home due to symptoms. The scale is designed to augment clinical diagnosis of depression in treatment settings and has been used in several large epidemiological studies of military populations (Hoge et al., 2004; Thomas et al., 2010). The scale has been shown to have excellent internal reliability (Cronbach's alpha=.89), test-retest reliability (r=.84), and predictive validity (Kroenke, Spitzer, & Williams, 2001)

The Trauma History Screen *(THS;* Carlson et al., 2011*).* The THS is a self-report measure that was developed to target exposure to events associated with psychological distress (Carlson et al., 2011). The THS includes 14 items that ask the

respondent to indicate whether or not the particular event occurred in their lifetime and how many times. He or she is then asked to describe the event, how many times the event has occurred, the age at which it first happened, if anyone was hurt or killed, and what their emotional response was to the event. An adapted version of the THS was used in this study to maximize data collection and reduce the time of administration. Participants were asked whether or not these events had ever occurred for them and approximately how many times they had occurred. For participants who had been deployed while serving, questions were asked twice, first to indicate whether the event happened before their deployment and again to indicate if the event occurred during or after their first deployment. Thus, the pre-deployment trauma numbers reflect all events that occurred prior to military deployment for the entire sample, and deployment/post-deployment numbers trauma numbers reflect only events that occurred in the portion of the sample who had previously deployed. In order to reduce administration time, there were no follow-up questions; instead, the number of events endorsed, which was termed High Magnitude Stressors (HMS) were calculated.

The Combat Exposure Scale *(CES;* Lund, Foy, Sipprelle, & Strachan, 1984*).* The combat exposure scale is a seven item scale and measures combat exposure among war veterans on a 5-point Likert scale. The items are weighted differentially according to the severity of the experience (i.e., "seeing someone hit by incoming enemy rounds" is weighted more than "firing rounds at the enemy") with a total score range from 0 to 41. The continuous scale was used to create an ordinal combat

exposure scale, using levels indicated by Aldwin, Levenson, & Spiro, (1994). Participants with scores of 0 were considered to have no combat exposure; those with scores of 1-8, light; 9-16, light-moderate; 17-24, moderate; 25-32, moderate-heavy; and 33-41, heavy. In this study, CES scores were used to determine bivariate classifications of combat (CES>0) and non-combat (CES=0) veterans. The single factor structure of the scale has been supported through principle components analysis. The CES has also been shown to have good internal stability (Coefficient alpha=.85; .92) and test-retest reliability (r=.97) (Keane et al., 1989; Aldwin, Levenson, & Spiro, 1994). Finally, the scale demonstrates divergent validity, differentiating those with PTSD from those without it among a sample of combat veterans (Keane et al., 1989*).* While the scale was originally developed for use with veterans of the Vietnam War, its use has been expanded by researchers with mixed samples of WWI, Korean War and OIF/OEF veterans (Aldwin, Levenson, & Spiro, 1994; Taft et al., 2009; Wilk et al., 2010).

The PTSD Checklist *(PCL;* Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL consists of 17 questions that correspond to the DSM-IV criteria for diagnosis of PTSD (American Psychiatric Association, 2000). Respondents are asked how often they have been bothered by each symptom in the past month on a five point Likert scale. Initial psychometric data was derived by using a sample of Vietnam veterans. Internal consistency coefficients were very high for the total scale (Cronbach's alpha = .97) and for each subscale (.92-.93). Test-retest reliability over 2-3 days was .96. The PCL correlated highly with the Mississippi Scale for Combat

Related PTSD (r=.93), the PK Scale of the MMPI (r=.77), and the Impact of Event Scale (r=.90) supporting the convergent validity of the measure. The PCL has been found to be predictive of PTSD with a sensitivity of .82, a specificity of .83, and a kappa of .64 (Norris & Hamble, 2003). The PCL renders two scores, a scale severity score and a categorical item for PTSD diagnosis based on civilian and military norms placing participants into one of four categories ordered from least to most severe symptomology: no PTSD present, sub-clinical post-traumatic stress, clinical PTSD-civilian norms, and clinical PTSD -military norms.

Addiction Severity Index (*ASI;* McLellan et al., 1992*).* The ASI is a structured interview instrument designed to capture client problems across seven domains: drug use, alcohol use, legal problems, medical problems, family/social functioning, employment problems, and psychiatric status. The drug use, alcohol use, and employment problems domains were used in this study. Using client responses, composite scores were calculated for each domain, which represents problem acuity during the previous 30 days. The scales have been shown to have excellent in-rater reliability, high concurrent inter-subscale validity(*r* =.94 to .99), and high test-retest reliability (*r* = .92) among psychiatric and substance abusing clients (Cacciola, Koppenhaver, McKay, & Alterman, 1999; Leonhard, Mulvey, Gastfriend, & Shwartz, 2000).

Barriers/Access to care. The barriers to care tool is a researcher developed semi-structured interview that explores the client's past experiences with mental health and substance abuse treatment. The interview specifically focuses on

identifying key factors that enabled or interfered with clients' access to care. Questions included, "Have you accessed treatment for your substance abuse/mental health problems in the past?" "Where?" "Why/Why not?" and "What made it easy/difficult to get?"

Follow-up questionnaire. The follow-up survey targeted psychopathology, substance abuse, employment, access to care, treatment motivation, and program satisfaction. The PCL, PHQ and the drug, alcohol, and employment composite indices of the ASI were re-administered at follow-up. The barriers/access to care semi-structured interview was re-administered with questions reworded to explore experiences during the VTC program. Participants were also asked about their motivations for completing the VTC program and their satisfaction with the program. The follow-up questionnaire can be found in the appendix.

Data Analyses

Philosophical pragmatism was employed as the underpinning for this study. The assumptions that underlie this paradigmatic research philosophy lead to a combination or mixture of methods and procedures that work best for answering particular research questions (Tashakkori & Teddlie, 1998). The pragmatic philosophy emerged from John Dewey's transactional approach, which viewed knowledge as the result of relationships between actions and consequences, in contrast to a world "out there." Ontologically, this philosophy holds that knowledge is at the very same time constructed and real. In regards to epistemology, pragmatism holds that knowledge cannot be gained in any other way than through human

intervention. In terms of method, there is therefore no particular problem in the combination of interventionalist and noninterventionalist strategies within the same project. The pragmatic philosophy separates epistemology from methodology and allows researchers to adopt epistemological stances for the specific design and justification of their research (Biesta, 2010).

As a direct result of the research questions, this study employed a complementary methods design. The quantitative component addresses research question two, a correlational research design, and research question three, a one group pre-posttest design (Heppner, Wampold, & Kivlighan, 2008). Question four is a mixed-methods question as it includes both qualitative and quantitative methods. Results will be presented separately for the quantitative and mixed-methods portions and will be integrated in the discussion section, by combining the findings from all components.

Research questions two and three are quantitative. Research question two addresses the predictive nature of past trauma on the presenting symptoms of VTC participants. To examine this, hierarchical linear regressions (HLR) were conducted to explore the incremental contribution of different types of trauma exposure as predictors of symptoms at intake. To explore the relative contribution of each type of trauma, hierarchical analyses were conducted with the entry of three separate blocks. First, pre-deployment, non-military trauma was entered, followed by combat trauma and, in the final step, post-deployment trauma. The rationale for this order of entry was related to temporal order, in that traumas that emerge independent of deployment

and combat experiences were entered first, followed by combat experiences, and finally post-combat experiences, so that incremental and total explanatory power of these variables could be examined. Research question three examines differences in treatment across time in participant's symptoms across depression, PTSD, and substance use. To examine this, paired samples *t*-tests were conducted.

Question four is a mixed methods question comprised of QUAL + *quan* components, where the theoretical drive is inductive and the pacing is simultaneous. The QUAL component includes analysis of semi-structured interview responses, and the *quan* component includes frequency distributions of codes by quantitatively derived characteristics. Thus, the point of interface for the mixed methods portion is in the analysis section (Morse, 2010).

For the QUAL component, data were analyzed using a grounded theory content analysis approach (Corbin & Strauss, 2008). This method involved simultaneous data collection and analysis procedures. Emergent themes were coded in the data using an open, inductive approach. Themes were then grouped to form concepts based on the method of constant comparison. To ensure quality in the analysis, a code book was produced, and a peer auditor reviewed all codes until agreement was met.

In the *quan* component frequencies of codes were calculated across the quantitatively derived characteristic, combat exposure defined by the CES scale and dichotomized to combat (CES total score>0) and noncombat (CES total score = 0).

Chapter IV

Results

Study 1

Descriptive Analysis. Data was analyzed using SPSS (Version 18). The means and standard deviations of the variables used in the primary analyses for both the veterans and the non-veterans groups are presented in Table 4. Preliminary data screening showed that two variables, the 30-day alcohol and 30-day psychiatric composite scores, showed high levels of skew and kurtosis, with a high proportion of the sample having zero as a composite score. Therefore, base 10 log transformations were applied to an x+1 linear transformation of the scores to correct these problems. Bonferroni corrections were used so that family-wise error rate was held at $p < .05$. A power analysis (assuming .8 power) showed that a sample size of 102 (51 in each group) was necessary to detect medium size effects at the $p < .05$ level (G*Power, 2009); therefore, the analysis was underpowered to detect medium effects.

Primary Analysis. The primary hypotheses compared participants self-identified as veterans to matched controls who did not identify as veterans. Independent samples *t* tests were performed to assess whether mean scores differed significantly across the veterans and non-veterans groups. The assumption of homogeneity of variance was assessed by the Levene test. Unless otherwise noted, all tests were found to be non-significant, indicating that no significant violation of the equality of variance assumptions was found. Therefore, the pooled variances version of the *t* test was used for the following analyses.

Hypothesis 1.1 stated that veterans would present with more baseline psychiatric problems than would their civilian counterparts as measured by the psychiatric 30-day composite scores, severity scores, and clinical indices of the ASI. For all three dependent variables of psychiatric scores, *t* tests were non- significant (see Table 4). The hypothesis was not supported.

Hypothesis 1.2 stated that veterans would have higher baseline levels of alcohol abuse than their civilian counterparts as measured by the drug and alcohol composite scores, severity ratings, and clinical indices of the ASI. For all three dependent variables, *t*-tests were non-significant (see Table 4); therefore, the hypothesis was not supported.

Hypothesis 1.3 stated that veterans would have higher baseline levels drug abuse than would their non-veteran counterparts as measured by the drug composite scores, severity ratings, and clinical indices of the ASI. Violations in the homogeneity of variance tests were found for the drug severity ratings, $F = 8.02$, $p = .006$, and the clinical indices, $F = 4.80$, $p = .03$.Therefore, the separate variance *t* test was used to adjust for the effects of the violation. The *t* tests was non-significant for severity scores, (see Table 4), but was approaching significance for the 30-day composite scores, t (63.47), $p = .074$, and was significant for the clinical indices, t (59.58) = -3.00, $p = .004$.

Table 4

Means, Standard Deviations, and T-Tests of Scores on Addiction Severity Index

	Veterans (n = 35)		Non-Veterans (n = 35)				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	η^2
Psychiatric							
30 Day Composite	.26	.30	.28	.30	68	0.30	.00
Severity	3.21	2.67	3.66	2.72	67	0.70	.01
Lifetime T-Score	54.63	9.64	54.32	6.83	62	0.15	.00
Alcohol							
30 Day Composite	.12	.13	.13	.16	68	0.80	.01
Severity	3.75	2.87	4.40	3.09	65	0.89	.01
Lifetime T-Score	54.75	7.57	54.76	7.86	64	0.01	.00
Drug							
30 Day Composite	.13	.07	.09	.09	68	1.82	.05
Severity	5.71	2.04	5.20	2.98	67	0.83	.01
Lifetime T-Score	44.41	6.21	38.82	8.76	64	2.97**	.12

** $p<.001$

The mean lifetime drug clinical index was 5.58 units lower in the non-veterans group (M = 44.41, SD = 6.21) than it was in the veterans group (M = 38.82, SD = 8.75). The effect size, as indexed by η^2, was .12. This is a medium effect (Cohen, 1988). Thus, 12% of the variation in lifetime drug clinical scores can be explained by veteran status. The 95% CI for the difference between sample means, $M_1 - M_2$, had a lower bound of -9.34 and an upper bound of -1.83. These results suggest that for those entering a drug court, being a veteran was associated with significantly more severe lifetime drug use than being a non-veteran.

Results from study one demonstrate a significant difference between veterans and civilians in lifetime drug use. Measures of psychiatric problems, drug abuse, and alcohol abuse, including 30-day problems, lifetime problems, and clinician rated severity, were found to be statistically equivalent across groups.

Study 2

Descriptive Analysis. Trauma histories, including pre-deployment, combat, and deployment/post-deployment trauma, were assessed at intake. The counts of individuals indicating high magnitude stressors (HMS) are displayed on Table 5. The average number of HMS experiences was 4.1 (SD = 3.4) for pre-deployment trauma and 3.7 (SD = 3.8) for deployment/post-deployment trauma.

The most common HMS experience prior to deployment was the "sudden death of a close family member or friend". Among the sample, it was also common to have experienced being "attacked with a gun, knife, or weapon" prior to deployment. Events

that were uncommon included having been "forced to have sexual contact as a child" or as an adult.

For those who had experienced a military deployment, the most common trauma was "seeing something horrible or being badly scared during military service", followed by the "sudden death of a close family member or friend", and seeing "someone die suddenly or get badly hurt or killed". In addition to accounting for HMS events, combat trauma was also assessed. Combat exposure classifications are presented in Table 6. Nearly half the sample had experienced combat; nearly a third had experienced heavy combat or light combat, respectively, followed by light-moderate, moderate, and moderate-heavy combat trauma.

Table 5
THS Frequencies

	n	%
Pre-Deployment Trauma		
Sudden death of close family or friend	19	46%
Attack with a gun, knife, or weapon	17	42%
A really bad car, boat, train, or airplane accident	15	37%
A hurricane, flood, earthquake, tornado, or fire	15	37%
Hit or kicked hard enough to injure - as an adult	15	37%
Suddenly abandoned by spouse, partner, parent, or family.	14	34%
Seeing someone die suddenly or get badly hurt or killed	13	32%
Sudden move or loss of home and possessions	13	32%
Hit or kicked hard enough to injure - as a child	12	29%
A really bad accident at work or home	7	17%
During military service - seeing something horrible or being badly scared	7	17%
Forced or made to have sexual contact - as a child	2	5%
Forced or made to have sexual contact - as an adult	1	2%
Mean Unique Experiences		(4.07)
Standard Deviation		(3.42)
Deployment/Post-Deployment Trauma		
During military service - seeing something horrible or being badly scared	20	53%
Sudden death of close family or friend	19	50%
Seeing someone die suddenly or get badly hurt or killed	19	50%
Attack with a gun, knife, or weapon	16	42%
Sudden move or loss of home and possessions	15	40%
A really bad car, boat, train, or airplane accident	12	32%
Suddenly abandoned by spouse, partner, parent, or family.	11	29%
Hit or kicked hard enough to injure - as an adult	10	26%
A really bad accident at work or home	8	21%
A hurricane, flood, earthquake, tornado, or fire	7	18%
Forced or made to have sexual contact - as an adult	1	3%
Mean Unique Experiences		(3.76)
Standard Deviation		(3.75)

Table 6
Frequencies of Combat Exposure

Descriptor	*n*	%
Combat Exposed	21	51
Light	4	19
Light-Moderate	4	19
Moderate	3	14
Moderate-Heavy	3	14
Heavy	7	33
Non-Combat	20	49

Table 7
Intake Post Traumatic Stress Disorder Checklist Scores by Status

	Combat		Non-Combat	
PTSD	*n*	%	*n*	%
Diagnostic Category*				
Non-clinical	5	24	13	65
PTSD-Civilian Cut-off	3	14	1	5
PTSD-Military Cut-off	13	62	6	30
Severity Score** (*M*, *SD*)	*57.6*	*18.8*	*36.9*	*16.3*

Note. The PTSD variables were defined by the Posttraumatic Stress Disorder Checklist (PCL).
*$p<.05$; **$p<.01$

Table 8
Intake Patient Health Questionnaire Scores by Combat Status

	Combat		Non-Combat	
Depression	*n*	%	*n*	%
Diagnostic Category				
Non-clinical	3	14	5	25
Minimal Symptoms	4	19	9	45
Minor	6	29	2	10
Moderate	1	5	2	10
Severe	7	33	2	10
Severity Score* (*M*, *SD*)	*14.3*	*9.1*	*8.5*	*6.7*

Note. The depression variables were defined by the Patient Health Questionnaire (PHQ).
**p<.05*

Mental health symptoms were also assessed. Fifty six percent of the sample met or surpassed civilian or military norm cutoffs indicating clinical levels of PTSD; with more combat veterans meeting criteria than non-combat veterans, χ^2 (2, *n=41*) = 7.11, *p* = .03, (see Table 7). Indeed, 62% of combat veterans presented to court with active PTSD diagnosis meeting military level criteria, while the same was true for 30% of the non-combat veterans. Further, PCL severity scores for combat veterans indicated more severe PTSD symptoms for combat veterans than for non-combat veterans, *t* (*39*) = 3.75, *p* = .001.

Depression was also common in the sample, with nearly a third of veterans meeting criteria for major depression, and 50% meeting criteria for either major or minor depression (see Table 8). Depression was no more frequent among combat veterans than it was for non-combat veterans, χ^2 (4, *n=41*) = 7.51, *p* = .11.

Table 9
Drug of Choice by Combat Status

	Combat		Non-Combat	
	n	%	*n*	%
Alcohol	12	57	7	39
Polysubstance	3	14	7	39
Methamphetamine	2	10	2	11
Cannabis	1	5	1	5
None	3	14	1	6

Note. A chi-square test was non-significant

Substance use problems were also assessed. The most widely used substance for both combat and non-combat veterans was alcohol, followed by polysubstance use. ASI drug and alcohol abuse severity and employment problems composite score means and standard deviations are presented in Table 10. Differences between combat and non-combat veterans were non-significant, suggesting similar levels of substance abuse between the groups.

Table 10

Intake Addiction Severity Index Scores by Combat Status

	Combat (n = 21)		Non-Combat (n = 20)			
	m	*SD*	*m*	*SD*	*f*	*t*
Employment Problems	.54	.37	.66	.26	9	1.20
Alcohol Abuse	.35	.32	.25	.28	9	1.06
Drug Abuse	.08	.12	.10	.11	9	0.28

Primary Analysis

Predictors of Mental Health Symptoms. Results of the hierarchical linear regression (HLR) models are summarized in Table 11 and Table 12. Unless otherwise stated all data met the appropriate assumptions of normality, linearity, and homogeneity of error variances. To determine this, data screening included an examination of histograms on all seven variables and scatter plots for all bivariate combinations of criterion and predictor variables. Univariate distributions were fairly normal with no extreme outliers; bivariate relations were reasonably linear, all slopes were in the expected directions, and no bivariate outliers were found (Warner, 2008). A Mahalanobis *D* test identified no extreme multivariate outliers (Tabachnick and Fidell, 2007).

A post-deployment score was computed using a linear transformation of a weighted THS deployment/post-deployment HMS score by subtracting the total CES score to reflect

only post-deployment trauma. The variance inflation factor (VIF) tests of multicollinearity were adequate for all HLR analyses.

Table 11

Model Fit and Effects for Hierarchical Linear Regression Analyses of Trauma Predicting Symptom Severity

Predictors Included		*df*	*F*	R^2
PTSD				
1	Pre-Deployment	1, 39	.25	.01
2	Pre-Deployment, Combat	1, 38	11.56***	.37
3	Pre-Deployment, Combat, Post-Deployment	1, 37	10.23***	.45
Depression				
1	Pre-Deployment	1, 39	1.63	.04
2	Pre-Deployment, Combat	1, 38	3.91*	.17
3	Pre-Deployment, Combat, Post-Deployment	1, 37	3.25*	.21
Alcohol Abuse				
1	Pre-Deployment	1, 39	2.31	.06
2	Pre-Deployment, Combat	1, 38	1.60	.08
3	Pre-Deployment, Combat, Post-Deployment	1, 37	1.04	.08
Drug Abuse				
1	Pre-Deployment	1, 39	.57	.02
2	Pre-Deployment, Combat	1, 38	3.79*	.12
3	Pre-Deployment, Combat, Post-Deployment	1, 37	4.02**	.18

Note. The pre-deployment and deployment/post-deployment variables were defined by the count scores of the THS. Combat was defined by the severity score of the CES. PTSD and depression were defined by the severity scores of the PCL and PHQ, respectively. Alcohol and Drug abuse were defined by the alcohol and drug composite scores of the ASI, respectively.

PTSD. Hypothesis 2.1 stated that pre-deployment, combat, and post-deployment trauma, as measured by the Trauma History Screen (THS) and Combat Exposure Scale (CES), would predict the severity of PTSD symptoms, as measured by the PCL, at intake.

In block one, total unique traumatic events before the first deployment did not contribute significantly to the prediction of PTSD symptoms at intake, and this model was not significant F (1, 39) = .25, p = .62, R^2 = .01. This model indicates that pre-deployment trauma accounted for little of the variance in the PTSD symptoms at intake when considered independently of other predictors.

In block two, combat trauma was added to the model and resulted in a significant fit to the data, F (2, 38) = 11.56, p < .001, R^2= .38. This model suggests that the combination of pre-deployment and combat trauma significantly predicted PTSD symptoms at intake. To assess the contribution of individual predictors, the t ratios for the individual regressions slopes were examined. Both pre-deployment, t (38) = 2.03, p =.05, and combat, t (38) = 4.77, p <.001, traumas were significant. The direction of the slopes was as expected; the positive sign indicates that higher amounts of trauma predict higher amounts of PTSD. This model accounted for 38% of the variance in trauma symptoms.

The final model (block three) included post-deployment trauma as a predictor and resulted in a model that significantly predicted trauma symptoms at intake, F (3, 37) = 10.23, p < .001, R^2=.45. Examination of the beta coefficients and t-tests (see Table 12) suggests that all three types of trauma independently significantly predicted PTSD symptoms in the predicted direction, with more types of trauma indicating higher levels

final model explained 45% of the variation in trauma symptoms at intake. Thus, hypothesis 2.1 was supported.

Depression. Hypothesis 2.2 stated that pre-deployment, combat, and post-deployment trauma, as measured by the THS and CES, would predict the severity of depression symptoms, as measured by the PHQ, at intake.

In block one, unique events before the first deployment did not contribute significantly to the prediction of depression symptoms at intake, and this model was not significant, F (1, 39) = 1.63, p = .21, R^2= .04.

In block two, unique combat traumatic events were added to the model and resulted in a significant fit to the data, F (2, 38) = 3.91, p = .03, R^2 = .17. This model suggests that when considered together, pre-deployment trauma and combat trauma significantly predicted depression symptoms at intake, in the expected direction. This model accounted for 17% of the variance in depression symptoms.

The final model (block three) included post-deployment trauma and resulted in a model that significantly predicted depression symptoms at intake, F (3, 37) = 3.25, p =.03, R^2 = .21. Interestingly, when post-deployment was added to the model, overall model fit improved, but not significantly, ΔR^2 = .04, p =.19. This final model explained 21% of the variation in depression symptoms at intake and stands in partial support of hypothesis 2.2. Specifically, combat trauma accounted for most of the variance in depression symptoms, above and beyond pre-deployment symptoms and post-deployment symptoms.

Table 12

Hierarchical Linear Regression Analyses of CES and THS Predicting PCL, PHQ, and ASI Scores: Coefficients and Effects

	PTSD		Depression		Alcohol Abuse		Drug Abuse	
Predictor	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β
Step 1	.01		.04		.06		.02	
Pre-Deployment		.08		.20		.24		-.12
Step 2	.37***		.13*		.02		.15**	
Pre-Deployment		.27*		.40*		.28		-.25
Combat		.64***		.43*		.15		-.41**
Step 3	.08*		.04		.00		.08	
Pre-Deployment		.39**		.40*		.29		-.12
Combat		.79***		.49**		.16		-.23
Post-Deployment		.37*		.22		.02		.34
Total R^2	.45***		.21*		.09		.25**	
N	41		41		41		41	

Note. [a] Combat exposure was transformed to a quadratic function for the drug abuse HLR due to a violation of the linearity assumption.
The pre-deployment and deployment/post-deployment variables were defined by the count scores of the THS. Combat was defined by the severity score of the CES. PTSD and depression were defined by the severity scores of the PCL and PHQ, respectively. Alcohol and Drug abuse were defined by the alcohol and drug composite scores of the ASI, respectively.

*** $p<.001$; ** $p<.01$; * $p<.05$

Alcohol Abuse Severity. Hypothesis 2.3 stated that pre-deployment, combat, and post-deployment trauma, as measured by the THS and CES, would predict the severity of alcohol abuse at intake, as measured by the alcohol composite index of the ASI. In the first block, unique events before the first deployment did not contribute significantly to the prediction of alcohol abuse severity at intake, and this model was not significant F (1, 39) = 2.31, p =.14, R^2=.06. This model suggests that pre-military trauma accounted for little of the variance in the alcohol abuse at intake. Next, in block two, combat trauma was added to the model and resulted in a non- significant fit to the data, F (2, 38) = 1.60, p = .22, R^2 = .08. This model suggests that the combination of pre-deployment trauma and combat trauma do not significantly predicted alcohol abuse severity symptoms at intake.

The final model, block three, included post-deployment trauma and resulted in a model that did not significantly predicted alcohol abuse severity symptoms at intake, F (3, 37) = 1.04, p=.39, R^2=.08. This final model explained 8% of the variation in alcohol abuse severity symptoms. Thus, hypothesis 2.3 was not supported.

Drug Abuse Severity. After examination of the scatter plot of drug use by combat exposure, it was determined that the bivariate relationship between these two variables was nonlinear, rather it was quadratic with an inverted parabolic shape. To account for this derivation from the assumption of linearity, a quadratic transformation to the combat exposure variable was performed for the following set of HLR analyses.

Hypothesis 2.4 stated that pre-deployment, combat, and post-deployment trauma, as measured by the THS and CES, would predict the severity of drug abuse at intake, as measured by the drug composite index of the ASI.

In block one, total unique events before the first deployment did not contribute significantly to the prediction of drug abuse symptoms at intake, and this model was not significant F (1, 39) = .60, p = .45, R^2 = .02. This model suggests that pre-military trauma accounted for almost no variance in the drug abuse severity symptoms at intake.

Next, in block two, the quadratic transformation of the combat trauma variable was added to the model and resulted in a significant increase in fit to the data, F (2, 38) = 3.79, p = .03, R^2 = .17. This model suggests that when added to pre-deployment trauma, combat trauma significantly predicted drug abuse severity symptoms at intake. The negative beta coefficient of the quadratic term, β = -2.63, suggests that those who experienced moderate levels of combat exposure had higher levels of drug abuse severity at intake than those who had low or high levels of combat exposure. This model accounted for 17% of the variance in drug abuse severity symptoms.

The third and final model included the post-deployment variable and resulted in a model that significantly predicted drug abuse severity symptoms at intake, F (3, 37) = 4.02, p = .01, R^2 = .25. This final model explained 25% of the variation in drug abuse severity symptoms at intake. The slope predicting drug abuse from post-deployment trauma was positive and significant, β = .34. This suggests that drug use was positively related post-deployment trauma after accounting for the effects of combat trauma and

pre-deployment trauma, and the association was approaching significance t (2) = 1.97, p=.06. Hypothesis 2.4 was partially supported.

Treatment Outcomes

The third set of research hypotheses examined the treatment outcomes associated with the VTC program. Measures of mental health symptoms, including PTSD and depression, as well a drug and alcohol abuse severity and employment problems were administered at intake and three months into the treatment program. To examine changes in the individuals over time, paired samples t test were performed to assess whether scores differed significantly for participants from intake to follow-up, three months later. Data were screened for violations of normality. Unless otherwise noted, all variables were found to be relatively normally distributed. Results of the paired samples t tests are summarized in Table 12.

Hypothesis 3.1 stated that participants would report fewer symptoms of PTSD three months into treatment as compared to baseline as measured by the PCL. There was a significant decrease in the scores on the PCL from intake (M = 44.6, SD = 19.1) to the three month follow-up (M = 33.4, SD = 21.0; t (28) = 3.2, p = .003). The hypothesis was supported. Effect sizes were interpreted using Cohen (1988) interpretive guidelines, and the effect was found to be large (η^2 =.27).

Hypothesis 3.2 stated that participants would report a reduction in symptoms of depression three months into treatment as compared to their baseline symptoms. Two bivariate outliers were found during data screening and removed from the analyses due to

non-normality. Scores on the PHQ indicated a statistically significant decrease in symptoms of depression from baseline (M = 9.2, SD = 7.4) to follow-up (M = 6.1, SD = 6.5; t (27) = 3.0, p=.006). The hypothesis was supported, and the effect was large (η^2 =.25).

Hypothesis 3.3 stated that participants would report reduced alcohol use three months into treatment as compared to baseline as measured by the ASI. Scores on the alcohol abuse severity index of the ASI indicated a statistically significant reduction in symptoms from intake (M = .29, SD = .30) to follow-up (M = .06, SD = .09; t (27) = 4.41, $p < .001$). The hypothesis was supported, and the effect was large (η^2 =.42).

Hypothesis 3.4 stated that participants would report reductions in drug abuse severity three months into treatment as compared to baseline. Scores on the drug severity composite index of the ASI indicated a significant reduction in drug abuse severity from intake (M = .11, SD = .12) to three months into the program (M = .04, SD = .05; t (28) = 3.43, p = .002). The hypothesis was supported, and the effect was large (η^2 =.30).

Hypothesis 3.5 stated that participants would report reductions in employment problems three months into treatment as compared to baseline. Scores on the employment composite index of the ASI indicated a significant reduction in employment problems from intake (M = .66, SD = .27) to three months into the program (M = .55, SD = .30; t (28) = 2.75, p = .01). The effect was large (η^2 =.22), and the hypothesis was supported.

Table 13
Means, Standard Deviations, and T-Tests of Symptom Severity by Time (n=27)

	Intake		3 Month				
Variable	*M*	*SD*	*M*	*SD*	*df*	*t*	η^2
PTSD	44.62	19.05	33.96	21.00	28	3.19**	.27
Depression	9.19	7.35	6.07	6.52	27	2.96**	.25
Alcohol	0.29	0.30	0.06	0.09	27	4.41***	.42
Drugs	0.11	0.12	0.04	0.05	28	3.43**	.30
Employment	0.66	0.27	0.55	0.30	27	2.75*	.22

*** p<.001; ** p<.01; * p<.05 *Note.* η^2 *>.14 considered a "large" effect (Cohen; 1988)*

Barriers and Access to Care

Integration of qualitative and quantitative data is a key feature of mixed methods research. Textual responses to open-ended questions regarding barriers and access to mental health treatment before and during involvement in Veteran's Treatment Court (QUAL) were analyzed and organized in terms of clients' combat histories (quan). The display of qualitative data by quantitatively derived categories made it possible to explore codes that were common for either or both groups.

Emergent indicative themes of prior barriers to VA care are presented in Table 14 by combat status. Combat veterans and non-combat veterans had similarities and differences in terms of their response themes. Both combat and non-combat veterans reported being unqualified for VA services due to their discharge status, as well as losing their VA benefits due noncompliance with the VA staff and policies. Some veterans

Table 14
Barriers to VA Care by Combat Status: Coded Interview Response Frequencies

	Combat (n = 13)	Non-Combat (n = 18)
Unqualified	11	5
Negative Past Experiences	3	1
Financial Barriers	3	1
Awareness	2	12
Procedural Barriers	2	2
Time	1	1
Personal Attitudes	0	3
Transportation	0	4

reported having other negative past experiences at the VA, such as not agreeing with the medical management of their mental health symptoms or having long delays in necessary care. Further, both groups also reported being disqualified for not meeting the income criteria. Both groups also reported procedural barriers, such as long waits for appointments and not getting through on the phone.

Awareness, personal attitudes, and transportation were themes common for non-combat veterans. Awareness deals with the knowledge and understanding of entitlements to veteran's benefits and resources, as well as acting proactively to access those resources. Personal attitudes centered on negative feelings about accessing VA benefits, such as feeling undeserving of benefits due to one's non-combat status. Transportation difficulties were also cited as barriers when veterans were unable to access services due to their distance from the treatment facility or lack of means to transport themselves. Examples of responses by theme from combat and non-combat veterans are provided in Table 15.

A second open-ended question explored the mechanisms of change in the VTC program, or ways in which the program facilitated participants in overcoming barriers and accessing services (see Table 16). Interestingly, the most commonly cited mechanism for accessing services for the combat and non-combat veterans was being referred to non-VA resources, including community treatment providers, AA/NA, detox, and shelter services (see Table 17). Combat and non-combat veterans also both reported being referred for VA services. Counter to the program's aims, eight veterans reported receiving no additional support or services through their involvement with the court. Salient responses from combat and non-combat veterans are provided in Table 18. Additionally,

frequencies of program referrals are displayed in Table 17. There was a marked degree of similarity between combat and non-combat veterans in terms of their service utilization while in the program, with large portions of both groups reporting using AA/NA, group counseling, VA services, and individual counseling. Less frequently utilized services included shelter services, anger management classes, and employment assistance.

Table 15

Barriers to Care: Sample Interview Responses from Combat and Non-Combat Veterans

Personal Attitudes- negative feelings associated with service utilization
"I felt like I didn't deserve them." -Non-Combat veteran
"I didn't want to lean on anyone. I was always a provider, so I didn't want a handout." -Non-Combat Veteran
Awareness- lack of knowledge, understanding, or effort
"I didn't know that I had benefits." -Non-Combat Veteran
"I didn't know that it was an option." -Non-Combat Veteran
"I had just never been offered it before." -Non-Combat Veteran
Procedural Barriers- problems with navigating VA beurocracy
"Getting through on the phone was difficult" -Combat Veteran
"I never persued VA services because they were slow and there was too much red tape." -Non-Combat Veteran
"Time was a factor. They [the VA] didn't have time for me." -Non-Combat Veteran
Unqualified- no longer elligable for benefits due to discharge, past problems with staff, or financial criteria
"I had inquired about screening for PTSD. I was denied because I was making too much money and the second time they were overcrowded and just said "no". It seemed like I needed to be more severe to get services." -Combat Veteran
"Because of my condition the VA the providers felt that I was not appropriate and a risk to the staff." -Combat Veteran
"Up until 2010, they [the VA] said I was never in combat. In 2010, they acknowledged I was there." -Combat Veteran
"I don't have access to services due to the nature of my discharge." -Combat Veteran
Negative Past Experiences- negative past experiences with VA during treatment
"20 years ago I needed a right knee replacement, and they [the VA] still haven't done it. They don't give reasons; they just don't do what they should do." - Combat Veteran
"The VA tries to throw pills at you like you are nuts." -Combat Veteran
"I did mental health on my own through the VA. I didn't follow through… I didn't think I needed it anymore." -Non-Combat Veteran
"They are kind of rude out there [at the VA]." -Combat Veteran

Table 16

Access to Care by Combat Status: Coded Interview Response Frequencies

	Combat (n = 13)	Non-Combat (n = 18)
Connected to resources	5	12
No additional referrals	4	4
Connected to VA resources	3	3

Table 17

Access to Care by Combat Status: Questionnaire Responses

	Combat (n = 13)		Non-Combat (n = 18)	
	N	%	*N*	%
AA/NA	9	75	14	82
Group Counseling	7	58	12	71
VA Services	7	58	9	53
Individual Counseling	6	50	8	47
Anger Management Classes	3	25	5	29
Shelter	3	25	4	24
Employment Assistance	2	17	6	35

Note. Chi-Square analyses indicates no significant differences in service utilization between the combat and non-combat vets at the $p<.05$ level.

Table 18
Access to Care: Sample Interview Responses from Combat and Non-Combat Veterans

Connected to resources
"I was given the resources from the vet counselors, Sue and Rhonda, and they enrolled me directly and did all the necessary paperwork. Sue has been very helpful."- OIF/OEF Combat Veteran
"They showed me where to go and who to contact." -Gulf War Combat Veteran
"They opened a lot of doors. I don't know what doors to walk through, and they guide me along. They put me on the path to do something." - Non-Combat Veteran
"It [VTC] put me in touch with main line people for job services, treatment, and housing." -Noncombat veteran
"They provided me with info on who to contact to get further services and actually made me aware that there were other services." -Noncombat Veteran
Connected to VA resources
"They opened the door to VA medical. This place [VTC], they made me go down there and do it." -Combat Veteran
"They got me into residential treatment for detox… Sue helped. She coordinated between the VA and the court and got me into the residential treatment setting." - Vietnam Combat Veteran
"The VTC suggested I go see vet services in Ventura, so I went and that is where I do the program." -Non-Combat Veteran
"Since I've been in VTC, they pushed me to go get my medical and lifetime medical. They've taken care of me at the VA." -Non-Combat Veteran
No additional referrals
"They didn't help me out, but I didn't ask for anything." -Non-Combat Veteran
"I haven't asked for anything. I need to talk to Sue." -Vietnam Combat Veteran
"They haven't yet. There is no need in my case for drug and alcohol counseling." -Non-Combat Veteran

Treatment Motivation and Satisfaction

Participants were asked to describe their motivations for treatment while in the program. Two major themes, acknowledging a need for treatment and legal reasons, emerged from the analysis and are displayed in Table 19. The most frequent response was an acknowledgement of the participant's need for treatment. Among combat veterans, the more frequent response was for mental health problems, while among non-combat veterans substance abuse problems were more frequently cited. Both groups also cited medical problems as a reason for needing treatment. Legal reasons were also cited as a motivator for treatment. Specifically, both combat and non-combat veterans stated they hoped to stay out of jail. Non-combat veterans also cited their desire to complete the program successfully. Salient responses are displayed in Table 20

Table 19
Motivations for Treatment: Coded Interview Responses

	Combat (n = 13)	Non-Combat (n = 18)
Acknowledge Need for Treatment	20	25
for mental health problems	10	8
for substance abuse problems	7	12
for medical problems	2	2
Legal Reasons	5	6
to stay out of jail	2	3
to complete the program	0	2

Table 20
Motivations for Treatment: Sample Interview Responses from Combat and Non-Combat Veterans

Acknowledge Need for Treatment
"I had a problem and I needed help." -Combat Veteran
"I had an alcohol problem. I drank a lot in the military and until I was 28. After the military, I was sober for 10 years and relapsed in 2010 and went to drugs. I was abusing prescription drugs and went back to heroin and meth. -Combat Veteran
"I was a complete drunk. I was hurting myself and other." -Noncombat Veteran
"I realized I was an addict." - Noncombat Veteran
"[I got treatment] because I couldn't sleep and I was angry all the time." -Combat Veteran
"I went for PTSD, combat, and adjusting back to civilian life." -Combat Veteran
"I gave it a try because I had more than a drinking problem." -Combat Veteran
"I was delusional and thought someone was trying to kill me." -Combat Veteran
Legal Reasons
"I was court ordered." -Non-combat Veteran
"It kept me out of prison. It got me in touch with a decent judge." -Combat Veteran
"I had to do program for veteran's court… I was forced, but it was a good thing because I discovered a good program that is for addiction and PTSD" -Noncombat Veteran
"I show up to stay out of jail." -Non-Combat Veteran

Table 20
Program Satisfaction: Sample Interview Responses from Combat and Non-Combat Veterans

Nonadversarial approach- satisfied with the non-judgmental, understanding, respectful treatment received

"They try to help you, and they listen to you". -Non-Combat veteran

"I don't feel like a criminal [in VTC]." -Combat Veteran

"He [the judge] understands where I come from" -Combat Veteran

Program components- satisfaction with aspects of the treatment plan, individuals, or providers

"The judge is really personable and seems like he really wants to help people." -Non-Combat Veteran

"I like the formalness of the judge. His way of speaking to you, he is understanding. -Combat Veteran

"I like our group meetings. They are informational, informal, and we share a lot of our problems and find the best ways to handle them." -Non-Combat Veteran

Dissatisfied- unsatisfied with the program or aspects of the program

"To date, nothing. He [the judge] says he'll allow me to go home, and then he doesn't let me go. I've completed every requirement." -Non-Combat Veteran

"I think it's a good idea, but it's been 100% worthless to me. They haven't done anything for me." -Combat Veteran

Attention- feelings of gratitude due to specialized effort put forth by the court directed at the defendant

"They try to help you out, and they listen to you." -Non-Combat Veteran

Opportunity- gratitude regarding the ability to have a second chance and start again

"I feel like you are giving me an opportunity to fix my life. I'm grateful for the opportunity."-Combat Veteran

"[I am satisfied with] the whole thing, because they are giving us a chance." -Non-Combat Veteran

Access to services - satisfaction with the referral process

"Since I've been in VTC, they've pushed me to go get my medical and lifetime medical. They've taken care of me at the VA. The groups at [community treatment provider] are really working. If you want it, it works. -Non-Combat Veteran

Convenience- satisfaction with the time and location of court

"I like knowing it is at Wednesday at 1:30 and not early in the morning when I have to be at work." -Non-Combat Veteran

Table 21

Program Satisfaction: Coded Interview Responses

	Combat (n = 13)	Non-Combat (n = 18)
Non-adversarial approach	9	8
Program components	6	9
Dissatisfied	2	2
Attention	2	2
Opportunity	2	3
Access to services	1	2
Convenience	0	2

Summary Findings

Table 22

Summary of Findings for Studies One and Two

Hypotheses	Result
Study One	
1.1 H_1 - There will be a significant difference in baseline psychiatric problems between the Veteran group and the Non-Veteran group	Unsupported
1.2 H_1 - There will be a significant difference in baseline alcohol abuse problems between the Veteran group and the Non-Veteran group	Unsupported
1.3 H_1 - There will be a significant difference in baseline drug abuse problems between the Veteran group and the Non-Veteran group	Supported
Study Two	
2.1 H_1 – Pre-deployment, combat, and post-deployment trauma will predict severity of PTSD symptoms at intake	Supported
2.2 H_1 - Pre-deployment, combat, and post-deployment trauma will predict depression symptoms at intake	Partially Supported
2.3 H_1 - Pre-deployment, combat, and post-deployment trauma will predict severity of alcohol abuse severity at intake	Unsupported
2.4 H_1 - Pre-deployment, combat, and post-deployment trauma will predict severity of drug abuse severity at intake	Partially Supported

Table 22 Continued

Hypotheses	Result
3.1 H_1 - Participant report fewer symptoms of PTSD three months into treatment as compared to baseline.	Supported
3.2 H_1 - Participant report fewer symptoms of depression three months into treatment as compared to baseline.	Supported
3.3 H_1 - Participant report reductions in alcohol abuse severity three months into treatment as compared to baseline.	Supported
3.4 H_1 - Participant report reductions drug abuse severity three months into treatment as compared to baseline.	Supported
3.5 H_1 - Participant report reductions in employment problems three months into treatment as compared to baseline.	Supported
4.1 Barriers to care and access to treatment differs by participants combat statuses	Partially Supported
4.2 Motivations for treatment and program satisfaction differs by participants combat status	Unsupported

Chapter V

Discussion

This research focused on the experiences of veterans in two jail diversion programs, a traditional drug court and a new specialized variant of drug court, Veterans Treatment Court (VTC), and sought to provide an empirical understanding of the needs of justice-involved veterans as well as the effects of the VTC program. Two sets of analyses were conducted. In the first study, it was hypothesized that veterans and non-veterans would differ in terms of their presenting psychiatric symptoms and drug and alcohol abuse severity at intake to a traditional drug court. The findings of the study indicated that veterans presented to drug court with more severe lifetime drug abuse problems than did civilians. Study two focused on veterans enrolled in a Veteran's Treatment Court. Findings indicated that veterans present to the justice system with symptoms related to their diverse trauma histories, including both military related and non-military traumas. PTSD, depression, and drug abuse severity were found to be associated with combat trauma severity. For PTSD, post-deployment trauma incrementally contributed to symptoms above and beyond the effects of combat trauma, indicating that non-combat stressors have negative effects on functioning of military veterans.

Participation in the VTC program was found to be associated with significant reductions in mental health symptoms, substance abuse severity, and employment problems over time. The particular aspects of the program that contributed to this change

appeared to be the additional access to services and the streamlined referral process to the VA for both combat and non-combat veterans. The findings of this study suggest that the VTC program is responsive to the range of trauma-related mental health problems veterans present with to the justice system independent of their combat statuses.

While veterans and non-veterans presented to a drug treatment court with similar alcohol and psychiatric problems, veterans presented to the court with a more severe lifetime history of drug problems. This sample of veterans consisted of mostly older males and represents a group of veterans who had gone without effective drug treatment during the course of their life. This finding is consistent with a similar study, which found that veterans presented to the drug court setting with more severe drug use than civilians (White, Mulvey, Fox, & Choate, 2011). This growing body of research provides support for the contention that veterans present to the justice system with treatment needs that may be addressed in a specialized treatment program.

The second part of the study examined the presenting concerns, treatment outcomes, and program experiences of veterans participating in a Veterans Treatment Court (VTC). The veterans in this study reported considerable trauma histories. On average, the sample had four types of high magnitude stress (HMS) experiences before deployment and four during or after deployment. This translates to an average of eight unique potentially traumatic experiences for combat-exposed veterans. These experiences contributed to the mental health symptoms of those presenting to the VTC. Symptoms were significantly worse for combat veterans, with more severe symptoms of PTSD and higher levels of depression, than non-combat veterans. Given combat veterans more

severe history of trauma, this difference would be expected. Despite these mental health challenges, combat and non-combat veterans presented with similar addiction-related problems. This is likely due to screening procedures into the program, leading to homogeneity among the sample in regards to their drug abusing offending behaviors.

To further elucidate the predictive nature of different types of past trauma on presenting concerns, regression analyses were conducted in a step-wise manner to examine the incremental predictive nature of lifetime traumas, including pre-deployment, combat, and post-deployment trauma. Findings suggest that cumulative traumas are predictive of PTSD symptoms, depression, and drug abuse severity, with more traumas predictive of more severe symptoms and substance use at intake. This is consistent with a cumulative trauma model of PTSD, suggesting a dose-response relationship between past trauma and mental health symptoms.

Some interesting patterns emerge when models were scrutinized more closely, specifically in regards to the sequelae of depression versus PTSD for justice-involved veterans. For PTSD, pre-deployment (or non-military) trauma and a combination of combat and post-deployment trauma significantly predicted symptom severity. This suggests that, as opposed to depression, which is independently predicted by combat, the expression of PTSD in veterans is also related to post-deployment related traumas. For instance, a large portion of our sample indicated that they had experienced "a sudden move or loss of home and possessions" and/or were "suddenly abandoned by a spouse partner, parent, or family member" following deployment. Other studies have cited the impact of negative experiences during reintegration on samples of help-seeking veterans

with PTSD. Veterans with PTSD have been shown to demonstrate difficulties with their families, communities, and social functioning following deployment (Finley et al., 2010; Sayers, Farrow, Ross, & Oslin, 2009; Sayer, Noorbaloochi, Frazier, Carlson, Gravely, & Murdoch, 2010). Together, these findings suggest that the post-deployment period is a sensitive period for recently returned personnel.

Further, these finding are consistent with Olusanya (2012) conceptualization of a psychosocial-ecological framework for predicting post-deployment mental health problems. According to this model, particular combinations of psychosocial factors and combat exposure interact to predict the likelihood of developing and maintaining mental illness. It appears that this model may be relevant to the expression of PTSD following military service.

Drug abuse was found to have a cubic relationship with combat trauma. At very high and low levels of combat trauma, drug abuse was low, and at moderate levels of combat trauma, drug abuse was high. This is an interesting finding because it runs counter to the prevailing models in the substance abuse and trauma literature, self-medication and dose-response theories. Together these theories posit that trauma survivors abuse drugs to dull their PTSD symptoms and predict that the individuals with the most severe trauma histories and PTSD also use the most drugs. There are a few potential explanations for the cubic relationship found in this study. For military personnel, drug abuse is grounds for discharge for the military. Indeed, a large portion of our sample indicated starting to abuse substances while in the military. If individuals with severe combat history returned from combat to abuse drugs heavily, while they were in

the military, they might then have been discharged from service. Such a discharge might lead to identification and treatment of these individuals. The scenario might look different for a person with moderate combat exposure and less severe PTSD and substance abuse. This person may have been left unidentified and untreated following deployment. This would suggest that justice-involved veterans, with moderate levels of combat exposure, are at heightened risk to go untreated for drug problems than those with high levels of combat exposure.

Another potential explanation for this relationship is that substance abuse may have a more complex relationship with past trauma and mental health disorders than explicated here. The finding that alcohol was not related to trauma points to this possibility. One possibility is that there is a mediation relationship between past trauma, PTSD, and substance abuse. Past research has shown this relationship in adult women with history of childhood rape (Epstein, Saunders, Kilpatrick, & Resnick, 1998) and interpersonal violence (Ullman, Relyea, Peter-Hagene, & Vasquez, 2013), as well as individuals with severe mental illness and history of trauma (Subica, Claypoole, & Wylie, 2012).

This study examined the treatment outcomes across time of the VTC participants in regards to PTSD, depression, alcohol abuse, drug abuse, and employment problems. We found significant reductions on all indicators in this study from baseline to 3 months in the program. Taken with R-N-R theory, these findings suggest that the VTC program provides treatment services that are responsive to the diverse treatment needs of the justice-involved veterans. The fact that significant reductions in problem severity and

mental health symptoms were found across several indicators speaks to the comprehensive services received by the veterans while in the VTC program. These findings are consistent with past research showing effectiveness of drug courts with the veteran population, as evidenced by reductions in recidivism (Smith, 2013), and expands these findings to demonstrate reductions in mental health symptoms.

This study examined barriers to care for veterans entering a VTC program. The VTC model assumes that justice-involved veterans have mental health problems relating to their service that had gone untreated in the past. It is unclear what barriers interfered with veterans accessing mental health and drug abuse treatment prior to their offending, and whether these barriers diverged across veteran status (combat vs. non-combat). This study found that common barriers, including institutional barriers, personal attitudes, and transportation problems, existed across groups of veterans. This is consistent with prior research (Ouimette et al., 2011) that showed similar barriers in a sample of help-seeking veterans. However, this study expanded upon this prior research to other barriers that were not found in the previous study. Surprisingly, a large portion of veterans cited being unqualified for VA treatment as a barrier to care. Many of the veterans reported having non-honorable discharges due to their substance abuse while in the military. This points to a problematic policy in the United States military, in that those veterans who develop substance abuse problems while in the military are removed for these issues. The nature of this removal, under dishonorable or "other than honorable" conditions, then precludes these veterans from receiving necessary treatment at the VA to overcome their addiction

problems. It is an issue that has recently garnered more public attention, and remains unresolved (Philipps, 2013).

Barriers of awareness and personal attitudes were mostly reported by the non-combat veterans in this study. There appeared to be a common misconception among non-combat veterans that they did not qualify or were undeserving of VA health care because such benefits were reserved only for combat veterans. This is in direct conflict with the stated policy of the VA, which affords benefits to all men and women who served in the military and have been discharged from the service "under [other than dishonorable] conditions" (Department of Veterans Affairs, 2013). This finding underscores one clear purpose for VTC's to enroll non-combat veterans, as VTC's can function to overcome misunderstandings and stigmas associated with VA service utilization among non-combat veterans. It is unclear if such a bias or misinformation extends beyond to the larger veteran population or was limited to the sample under study. Future research should examine the reasons for service underutilization among non-justice involved, non-combat veterans.

This study found similarity between combat and non-combat veterans in terms of participant's self-reported program experiences. Despite differences in initial barriers to care reported by veterans of varying trauma histories, both combat and non-combat veterans accessed services through the program at VA and non-VA resources. This suggests that the VTC program functions to assist veterans in gaining access to VA services, regardless of their combat statuses. The combat and non-combat groups also looked similar in terms of their satisfaction in the program and motivation for treatment.

Together, these findings suggest that the VTC program functions similarly for combat and non-combat veterans.

Limitations

There were several limitations of this research. First, the samples under study included justice-involved veterans. Therefore, engagement in the legal system was the first line of eligibility criteria for inclusion. Further, many justice-involved veterans were screened out of the VTC program prior to enrollment due to their unwillingness to participate in the program or the nature of their offense. In particular, veterans with low level misdemeanor offenses or more serious violent offenses were not eligible for the program. Although these findings describe the mental health and experiences of veterans involved in the justice system, these findings should not be generalized to other groups of veterans, such as non-justice-involved veterans.

In some instances, a lack of significant findings may have been due to self-report bias. Participants were interviewed outside the courtroom during one of their regularly scheduled status hearings. Many participants were justice-involved due to substance related charges. While each participant was fully informed of their rights to confidentiality, the nature of their substance-related offending may have led to feelings of apprehension about reporting true substance using behaviors to researchers. Thus, problems with the reliability of self-reported information may have clouded a true relationship among variables, such as substance use behaviors, with criminal elements.

The outcomes based questions in this study were limited in that the design was a one group pre-test post-test. Due to the lack of a control group, statistical regression to the mean or maturation effects cannot be ruled out (Heppner, Wampold, & Kivlighan,

2008). Statistical regression to the mean refers to the tendency for extreme scores to become average. Thus, it is possible from a statistical standpoint that the participants in this program would have demonstrated some improvements in their mental health, substance misuse, and employment over time regardless of the treatment, or lack of treatment, they received. However, interview responses to the program satisfaction question, suggest that regression to the mean was not solely responsible for the positive outcomes.

Additional limitations to this study were also noted. For some analyses, the sample size in this study did not meet adequate power to detect medium or small effects. Power is a function of sample size, effect size, and error levels. To meet adequate power to detect effects, sample sizes must meet minimum cut-offs. For some of the analyses in this study, the power was only adequate to detect large effect sizes. Thus, other relationships may be existed that were undetected. Finally, the qualitative component of this study was limited in that the findings in this group of veterans may not generalize to other samples of veterans.

Clinical Implications

This research indicates that veterans present to the justice system with specialized needs that are responded to in an intensive drug program. However, it is unclear whether veterans might benefit from more or less frequent drug testing, intensive drug counseling, and participation in peer-support programs to match their need for more intensive drug

treatment. According to R-N-R theory, such a system of matching would result in better outcomes for veterans in the treatment court setting.

This study found a significant degree of trauma among the veterans presenting to the justice system. Indeed, 56% of the sample presented with clinical levels of PTSD. This suggests that trauma-informed treatment is key for this group. The two evidence-based treatments provided by the VTC program under study included *Seeking Safety* and *The Matrix*. These interventions are appropriate for use with this sample and showed positive outcomes in regards to reductions in trauma symptoms over the course of the treatment. Additional treatments with empirical support for use with traumatized veterans may be considered for future use with VTC participants. Treatments such as cognitive processing therapy (CPT; Resick, Nishith, Weaver, Astin, & Feuer, 2002) and prolonged exposure therapy (PE; Foa et al., 1999) have demonstrated effectiveness in reducing symptoms of PTSD in veterans. As VTC's continue to expand, including such individualized therapies to the continuum of care may prove to be quite successful.

Further, this research has important implications community outreach for veterans following their military service. PTSD in veterans was related to non-military related traumas and post-deployment factors, such as reintegration and post-deployment re-adjustment issues in addition to combat trauma. This suggests post-deployment adjustment issues, such as reconnecting with family and community members, contribute to difficulties faced by veterans following deployment. A large portion of our sample indicated that they had had experienced, "a sudden move or loss of home and possessions" as well as having been "suddenly abandoned by a spouse partner, parent, or

family member". These findings replicate others, which show high rates of family problems following deployment in PTSD afflicted veteran (Sayer et al., 2010; Sayers et al. 2009; Pietrzak, Johnson, Goldstein, Malley, & Soutwick, 2009). Further, past research with OIF/OEF veterans has found that the prevalence of PTSD increases as the time from returning from deployment increases (Grieger et al., 2006; Milliken et al., 2007). This research would suggest that this trend is due to additional high magnitude stressors military veterans experience during the post-deployment period. Thus, it appears that the post-deployment period is a high risk time for recently returned personnel, and intervention, including family therapy and community outreach, during this period is warranted to prevent negative outcomes such as criminal activity (Bobrow, Cook, Knowles, & Vieten, 2012).

Policy Implications

The findings from this study suggest that, in the past, justice-involved veterans experienced significant drug problems that were left un-treated or ignored. Such a finding suggests veterans were overlooked in the past, and provides a baseline for the justice system to work to improve its response with future generations of service men and women.

The underlying assumption of the Veterans Treatment Court model is that the veteran's criminal behavior is mediated by mental illness related to their experiences in the military. This has raised the issue among policy makers whether to enroll non-combat veterans into such a jail diversion program. To these officials, at the heart of the matter is whether non-combat veterans, who have not experienced war or active combat, can suffer

with mental illness that stems from their military experience, and should thus be given preferential treatment in the justice system.

In the court under study, non-combat veterans presented with active, clinically significant PTSD. Further, examination of the predictors of PTSD included combat trauma, as well as other traumas, including pre-deployment trauma and post-deployment trauma. This suggests that veterans present to the justice system with mental illness that relates not only to combat experiences, but also to traumas un-related to combat (such as childhood victimization) and those traumas following deployment (such as being abandoned by a spouse). Thus, accepting veterans for only combat related trauma issues to the VTC program ignores the complexity of issues that are in play when veterans enter the justice system. Furthermore, combat, as defined by traditional combat screeners, misses the potential for non-combat related military trauma, such as military sexual trauma or training accidents. Thus, in the regards to enrollment criteria for Veteran's Treatment Court programs, this research suggests that combat status should not be the definitive determinant of military related mental illness, and that, indeed, eligibility criteria need to be broader than considering combat alone.

Further, the majority of veterans in our sample benefitted from the program across a broad range of indicators, including mental health, substance use, and employment. Given that all veterans (i.e. combat and non-combat) are eligible for benefits through the VA, it stands to question why a program, such as VTC, would be limited to a subgroup of its potential target population. Assisting veterans in accessing earned benefits displaces financial burdens from local municipalities to the federal government. Additionally, this

study has shown that the VTC program functions successfully across a wide variety of veterans. In a climate of dwindling resources for mental health programming, it behooves local policy makers to support the development and implementation of the VTC for all veterans in their community

Future Directions

This study raised several issues that warrant future research and study. First, the VTC program has yet to be empirically validated in regards to program effectiveness. This study provides initial evidence that participation in the VTC program is associated with symptom reductions. However, additional studies, with quasi-experimental or experimental designs would provide stronger evidence to support the widespread implementation of the VTC model. Future research should explore the impact of VTC on veterans enrolled in the program versus those in a wait-list control group or a treatment as usual control groups to improve internal validity and strengthen the empirical basis for the expansion of the model.

Treatment matching and adherence to the responsivity principle has been suggested by scholars as a beneficial in the context of drug courts (Marlowe, 2006). Given the diversity of presenting concerns in this sample of veterans, including differences in trauma histories and subsequent mental health symptoms and drug abuse severity, future research might examine the use of treatment matching in the VTC context. While the program under study designed treatment plans to meet the individual needs of the offenders, at the present time, the sample sizes are too small to do any meaningful comparisons across groups of offenders. Further, the assessment process in

the VTC under study was not formalized. Veteran specific formalized assessment practices might be instituted in the VTC model to include screening for PTSD, depression, substance use, violence and aggression, and traumatic brain injury. Veterans could be matched to specialized tracks based on their criminal behavior and treatment needs assessed at intake. Future studies could examine differential outcomes of justice involved veterans matched to offense and need specific programs versus those who receive the standard package of treatment.

Finally, longitudinal research examining the predictors of treatment success in Veterans Treatment Court as well as the program's effect on subsequent recidivism is needed. One such predictor might be generational cohort. In samples of help-seeking veterans, younger cohorts have been found to present with different problems and respond more successfully to treatment than older cohorts (Chard, Schumm, Owens, & Cottingham, 2010; Fontana & Rosenheck, 2008). It would be interesting to examine whether these patterns unfold for mandated, justice-involved veterans. Due to the time constraints of this evaluation, data on arrest and days of incarceration following program completion was not yet available. Thus, these questions remain for future research.

Conclusion

In sum, the current study supports others in finding high levels of trauma related mental health symptoms and substance abuse among veterans, particularly for those who had experienced combat. Findings indicated differential expression for trauma induced psychological symptoms and substance abuse disorders. Combat trauma was predictive of drug abuse severity and symptoms of PTSD and depression. For PTSD, post-

deployment trauma contributed in unique ways to symptoms above and beyond pre-deployment and combat traumas, indicating that non-military stressors have deleterious effects on mental health among veterans. These findings are neglected by VTC programs that limit eligibility to only combat veterans.

Further, positive changes in mental health symptoms and substance abuse severity were detected after three months of participation in the Veteran's Treatment Court program. The particular aspects of the program that contributed to this change appeared to be the additional access to services and the streamlined referral process to the VA, as well as increased motivation for treatment success. These mechanisms were independent of combat history, and provide further support that the VTC program meets the needs of both combat and non-combat veterans alike.

While the current study suggests that participation in formalized treatment can impact participants' mental health symptoms, achieving more dramatic improvements would likely require interventions that specifically assessed and targeted treatment needs at intake. Future research is needed to evaluate whether treatment matching might have an effect above and beyond that observed in this study. Further, while short term reductions in mental health symptoms were achieved, the question remains as to whether the VTC program achieves its long term goals of reducing criminal offending behaviors among veterans.

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Appendix

Interview Consent Form

Intake Interview

3 Month Interview

Consent to Participate in a Study on the Effectiveness of Veterans Treatment Court

You are being asked to participate in a study to evaluate your treatment court experience and to learn how to make it more effective. We are asking people to respond to our questions at two time periods in the program: at entrance and three months into the program. The surveys will take approximately 10-30 minutes.

If you decide to participate you will be asked a series of questions about your life experiences and current functioning. Some participants may experience psychological discomfort in recalling potentially traumatic experiences. You do not have to provide any information beyond what you are comfortable sharing, as your responses to all questions are voluntary. A few questions on the survey ask about whether you had past experiences of childhood physical and sexual abuse. If you tell us the abuser's name and current location, we are required by law to report this information.

Any information you tell us will be confidential. A code number will be used instead of your name to identify you in study databases. At no time will the information obtained in the interviews be given to anyone in a way that could be used to identify you. Only project staff will have access to names and ID numbers, and they will not have access to the data in the database.

The benefit to you and to others will be in the form of information which will be used to make this program more effective. We also hope to publish the outcomes to help programs like this across the country. Upon completing the exit interview, you will be provided with a $5 gift card for your participation in the study. You may end your participation at any time.

If you have any questions about this research project please contact or Jessica Larsen, Ed.M. at jlarsen@education.ucsb.edu/805-893-4986 or Merith Cosden, Ph.D. 805-893-2370. If you have any questions regarding your rights as a research subject, please contact the Human Subjects Committee at 805-893-3807 or hsc@research.ucsb.edu. Or write to the University of California, Human Subjects Committee, Office of Research, Santa Barbara CA 93106-2050

I agree to participate in the study:

Signature: _____ Date: _____

Print Name: _____

Witness _____ Date: _____

ID:_____ Date:_____

1. When you were in the military was it for active duty, National Guard, or reserves? (If several, indicate the level associated with the most deployments)
    A. Active Duty
    B. National Guard
    C. Reserves

2. What branch service were you in?
    A. Army
    B. Navy
    C. Marines
    D. Air Force
    E. Coast Guard

Intake

3. What was your highest rank? _____

*Refer to question 1, if **active duty read questions4 & 5** below, if National Guard or Reserve ask,*

"Were you ever activated?" YES (*ask 4 and 5*) NO (*skip to question 6*)

4. When did you enter active duty? (month/year) _____
5. When did you separate from active duty? (month/year) _____

**Note – separation date must be AFTER return from deployment date.*

6. Are you currently still in the reserves? (This includes regular reserves, **OR** Individual Ready Reserves / inactive reserves (IRR) probe to find out if patient is in either
    A. Yes
    B. No
    C. Don't Know/Refused

7. Where you ever deployed while serving? YES NO

    A. Please identify the conflict & dates of deployment:

8. How long was each deployment (*months*)? 1) _____ 2) _____ 3) _____ 4) _____

use back if extra space is needed

9. When did you most recently return from deployment? (month/year) _____

10. How many deployments did you have **since Sept 11, 2001 as part of OEF/OIF**?

11. Do you have a service related disability? YES NO
    A. What percentage disability? _____%

12. Have you accessed VA for care? YES NO

13. Is this your first offense YES NO

14. Have you been on probation before? YES NO

15. Gender: 1- Male 2- Female

16. Date of birth: _____ ☐

17. What Race do you consider yourself?

1. White (not Hisp)
2. Black (not Hisp)
3. American Indian
4. Alaskan Native
5. Asian/Pacific
6. Hispanic-Mexican
7. Hispanic-Puerto Rican
8. Hispanic Cuban
9. Other Hispanic

18. Education Completed: ☐☐ Years ☐☐ months

19. Marital Status

1. Married
2. Remarried
3. Widowed
4. Separated
5. Divorced
6. Never Married

1b. How long ____Years ___Months

20. Children? No Yes, How many? _____ Any born during VTC? _____

21. Living Situation

1. With sexual partner and children
2. With sexual partner alone
3. With children alone
4. With parents
5. With family
6. With friends
7. Alone
8. Controlled environment
9. No stable arrangements

3b. How long ____Years ___Months

22. *Please indicate the number above the answer that best describes your experiences. If you deployed multiple times, please refer to the deployment when you experienced the most combat.*

A. Did you ever go on combat patrols or have other dangerous duty?

1 No	2 1-3x	3 4-12x	4 13-50x	5 51+ times

B. Were you ever under enemy fire?

1 Never	2 <1 month	3 1-3 months	4 4-6 months	5 7 mos or more

C. Were you ever surrounded by the enemy?

1 No	2 1-2x	3 3-12x	4 13-25x	5 26+ times

D. What percentage of the soldiers in your unit were killed (KIA), wounded or missing in action (MIA)?

1 None	2 1-25%	3 26-50%	4 21-75%	5 76% or more

E. How often did you fire rounds at the enemy?

1 Never	2 1-2x	3 3-12x	4 13-50x	5 51 or more

F. How often did you see someone hit by incoming or outgoing rounds or IED attacks?

1 Never	2 1-2x	3 3-12x	4 13-50x	5 51 or more

G. How often were you in danger of being injured or killed (i.e. being pinned down, overrun, ambushed, near miss, etc.)?

1 Never	2 1-2x	3 3-12x	4 13-50x	5 51 or more

23. *Listed here are problems and complaints that people sometimes have in response to stressful life experiences**, including military experiences**. Please read each one carefully, and then indicate one of the numbers that reflects how much you have been bothered by the problem **in the past month.***

	Not at all	A little bit	Moderately	Quite a bit	Extremely
A. Repeated, disturbing *memories, thoughts,* or *images* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
B. Repeated, disturbing, *dreams* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
C. Suddenly *acting* or *feeling* as if a stressful experience were *happening again* (as if you were reliving it)?	**1**	**2**	**3**	**4**	**5**
D. Feeling *very upset* when *something reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
E. Having *physical reactions* (e.g. heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
F. Avoiding *thinking about* or *talking about* a stressful experience from the past or avoiding *having feelings* related to it?	**1**	**2**	**3**	**4**	**5**
G. Avoiding *activities* or *situations* because *they reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
H. Trouble *remembering important parts* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
I. *Loss of interest* in activities that you used to enjoy?	**1**	**2**	**3**	**4**	**5**
J. Feeling *distant* or *cut off* from other people?	**1**	**2**	**3**	**4**	**5**
	1	**2**	**3**	**4**	**5**

K.	**Feeling *emotionally numb* or being unable to have loving feelings for those close to you?**					
L.	**Feeling as if your future will somehow be *cut short*?**	**1**	**2**	**3**	**4**	**5**
M.	**Trouble *falling* or *staying asleep*?**	**1**	**2**	**3**	**4**	**5**
N.	**Feeling *irritable* or having *angry outbursts*?**	**1**	**2**	**3**	**4**	**5**
O.	**Having *difficulty concentrating*?**	**1**	**2**	**3**	**4**	**5**
P.	**Being "*super-alert*" or watchful or on guard?**	**1**	**2**	**3**	**4**	**5**
Q.	**Feeling *jumpy* or easily startled?**	**1**	**2**	**3**	**4**	**5**

24. *Over the **LAST TWO WEEKS**, how often have you been bothered by any of the following problems?*

	Not at all	Several days	More than half the days	Nearly every day
A. Little interest or pleasure in doing things	**0**	**1**	**2**	**3**
B. Feeling down, depressed, or hopeless	**0**	**1**	**2**	**3**
C. Trouble falling or staying asleep, or sleeping too much	**0**	**1**	**2**	**3**
D. Feeling tired or having little energy	**0**	**1**	**2**	**3**
E. Poor appetite or overeating	**0**	**1**	**2**	**3**
F. Feeling bad about yourself-or that you are a failure or have let yourself or your family down	**0**	**1**	**2**	**3**
G. Trouble concentrating on things, such as reading the newspaper or watching television	**0**	**1**	**2**	**3**
H. Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual.	**0**	**1**	**2**	**3**
I. Thoughts that you would be better off dead, or of hurting yourself in some way.	**0**	**1**	**2**	**3**

J. If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____ (0)

Somewhat difficult _____ (1)

Very difficult _____ (2)

Extremely difficult _____ (3)

25. *The next set of questions we are asking of everyone. Sometimes people who have substance abuse problems have had other difficult experiences in their life, and that is why I am asking you these questions. The events below may or may not have happened to you. Indicate whether they happened before, during or after your first deployment. If an event could fit in two categories, just list it in one of them. (In the blank next to every box you checked, put the number of times something like that happened. If never deployed only write answers in the before first deployment column)*

		Before **first deployment**	# of times	During or after **first deployment**	# of times
A.	A really bad car, boat, train, or airplane accident	☐	_ ___	☐	_ ___
B.	A really bad accident at work or home	☐	_ ___	☐	_ ___
C.	A hurricane, flood, earthquake, tornado, or fire	☐	_ ___	☐	_ ___
D.	Hit or kicked hard enough to injure - as a child	☐	_ ___	☐	_ ___
E.	Hit or kicked hard enough to injure - as an adult	☐	_ ___	☐	_ ___
F.	Forced or made to have sexual contact - as a child	☐	_ ___	☐	_ ___
G.	Forced or made to have sexual contact - as an adult	☐	_ ___	☐	_ ___
H.	Attack with a gun, knife, or weapon	☐	_ ___	☐	_ ___
I.	During military service - seeing something horrible or being badly scared	☐	_ ___	☐	_ ___
J.	Sudden death of close family or friend	☐	_ ___	☐	_ ___
K.	Seeing someone die suddenly or get badly hurt or killed	☐	_ ___	☐	_ ___
L.	Some other sudden event that made you feel very scared, helpless, or horrified.	☐	_ ___	☐	_ ___
M.	Sudden move or loss of home and possessions.	☐	_ ___	☐	_ ___

N.	Suddenly abandoned by spouse, partner, parent, or family.	☐	_ ___	☐	_ ___

26. Did any of these things really bother you emotionally? NO YES

27. If so, how many would you say really bothered you for more than a month? ____

Employment

28. Do you have a **valid driver's license**? YES NO

29. Do you have an **automobile available** for your use? YES NO

30. In the 30 days prior to entering your offense, how many days were you **paid for working**? _____ Days

31. How much did you **receive from employment** (new income) in the 30 days prior to your offense? $_____

Alcohol

32. In the 30 days prior to your offense, how many days did you **use any** alcohol? _____ Days

33. In the 30 days prior to your offense, how many days did you **use alcohol to intoxication?** _____ Days

34. How much would you say you **spent** during the 30 days prior to your offense on alcohol? $_____

35. In the 30 days prior to your offense, how many days did you experience any **alcohol problems**? ____ Days

36. **How troubled or bothered** are you by any alcohol problems?

0----------1----------2----------3----------4

Not at all Slightly Moderately Considerably Extremely

37. How **important** to you is treatment for these problems?

0----------1----------2----------3----------4

Not at all Slightly Moderately Considerably Extremely

Overall, which substance(s) is/are the major problem?

00- No problem
01- Alcohol any use
02- Alcohol to intox
03- Heroin
04- Methadone
05- Opiates/Analgesics
06- Barbiturates
07- Other/Sed/Hyp/Tranq
08- Cocaine
09- Amphetamines
10- Cannabis
11- Hallucinogens Methadone
12- Inhalants
13- Alcohol and one or more drugs
14- More than one drug

Drug Use

38. In the 30 days prior to your offense, how many days did you use:

A. Heroin ☐☐

B. Methadone ☐☐

C. Other opiates/analgesics ☐☐

D. Barbiturates ☐☐

E. Other sedatives/hypnotics/ tranquilizers ☐☐

F. Cocaine ☐☐

G. Amphetamines ☐☐

H. Cannabis ☐☐

I. Hallucinogens ☐☐

J. Inhalants ☐☐

K. More than 1 substance per day (including alcohol) ☐☐

39. In the 30 days prior to your offense, how many days did you **experience problems** with drug use? _____ Days

40. How **troubled or bothered** are you by drug problems?

0----------1----------2----------3----------4
Not at all Slightly Moderately Considerably Extremely

41. How **important** to you is treatment for these drug problems?

0----------1----------2----------3----------4
Not at all Slightly Moderately Considerably Extremely

42. Tell me about the circumstances under which you exited the military?

43. Were you honorably or dishonorably discharged from the military?

44. Have you ever tried to access substance abuse or mental health services before entering VTC? YES NO

A. At the VA? YES NO
B. At a Military Health Facility? YES NO
C. At a local Vet Center? YES NO
D. Other place? YES NO Place: _____

Why/Why Not?

45. If you didn't, what made it hard to get? P: In particular, what made it hard to get at the VA?

3 Month

ID:_____ _____ Date:_____

32. *Programs accessed in treatment*

- *Counseling- Individual*
- *Counseling- Group*
- *Anger Management*
- *Employment assistance :_____*
- *Veteran's Administration (circle one) Medical or Psychological*
- *Alcohol Awareness and Education*
- *Shelter- Clean and Sober living*
- *AA/NA*
- *CBOC Individual Therapy with Sue*
- *Seeking Safety Group with Sue*

Other:

2. Education Completed: ☐☐s ☐☐onths

3. Marital Status
   1. Married
   2. Remarried
   3. Widowed
   4. Separated
   5. Divorced
   6. Never Married

1b. How long ____Years ___Months

4. Children? No Yes, How many? _____ Any born during VTC? _____

5. Living Situation
   2. With sexual partner and children
   3. With sexual partner alone
   4. With children alone
   5. With parents
   6. With family
   7. With friends
   8. Alone
   9. Controlled environment
   10. No stable arrangements

5b. How long ____Years ___Months

6. *Over the **LAST TWO WEEKS**, how often have you been bothered by any of the following problems?*

	Not at all	Several days	More than half the days	Nearly every day
A. Little interest or pleasure in doing things	**0**	**1**	**2**	**3**
B. Feeling down, depressed, or hopeless	**0**	**1**	**2**	**3**
C. Trouble falling or staying asleep, or sleeping too much	**0**	**1**	**2**	**3**
D. Feeling tired or having little energy	**0**	**1**	**2**	**3**
E. Poor appetite or overeating	**0**	**1**	**2**	**3**
F. Feeling bad about yourself-or that you are a failure or have let yourself or your family down	**0**	**1**	**2**	**3**
G. Trouble concentrating on things, such as reading the newspaper or watching television	**0**	**1**	**2**	**3**
H. Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual.	**0**	**1**	**2**	**3**
I. Thoughts that you would be better off dead, or of hurting yourself in some way.	**0**	**1**	**2**	**3**

If you checked off *any* problems, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____

Somewhat difficult _____

Very difficult _____

Extremely difficult _____

7. *Listed here are problems and complaints that people sometimes have in response to stressful life experiences**, including military experiences**. Please read each one carefully, and then indicate one of the numbers that reflects how much you have been bothered by the problem **in the past month.***

	Not at all	A little bit	Moderately	Quite a bit	Extremely
A. Repeated, disturbing *memories, thoughts,* or *images* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
B. Repeated, disturbing, *dreams* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
C. Suddenly *acting* or *feeling* as if a stressful experience were *happening again* (as if you were reliving it)?	**1**	**2**	**3**	**4**	**5**
D. Feeling *very upset* when *something reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
E. Having *physical reactions* (e.g. heart pounding, trouble breathing, sweating) when *something reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
F. Avoiding *thinking about* or *talking about* a stressful experience from the past or avoiding *having feelings* related to it?	**1**	**2**	**3**	**4**	**5**
G. Avoiding *activities* or *situations* because *they reminded you* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
H. Trouble *remembering important parts* of a stressful experience from the past?	**1**	**2**	**3**	**4**	**5**
I. *Loss of interest* in activities that you used to enjoy?	**1**	**2**	**3**	**4**	**5**
J. Feeling *distant* or *cut off* from other people?	**1**	**2**	**3**	**4**	**5**
K. Feeling *emotionally numb* or being unable to have loving feelings for those close to you?	**1**	**2**	**3**	**4**	**5**
L. Feeling as if your future will somehow be *cut short*?	**1**	**2**	**3**	**4**	**5**
M. Trouble *falling* or *staying asleep*?	**1**	**2**	**3**	**4**	**5**

N. Feeling *irritable* or having *angry outbursts*?	**1**	**2**	**3**	**4**	**5**
O. Having *difficulty concentrating*?	**1**	**2**	**3**	**4**	**5**
P. Being "*super-alert*" or watchful or on guard?	**1**	**2**	**3**	**4**	**5**

8. Have you accessed substance abuse or mental health services while you were in veteran's treatment court? YES NO
    a. At the VA? YES NO
    b. At a Military Health Facility? YES NO
    c. At a local Vet Center? YES NO
    d. Other place? YES NO Place: _____

9. What were some reason(s) you sought out Mental Health/ Substance abuse treatment while in VTC?

10. ACCESSED SERVICES- How did VTC help you to gain access to services?
DID NOT ACCESS SERVICES: What would have made it easier to get services?

11. Tell me about your experiences with the other defendants in VTC?
    P: Do they help you in the program in any way?
    P: Do you feel a sense of connection to them?

12. What aspects of the VTC program are you satisfied with?

13. If you could change something about the VTC program, what would it be?

Employment

14. Do you have a **valid driver's license**? YES NO

15. Do you have an **automobile available** for your use? YES NO

16. In the past 30 days, how many days were you **paid for working**? _____ Days

17. How much did you **receive from employment** (new income) in the past 30 days?
$_____

Alcohol

18. In the past 30 days, how many days did you **use any** alcohol? _____ Days

19. In the past 30 days, how many days did you **use alcohol to intoxication?** ___Days

20. How much would you say you **spent** in the past 30 days on alcohol? $_____

21. In the past 30 days, how many days did you experience any **alcohol problems**?
22. **How troubled or bothered** by any alcohol problems were you in the past 30 days?
0----------1----------2----------3----------4 Not at all Slightly Moderately Considerably Extremely

23. How **important** to you now is treatment for these problems?
0----------1----------2----------3----------4
Not at all Slightly Moderately Considerably Extremely

Drug Use

24. In the past 30 days, how many days did you use:

A. Heroin ☐☐

B. Methadone ☐☐

C. Other opiates/analgesics ☐☐

D. Barbiturates ☐☐

E. Other sedatives/hypnotics/ tranquilizers ☐☐

F. Cocaine ☐☐

G. Amphetamines ☐☐

H. Cannabis ☐☐

I. Hallucinogens ☐☐

J. Inhalants ☐☐

K. More than 1 substance per day (including alcohol) ☐☐

25. In the past 30 days, how many days did you **experience problems** with drug use?

26. How **troubled or bothered** were you been in the past 30 days by drug problems?

0----------1----------2----------3----------4
Not at all Slightly Moderately Considerably Extremely

27. How **important** to you now is treatment for these drug problems?

0----------1----------2----------3----------4
Not at all Slightly Moderately Considerably Extremely