UNIVERSITY OF CALIFORNIA

Santa Barbara

Moral Injury and the Justice-Involved Veteran

A dissertation submitted in partial satisfaction of the

requirements for the degree of Doctor of Philosophy

in Counseling, Clinical, and School Psychology

by

Justin Ray Gauthier

Committee in charge:

Professor Merith Cosden, Chair

Professor Steven R. Smith

Professor Michael Furlong

September 2016

The dissertation of Justin Ray Gauthier is approved.

_____

Michael Furlong

_____

Steven R. Smith

_____

Merith Cosden, Committee Chair

May 2015

Moral Injury and the Justice-Involved Veteran

ACKNOWLEDGEMENTS

I would like to acknowledge those who have supported me throughout my graduate studies and dissertation completion. Without you, this accomplishment would not have been possible. First, to my graduate advisor and mentor, Merith Cosden: Your kindness, generosity, wisdom, and professionalism inspire me to be a great psychologist. Your unconditional support, guidance, and devotion to my development have meant so much, and I would not be completing this project without you. I am incredibly honored to be your student. To my co-advisor and committee member Steve Smith, thank you for sharing your wisdom and your dedication to both my personal and professional development. You are a one-of-a-kind mentor. Thank you to Mike Furlong for your service on my committee and the dedication you have shown to my professional growth.

Second, this project would not have been possible without the brilliant and passionate North Santa Barbara County Veterans' Treatment Court interdisciplinary team, who I have had the privilege and pleasure of working with throughout the entirety of my graduate studies. I would like to particularly thank The Honorable Rogelio Flores and Amy Lopez for your assistance throughout this project. The energy and dedication you have for serving veterans is extraordinary. I am extremely proud to have worked alongside both of you. Thank you to my colleague Jessica Larsen and the various graduate and undergraduate students who have assisted in tasks associated with this project. Working with such a talented and enjoyable team has made this experience incredibly rewarding.

Third, thank you to the influential mentors and advisors I have had inside and outside the field of psychology. Your support and influence has made me the professional I am today. Last, to my family and friends. Your encouragement and support through this difficult

journey has made it and one of the most enjoyable periods of my life. In particular, I would like to acknowledge my wonderful and talented friends and future colleagues at the University of California, Santa Barbara.

CURRICULUM VITAE

Justin Ray Gauthier, M.A., Ph.D. Candidate
May 2015
University of California, Santa Barbara
Department of Counseling, Clinical, and School Psychology

EDUCATION

2015-2016 **Predoctoral Intern**
Mental Health and Clinical Neurosciences Division
VA Portland Health Care System, Portland, OR (APA Accredited)

2013-2016 **Doctor of Philosophy in Counseling, Clinical, and School Psychology**
Emphasis in Clinical Psychology
University of California, Santa Barbara (APA Accredited)
Advisors: Merith Cosden, Ph.D.; Steven R. Smith, Ph.D.
Dissertation Research: *"Moral injury and the justice-involved veteran."*
Dissertation Defended: May 2015

2011-2013 **Master of Arts in Counseling Psychology**
University of California, Santa Barbara

2005-2009 **Bachelor of Arts in Psychology**
Cum Laude; Psychology Department Honors
Augsburg College

HONORS AND AWARDS

2014 **Dissertation Fellowship**
University of California, Santa Barbara, Graduate Division
Nominated by the Department of Counseling, Clinical, and School Psychology faculty and awarded by a multidisciplinary faculty committee and the Dean of the Graduate Division. Provided comprehensive financial support to allow full attention toward completion of dissertation writing.

2013 **Early Career Scholar Award**
American Psychological Association Div. 50 (Society of Addiction Psychology) and National Institute on Alcohol Abuse and Alcoholism
Awarded for the excellent quality of research presented at the annual meeting of the American Psychological Association.

2013 **Outstanding Researcher Award**
Department of Counseling, Clinical, and School Psychology
University of California, Santa Barbara
Awarded for dedication to science and quality of published work.

2012 **Ray E. Hosford Counseling and Psychological Services Clinic Award**
Hosford Counseling and Psychological Services Clinic
University of California, Santa Barbara
Awarded for outstanding achievements and contributions to the psychological services clinic.

2007-2009 **Reverend & Mrs. George Pauluk Scholarship**
Augsburg College
Awarded to upperclassmen for academic achievement in psychology.

2005-2009 **Regents Scholarship**
Augsburg College

Travel Awards

2014 Academic Senate, University of California, Santa Barbara
2014 California Department of Health Care Services
2013 National Institute on Alcohol Abuse and Alcoholism
2013 Society for Personality Assessment
2012-2014 Graduate Student Association, University of California, Santa Barbara
2011-2015 Department of Counseling, Clinical, and School Psychology, University of California, Santa Barbara

PEER-REVIEWED PUBLICATIONS

Cosden, M., **Gauthier, J. R.**, & Hughes, J. B. (2013). College students' perspectives on parental notification and parent-student communication on student alcohol use**.** *Journal of Student Affairs Research and Practice, 50*(4), 355-464. doi:10.1515/jsarp-2013-0029

Etter, D., **Gauthier, J**. **R.**, McDade-Montez, E., Cloitre, M., & Carlson, E. (2013). The role of child maltreatment in the positive affect capacity of psychiatric inpatients. *European Journal of Psychotraumatology, 4.* doi:10.3402/ejpt.v4i0.20771

CONFERENCE PRESENTATIONS AND WORKSHOPS

Cosden, M., Koch, L, **Gauthier, J. R.**, & Lopez, A. (2015, July). *Vicarious Trauma and Vicarious Posttraumatic Growth Among Service Providers In Problem-Solving Courts*. Paper presented at the annual National Association of Drug Court Professional Training Conference, Washington, DC.

Gauthier, J. R., Cosden, M., & Lopez, A. (2014, August). *Cross-system collaboration in veterans' treatment courts*. Workshop presented at the annual California Department of Health Care Services Substance Use Disorders Statewide Conference, Costa Mesa, CA.

Gauthier, J. R., Hughes, J. B., & Cosden M. (2013, August). *College students' perspectives on parental notification and parent-student communication on student alcohol use*. Poster presented at the Division 50 Early Career Poster Session at the annual meeting of the American Psychological Association, Honolulu, HI.

Gauthier, J. R., Hughes, J. B., & Cosden M. (2013, August). *College students' perspectives on parental notification and parent-student communication on student alcohol use*. Poster presented at the annual meeting of the American Psychological Association, Honolulu, HI.

Gauthier, J. R., Larsen, J. L., & Cosden, M. (2013, March). *Evaluating the use of the Addiction Severity Index for Emerging Adults in a Drug Treatment Court*. Poster presented at the annual meeting of the Society for Personality Assessment, San Diego, CA.

Larsen, J. L., **Gauthier, J. R.**, Cosden, M., & Lopez, A. (2012, August). *Veterans' treatment courts: Partnering to provide specialized services*. Workshop presented in *Recovery oriented systems of care: Cultural competency and preparing for special populations under health care reform*, at the annual meeting of the California Department of Alcohol and Drug Programs, Sacramento, CA.

Larsen, J. L., **Gauthier, J. R.**, Hughes, J. B., & Cosden, M. (2012, May). *Veterans and civilians in a substance abuse treatment court: Do their needs and outcomes differ?* Poster presented at the annual meeting of the Association for Psychological Science, Chicago, IL.

Oshidary, N. S., Werner, K. H., **Gauthier, J. R.**, & Gross, J. J. (2010, June). *The effects of non-dual meditation on negative emotion responding and cognitive dissonance discomfort.* Poster presented at the annual Stanford University Psychology Honors Convention, Stanford, CA.

Freiheit, S. R., **Gauthier, J. R.**, & McManus, E. S. (2009, August). *Does religiosity matter? religious coping, attributions, and depressed mood*. Poster presented at the annual meeting of the American Psychological Association, Toronto, ON, Canada.

Gauthier, J. R. (2009, May). *Acceptance and its relationship to emotion regulation and mental health.* Poster presented at the annual Zyzzogeton research festival, Augsburg College, Minneapolis, MN.

Gauthier, J. R. (2009, April). *Acceptance and its relationship to emotion regulation and mental health.* Poster presented at the annual Minnesota Undergraduate Psychology Conference, St. Joseph, MN.

Gauthier, J. R. (2008, April). *Religiosity, stress, and affect: An examination of coping style and explanatory theory in college students.* Poster session presented at the annual Minnesota Undergraduate Psychology Conference, St. Paul, MN.

PROFESSIONAL PRESENTATIONS AND TRAININGS

Gauthier, J. R., & Koch, L. (2014, September) *Addiction Severity Index administration and scoring training*. Presentation and training hosted by the Santa Barbara County Alcohol and Drug Program, for ADP Treatment Providers. Funded by the Santa Barbara County Alcohol and Drug Program, Solvang, CA.

Gauthier, J. R., Sanford, A., & Lepore, C. (2013, November) *Addiction Severity Index administration and scoring training*. Presentation and training hosted by the Santa Barbara County Alcohol and Drug Program, for ADP Treatment Providers. Funded by the Santa Barbara County Alcohol and Drug Program, Solvang, CA.

Gauthier, J. R. (2012, November). *Parental notification of illegal alcohol use in college: Student perspectives of drinking patterns, parent-student communication, and well-being*. Presented to the Department of Counseling, Clinical, and School Psychology at the annual research festival in fulfillment of Master of Arts degree requirements. University of California, Santa Barbara, CA.

Cosden, M., **Gauthier, J. R.** & Hughes, J. B. (2012, July). *College student perspectives on parental notification of problematic alcohol use*. Presented to the Division of Student Affairs. University of California, Santa Barbara, CA.

Gauthier, J. R. (2009, May). *Acceptance and its relationship to emotion regulation and mental health.* Undergraduate Honors Thesis Defense, Augsburg College, Minneapolis, MN.

TECHNICAL AND RESEARCH REPORTS

Cosden, M. & **Gauthier, J. R.** (2015, February). *Evaluation of the Santa Barbara North County Veterans' Treatment Court*. Biannual program evaluation and progress report prepared for and submitted to the Substance Abuse and Mental Health Services Administration, Washington, DC.

Cosden, M. & **Gauthier, J. R.** (2014, August). *Evaluation of the Santa Barbara North County Veterans' Treatment Court*. Biannual program evaluation and progress report prepared for and submitted to the Substance Abuse and Mental Health Services Administration, Washington, DC.

Gauthier, J. R. & Cosden, M. (2014, August). *Veterans Entering Treatment Services Grant: Year One Program Evaluation*. Annual program evaluation and progress report, prepared for and presented to Santa Barbara County Alcohol, Drug, and Mental Health Services, Santa Maria, CA.

Cosden, M. & **Gauthier, J. R.** (2014, February). *Evaluation of the Santa Barbara North County Veterans' Treatment Court*. Biannual program evaluation and progress report

prepared for and submitted to the Substance Abuse and Mental Health Services Administration, Washington, DC.

Cosden, M., Sharkey, J., Welsh, K. L., Donahue, M., Hughes, J., & **Gauthier, J. R.** (2013, May). *Santa Barbara County Drug Court Process Evaluation*. Process evaluation of the Santa Barbara County Substance Abuse Treatment Courts, funded by the Santa Barbara County Probation Department, 2011 Public Safety Realignment Act, prepared for and presented to the Santa Barbara County Probation Department, Santa Barbara, CA.

Sharkey, J., Cosden, M., Mayworm, A., Donahue, M., **Gauthier, J. R.**, & Welsh, K. (2013, June). *Evaluation of Senate Bill 678.* Annual progress report, prepared for and presented to the Santa Barbara County Probation Department, Santa Barbara, CA. Retrieved from countyofsb.org/workarea/downloadasset.aspx?id=43926

Cosden, M. & **Gauthier, J. R.** (2013, August). *Evaluation of the Santa Barbara County Substance Abuse Treatment Court*. Annual program evaluation and progress report, prepared for and presented to the Santa Barbara County Probation Department, Santa Barbara, CA.

Cosden, M. & **Gauthier, J. R.** (2013, August). *Evaluation of the Santa Barbara County Re-Entry Drug Court*. Annual program evaluation and progress report, prepared for and presented to the Santa Barbara County Probation Department, Santa Maria, CA.

Cosden, M. & **Gauthier, J. R.** (2012, August). *Evaluation of the Santa Barbara County Re-Entry Drug Court*. Annual program evaluation and progress report, prepared for and presented to the Santa Barbara County Probation Department, Santa Maria, CA.

GRANT FUNDED RESEARCH

2014-2015 **Principal Investigator**, "*Moral injury and the justice-involved veteran."* Annual Ray E. Hosford Memorial Fellowship Research Award, University of California, Santa Barbara, funded at $750 to support dissertation research.

2013-2016 **Grant Writing Contributor,** "*Veterans entering treatment services: Expanding and enhancing the Santa Barbara County veterans' treatment court."* Awarded by the Substance Abuse and Mental Health Services Administration, Grant 1 H79 TI025033-01, funded at $975,000 for the period of 8/2013-7/2016.
Principal Investigators: John M. Doyel & Amy Lopez, County of Santa Barbara Alcohol, Drug, and Mental Health Services; Co-Investigator: Merith Cosden, Ph.D., University of California, Santa Barbara.

2008-2009 **Principal Investigator**, "*Acceptance and its relationship to emotion regulation and mental health.*" Augsburg College office of Undergraduate Research and Grant Opportunity, funded at $1,000.

RESEARCH EXPERIENCE

2011-2016 **Graduate Student Researcher**
University of California, Santa Barbara
Experience: Grant writing and management, data collection, entry, and analysis, creation and maintenance of databases, report writing, and training, supervision, and consultation on administration of symptom and outcome assessments. Collaboration with multidisciplinary teams, including judges, public defenders, district attorneys, and community mental health and substance use treatment providers.
Projects:
North Santa Barbara County Veterans' Treatment Court
Assisted Santa Barbara County in grant writing and the implementation, modification, and program evaluation of a SAMHSA funded veterans' treatment court to meet the needs of North Santa Barbara County justice-involved veterans.
Santa Barbara County Substance Abuse Treatment Court
Program evaluation of the Santa Barbara County drug treatment court.
Santa Barbara County Re-Entry Drug Court
Assisted Santa Barbara County in implementation, modification, and program evaluation of a community reintegration drug court program for repeat felony adult offenders with a substance related crime.
Evaluation of California Assembly Bill 109 and Senate Bill 678
Program evaluation of a performance-based funding system for probation departments to implement and maintain evidence-based practices in adult felony supervision. Efforts to save state General Fund monies, reduce criminal behavior and recidivism, and alleviate prison overcrowding.
College Students' Perspectives on Parental Notification and Parent-Student Communication on Student Alcohol Use
Evaluation of students' perspectives and behavior changes as a result of parental notification for illegal alcohol use in the local community.
Advisor: Merith Cosden, Ph.D.

2010-2011 **Research Health Science Specialist**
National Center for PTSD, United States Department of Veterans Affairs, Menlo Park and Palo Alto, CA
Experience: Managed a research lab, completed literature reviews, data collection, entry, and analysis, created and maintained databases, trained new project staff on procedures, assisted on other diverse research tasks as needed, and collaborated with an array of medical center staff including primary care administrators, researchers, and medical practitioners.
Project: *"Assessing risk of chronic posttraumatic mental disorder in new veterans."*
Advisor: Eve Carlson, Ph.D.

2010-2011 **Without Compensation Research Assistant**
National Center for PTSD, United States Department of Veterans Affairs, Menlo Park, CA
Experience: In collaboration with the Stanford University Psychophysiology Lab, taught and evaluated emotion regulation strategies with veterans in a residential PTSD treatment program, collecting behavioral and psychophysiological data.
Advisors: Steve Woodward, Ph.D.; James Gross, Ph.D.

2009-2011 **Research Assistant**
Stanford University Psychophysiology Lab, Stanford, CA
Experience: Contributed to project conceptualization, study management, participant recruitment and screening, development of procedure manuals, behavioral and psychophysiological data collection and analysis, literature searches, and training of new research assistants. Main projects were related to PTSD and social anxiety.
Advisors: James Gross, Ph.D.; Kelly Werner, Ph.D.; Kateri McRae, Ph.D.

2008-2009 **Research Assistant and Principal Investigator**
Augsburg College, Minneapolis, MN
Project: "*How are religiosity and mood related? An examination of stress, explanatory style, religiosity, and affect in college students."*
Psychology Department Honors Thesis: "*Acceptance and its relationship to emotion regulation and mental health.*"
Advisor: Stacy Freiheit, Ph.D.

CLINICAL EMPLOYMENT AND EXPERIENCE

2014-2015 **Extern in Neuropsychology**
Insight Neuropsychology, Oxnard, CA
Adult Protective Services Rapid Response Team, Ventura, CA
Experience: Administered and scored neuropsychological and psychodiagnostic assessments, contributed to interpretation and feedback, and perform additional clinical and administrative services. Cases were seen in-home as part of the County of Ventura Human Services Agency Adult Protective Services Rapid Response Team, as referrals from medical practitioners, and in private practice. Services ranged widely, including decision-making capacity, forensic consultation, and diagnostic clarification. Common presenting problems included memory loss and mild cognitive impairment, dementia related to Alzheimer's disease, stroke, and traumatic brain injury.
Supervisor: Erik Lande, Ph.D.

2011-2015 **Program Evaluator**
University of California, Santa Barbara

Experience: Administered semi-structured clinical interviews, standardized assessments, as well as suicide, violence, and recidivism risk assessments with veteran, criminal offender, and substance abuse populations.
Supervisors: Merith Cosden, Ph.D.; Jill Sharkey, Ph.D.

2013-2014 **Therapist/Extern**
Co-Occurring Disorders Program, Sanctuary Psychiatric Centers, Santa Barbara, CA
Experience: Provided individual and group psychotherapy, case management, and neuropsychological, cognitive, and personality assessment services to court mandated, residential, and outpatients with co-occurring psychiatric and substance related disorders. Many also diagnosed with co-occurring medical problems, including Hepatitis C and HIV/AIDS. Group services utilized Seeking Safety, the Matrix Model, and a mindfulness-based cognitive therapy for depression protocol. Individual case conceptualization and interventions ranged broadly, primarily from cognitive-behavioral and psychodynamic theoretical orientations.
Supervisors: Denise Mock, Ph.D.; Lisa Moschini, MFT

2011-2014 **Assessment Clinician**
Psychology Assessment Center, University of California, Santa Barbara
Experience: Completed comprehensive adult and child psychological assessments using neuropsychological, cognitive, achievement, and personality measures.
Supervisors: Erik Lande, Ph.D.; Ty Vernon, Ph.D.; Jordan Witt, Ph.D.

2012-2013 **Assessment Specialist**
Child Abuse Listening and Mediation, Santa Barbara, CA
Experience: Scored, interpreted, and wrote over 300 psychological assessment reports for masters level clinicians, addressing psychopathology, behavioral concerns, parenting behaviors, and traumatic stress.
Supervisor: Jessica Adams, Ph.D.

2012-2013 **Therapist**
Hosford Psychological Services Clinic, University of California, Santa Barbara
Experience: Individual, couple, and family psychotherapy with case conceptualization and intervention from cognitive-behavioral, psychodynamic, and family systems theoretical orientations.
Supervisors: Merith Cosden, Ph.D.; Steven R. Smith, Ph.D.

OTHER RELEVANT CLINICAL EXPERIENCE

2009-2011 **Inpatient Mental Health Technician**
Fremont Hospital, Fremont, CA

Experience: Met the daily needs of involuntary adult and adolescent psychiatric inpatients. Tasks included safety rounds, facilitating group treatment sessions, assisting in the creation and implementation of treatment plans, one-on-one precautionary care, knowledge of psychiatric medication, and non-violent crisis intervention.

2008-2009 **Volunteer Psychiatric Unit Intern**
Child and Adolescent Mental Health Unit, University of Minnesota Medical Center, Minneapolis, MN
Experience: Met the daily needs of involuntary child psychiatric inpatients. Tasks included contribution to the creation, modification, and implementation of behavioral treatment plans, and contribution to individual and group therapy sessions.

SUPERVISION EXPERIENCE

2015 **Basic Practicum Supervisor**
Hosford Psychological Services Clinic, University of California, Santa Barbara
Experience: Provided weekly group, individual, and "on-call" supervision and training to doctoral student clinicians.
Supervisors: Heidi Zetzer, Ph.D.

2011-2015 **Assessment Supervisor/Program Evaluator**
University of California, Santa Barbara
Experience: Trained and supervised county probation officers, psychiatric and substance abuse treatment providers, and doctoral level clinicians in training in the administration and interpretation of clinical assessments.
Supervisor: Merith Cosden, Ph.D.

2012-2014 **Senior Assessment Clinician**
Psychology Assessment Center, University of California, Santa Barbara
Experience: Supervised doctoral student clinicians in administration, scoring, interpretation, report writing, and feedback of comprehensive adult and child psychological assessments using neuropsychological, cognitive, achievement, and personality measures.
Supervisors: Erik Lande, Ph.D.; Ty Vernon, Ph.D.

TEACHING EXPERIENCE

Teaching Assistant, University of California, Santa Barbara
Winter 2015 CNCSP 255: Neuropsychological Assessment

Guest Lecturer, University of California, Santa Barbara
May 2015 *"A case study: Utility of the MMPI-2 and Rorschach in a neuropsychological assessment."* Lecture presented to graduate students in CNCSP 251:

Personality and Emotional Assessment.

May 2012 "*Parent-student communication for families who did and did not receive parental notifications of their student's illegal alcohol use*." Lecture presented to undergraduate students in CNCSP 102: Practicum in Applied Psychology.

Academic Peer Tutor, Augsburg College
2007-2008 Psychology 105: Principles of Psychology

DEPARTMENT, UNIVERSITY, AND PROFESSIONAL SERVICE

2014-2015 Society for Personality Assessment Graduate Student Association, Campus Representative
2012-2013 Department Executive & Student Affairs Committee, Member
2012-2013 Department Admissions Committee, Member
2011-2013 Graduate School Faculty Executive Committee, Member

PROFESSIONAL AFFILIATIONS

American Psychological Association, Student Affiliate
American Psychological Association Div. 12, Clinical Psychology, Student Affiliate
American Psychological Association Div. 40, Clinical Neuropsychology, Student Affiliate
American Psychological Association Div. 50, Addiction Psychology, Student Affiliate
American Psychological Association Div. 56, Trauma Psychology, Student Affiliate
Association for Behavioral and Cognitive Therapies, Student Member
International Society for Traumatic Stress Studies, Student Member
National Association of Drug Court Professionals, Member
Society for Personality Assessment, Student Affiliate

ABSTRACT

Moral Injury and the Justice-Involved Veteran

by

Justin Ray Gauthier

United States veterans suffer from an array of mental health and substance related problems. Traditionally, these problems have been conceptualized through fear-based models of threats to life and safety and traumatic losses. However, mounting clinical wisdom and theory suggests that posttraumatic stress disorder, depression, suicidal ideation, and substance use may not be adequately captured by current conceptualizations. Moral injury is an emerging concept that includes the more intricate spiritual, emotional, and psychological wounds that stem from ethical and moral challenges of military service. A group of veterans that may especially prone to the harmful effects of moral injury are justice-involved veterans, as they tend to report a high prevalence of traumatic event exposure, mental illness, and substance related problems. The purpose of this study is to examine the unique impact of moral injury as a contributor to the frequent problems reported by justice-involved veterans and to further understand this construct among the justice-involved veteran population.

Eighty-two veterans who presented to a central California veterans' treatment court participated in semi-structured interviews consisting of measures of moral injury, combat and non-combat trauma exposure, posttraumatic stress disorder symptoms, depressive symptoms, substances use, and suicidal ideation. The court was a jail diversion psychological and

substance abuse treatment program for veterans in the local criminal justice system. Results from hierarchical multiple regression analyses indicated that moral injury contributed to the prediction of posttraumatic stress disorder symptoms, depressive symptoms, alcohol use, and drug use, even after controlling for predeployment trauma, combat exposure, and postdeployment trauma. As predicted, moral injury played a unique role in both mental health and substance use among the justice-involved veteran population, many who were never deployed and never experienced combat. Qualitative analysis examined the types of events that justice-involved veterans reported as morally injurious, revealing that unconventional traumatic events, such as perceived personal and systemic betrayals, were more frequently reported than conventional events, such as combat violence. The results were similar for both deployed and nondeployed veterans. Implications for treatment and future directions for research are discussed.

TABLE OF CONTENTS

LIST OF TABLES

Chapter I

Introduction

It is widely known that United States veterans are prone to suffering an array of negative outcomes as a result of their military service. Most familiar to the public and studied among researchers is posttraumatic stress disorder (PTSD), due to its high prevalence. The lifetime prevalence of PTSD among the general United States population is around 6.8% (Kessler et al., 2005), while researchers have consistently found rates of PTSD among veterans as high as 30%. This problem is oft referred to by the military as the "PTSD epidemic" (United States Army, 2012). Other disproportionately prevalent problems among veterans, compared to the general population, are mild traumatic brain injury, depressive symptoms, alcohol and drug misuse and abuse, psychosocial concerns such as divorce and family problems, aggression, partner abuse, and unemployment, as well as suicidal ideation, attempts, and completed death by suicide (Bray et al., 2010; Hoge et al., 2008; Kemp & Bossarte, 2012; Lapierre, Schwegler, & LaBauve, 2007; McCauley & Killeen, 2012; Prigerson, Maciejewski, & Rosenheck, 2002; Rosenheck, Banks, Pandiani, & Hoff, 2002; Ruzek, 2003; Sayer et al., 2010; Sayers, Farrow, Ross, & Oslin, 2009; Tanielian & Jaycox, 2008).

Traditionally, traumatic event exposure has been of particular interest in the explanation of such problems. However, this is a complex area of research among veterans, as military-related trauma often lacks the clear physical disturbance that would hasten detection and diagnosis in the general population (United States Army, 2012). Given this, in the past few years, researchers and clinicians have demonstrated an interest in more intricate

explanations of injury, including the spiritual, emotional, and psychological wounds that stem from ethical and moral challenges of military service, and, in particular, combat.

Moral injury has emerged as a novel concept, not part of "Criterion A" (see Weathers & Keane, 2007 for a review), but as a distinct trauma and unique mechanism to psychological injury. Criterion A is a reference to the diagnostic language for PTSD, regarding the stressor, or traumatic, event, which has existed since the emergence of PTSD in the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition* (*DSM-III*; American Psychiatric Association, 1980). The language has been argued to restrict the association between the experience of trauma and psychological outcome, as a diagnosis of PTSD is contingent upon the stressor requiring "actual or threatened death or serious injury, or a threat to the physical integrity of self or others" (p. 467), and a response of "intense fear, helplessness, or horror" (American Psychiatric Association, 2000, p. 467). Such strict criteria may overlook broader symptomology, such as guilt and shame (Bryan, Morrow, Etienne, & Ray-Sannerud, 2013a). Moreover, the current diagnostic criteria may not incorporate some possible traumatic event exposure among veterans, such as the infliction of or failure to prevent trauma (Drescher & Foy, 2012), leadership failures, and perceived betrayals. The construct of moral injury emerged as an attempt to account for and better explain the non-Criterion A trauma service members and veterans may experience rather than or in addition to, traditional fear-based models of threats to life and safety (Nash & Litz, 2013) and traumatic losses (Drescher et al., 2011).

The current causal framework and working definition of moral injury was first posited in 2009 by Litz and colleagues, as "perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations" (p. 700).

Importantly, they note that this perception may occur "either during the event or at some point afterword" (p. 700). The military refers to this concept as "inner conflict," when "stress arises due to moral damage from carrying out or bearing witness to acts or failures to act that violate deeply held belief systems" (United States Navy & United States Marine Corps, 2010, p. 1-11). Clinicians experienced in treating veterans have also been shown to be well aware of the concept of moral injury and the need for further exploration. In a study of 23 Department of Veterans Affairs and Department of Defense health care and religious professionals, with years of experience with war zone veterans, respondents not only universally agreed that the concept of moral injury is needed, but that moral injury was "not adequately covered by the PTSD diagnostic criteria and related features… (with) unanimity in considering PTSD and moral injury as separate but frequently co-occurring problems" (p. 10; Drescher et al., 2011). Empirical study of the impact of morally injurious experiences has supported theory and clinical lore, linking moral injury to negative outcomes, such as increased severity of PTSD and depressive symptoms (Currier, Holland, Drescher, & Foy, 2013; Nash et al., 2013) and various other negative psychiatric outcomes.

Recently, research and clinical efforts among veterans have increased attention to the development of problems in the postdeployment and/or reintegration phase of military service, in which veterans readjust to living a civilian life once again. During this period, in addition to any current problems stemming directly from service, veterans face a wide array of new challenges, (e.g., a changing sense of purpose, loss of structure, employment problems, and changing social and family roles). It appears that these stressors increase risk for a variety of mental health and substance related problems. Studies show in particular, increases in the prevalence of PTSD (Thomas et al., 2010) and substance abuse problems

(Milliken, Auchterlonie, & Hoge, 2007), from predeployment to postdeployment, as well as in the one year after postdeployment.

Moral injury may provide a unique explanation for the development of such issues in the reintegration phase. In this period, adjustments in surroundings, sense of purpose, and social and relational models and moral motives may change (Drescher, Nieuwsma, & Swales, 2013). As a result, it may be that the moral context in which actions of omission or commission, observations, and knowledge of events, which have occurred in the past, are reexamined and interpreted; Perhaps leading to broad inner changes in regards to guilt, shame, and personal responsibility. As Drescher and Foy (2012) state, military "personnel can later come to question or doubt the appropriateness of their action or decision. Such second guessing may lead them down a path of harsh judgment about their own character and hopelessness about the very nature of humankind" (p. 92). This change in moral context, and re-examination, interpretation, and judgment of events, may have a critical role in predicting psychiatric problems, substance misuse and abuse, for the purposes of symptom and thought reduction, as well help explain the shame, guilt, and self-handicapping behaviors that are common among veterans, which existing models and the diagnostic criteria for disorders do not capture (Maguen & Litz, 2012).

Among veterans who have separated from the military, those involved with the justice-system, in particular, have demonstrated a high prevalence of traumatic event exposure (87%; Saxon et al., 2001), in addition to psychiatric, substance related, and psychosocial issues, most often co-occurring (Rosenheck et al., 2000). One of the most widely cited studies of veteran offending is The National Vietnam Veterans Readjustment Study (Kulka et al., 1990), which estimated that approximately 35% of Vietnam veterans had

been arrested, with approximately half of the male veterans with PTSD having been arrested or placed in custody on multiple occasions. The current rates of incarceration among veterans is lower than in previous service eras, as only 10% of men and 3% of women have been found to be arrested at least once since returning from deployment (Elbogen et al. 2012a). However, the prevalence of PTSD, mood disorders, and substance dependence have been reported at higher rates than in previous service eras, at 39%, 28%, and 44%, respectively (Saxon et al., 2001; Tsai, Rosenheck, Kasprow, & McGuire, 2013). It has been thought that military service, specifically combat exposure, may have contributed to veteran's involvement with the justice system in the first place (e.g., Killgore et al., 2008). However, interestingly, less than one-quarter of the justice-involved veteran population have been found to be exposed to combat, with many justice-involved veterans never having been deployed. Given that almost 90% of justice-involved veterans report traumatic experiences, with such a disproportionately high prevalence of mental health issues, the available evidence suggests that there may be other military related factors affecting a veteran's justice system involvement and poor mental health status.

As the current conflicts in Iraq and Afghanistan come to an end, there will be an influx of veterans returning from service, reintegrating into society and rejudging their military related experiences according to their shifting moral context. This may result in an increase in deep, spiritual, ethical, and moral injuries, and lead to psychiatric and psychosocial symptoms. It is likely there will be an increased need for mental health care to address the complex and high prevalence of these problems that emerge in the postdeployment and reintegration to civilian life phase of military service (Milliken et al., 2007). Further, it is unfortunate, but expected, that there will also be an increased prevalence

of veterans in contact with the criminal justice system in the coming years, as a result of the increase in number of service members returning from service, who may suffer from mental health and substance related issues. At present, little systematic, empirical, research has been conducted on the epidemiology, etiology, or signs and symptoms of veterans exposed to morally injurious events. Specifically, the impact of moral injury on mental health outcomes, compared to other traumatic events, has not yet been studied. Furthermore, the influence of moral injury on other common problems facing veterans, such as substance use disorders (SUDs) and suicidal ideation, remains unknown. Moral injury, as a potentially unique mechanism to psychological injury, may explain the prevalence of issues facing justice-involved veterans. Investigations into these links may provide valuable information to inform and guide continually evolving policy, prevention, and intervention efforts.

Purpose and Hypotheses

Mounting clinical wisdom and theory suggests that veterans may suffer deep and long-term psychological injuries that are not adequately captured by current conceptualizations of PTSD, adjustment disorders, and other diagnostic classifications (Litz et al., 2009). The current study seeks to examine the impact of moral injury, as a unique, non-Criterion A, and non-fear-based model of threat to life and safety (Nash & Litz, 2013) or traumatic loss (Drescher et al., 2011), mechanism to psychological injury among a highly trauma exposed and mentally ill sample of justice-involved veterans in central California.

The purpose of the current study is three fold. First, although theory exists, there is no empirical evidence examining the influence of moral injury on symptoms of PTSD, depression, alcohol and drug use, and suicidal ideation, compared to other traumatic event exposure commonly experienced by veterans. Second, at the time of this study, no empirical

data exists on the specific variety of events veterans, themselves, perceive as morally injurious. Qualitative data will be collected to examine the specific variety of events veterans perceive as morally injurious. Third, prior empirical research has almost exclusively examined moral injury among recently postdeployed, current service era veterans. This study will expand upon the current knowledge base in the scientific literature by assessing veterans of a variety of service eras and length of time since reintegration into civilian life. Further, moral injury is almost always discussed in regards to combat trauma; however, veterans may face many potentially morally injurious events that are noncombat related (e.g., military sexual trauma, within-ranks violence). Given the high prevalence of trauma among justice-involved veterans, yet low amount of combat exposure, it may be that justice-involved veterans are morally injured by noncombat trauma. In addition, it may be that injury occurs at some point after a traumatic event, manifesting during reintegration into civilian life when contexts and moral schemas change. Thus, moral injury may play a significant role in the development of mental illness and behavior that contributed to contact with law enforcement in the first place.

Question One. Moral injury is a traumatic experience that may or may not be associated with other, traditional, traumatic events, such as combat related incidents (e.g., firefights). However, given that moral injury is not dependent on other traumas, morally injurious experiences may or may not demonstrate an association with various military and nonmilitary related events. This study seeks to answer the question, what is the association of moral injury to other traumatic event experiences among justice-involved veterans?

Hypothesis 1. It is hypothesized that moral injury will be positively correlated with predeployment trauma, combat exposure, and during/postdeployment traumatic events.

Question Two. Moral injury has been shown to be associated with symptoms of PTSD and depression among clinical and nonclinical samples of veterans. However, the association of moral injury to other negative psychiatric and substance related outcomes common among veterans is unknown. This study will seek to answer the question, what are the associations between moral injury and other problems facing justice-involved veterans?

Hypothesis 2. It is hypothesized that moral injury, posttraumatic stress disorder symptoms, depression symptoms, suicidal ideation, alcohol use, and drug use, will all be positively correlated with each other.

Question Three. Justice-involved veterans have been shown to have disproportionately high rates of psychiatric problems, compared to nonveterans, and their non-justice-involved veteran's peers. Specifically PTSD and depression are highly prevalent. Theory and empirical research have identified trauma as a contributor to the development of PTSD and depression, however the influence of moral injury remains unknown. This study will seek to answer the question, what is the contribution of moral injury to the psychiatric problems of justice-involved veterans?

Hypothesis 3.1. It is hypothesized that predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma will predict PTSD symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma.

Hypothesis 3.2. It is hypothesized that predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma will predict depressive symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma.

Question Four. Based on self-medication theory, veterans may use, misuse, and abuse substances in an attempt to relieve or change unpleasant affective states or generate new affects when absent, inaccessible, or uncontrollable, likely due to psychiatric illness, such as PTSD and depressive symptoms. Given the theorized and empirical association between trauma, psychiatric problems, and substance use, and specifically, moral injury and psychiatric problems, this study will seek to answer the question, what is the contribution of moral injury to the substance use problems of justice-involved veterans?

Hypothesis 4.1. It is hypothesized that predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms will predict alcohol use, with moral injury uniquely adding to the prediction.

Hypothesis 4.2. It is hypothesized that predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms will predict drug use, with moral injury uniquely adding to the prediction.

Question Five. Suicidal ideation, suicide attempts, and completed death by suicide rates are disproportionately prevalent among veterans, likely as a result of high levels of trauma exposure and psychiatric and substance related problems. In addition, given the high rates of suicidal ideation among offenders in general, it is likely that justice-involved veterans are at an even greater risk of suicidal thoughts and behavior. This study will seek to answer the question, what is the contribution of moral injury to suicidal ideation among justice-involved veterans?

Hypothesis 5. It is hypothesized that moral injury will have equal or greater odds of predicting suicidal ideation as predeployment trauma, combat exposure,

during/postdeployment trauma, PTSD symptoms, depressive symptoms, alcohol use, and drug use.

Question Six. At present, there is no empirical research that directly examines specific experiences that justice-involved veterans report perceiving to be morally injurious. This study will be the first to investigate the events veterans report perceiving as contributing to moral injury, asking the question: What events do justice-involved veterans report as morally injurious? If a justice-involved veteran endorses experiencing moral injury quantitatively, they will be asked, "If you have experienced anything related to these statements, what types of events contributed to that?"

Chapter II

Literature Review

Writing about traumatic experiences and the psychological and spiritual consequences of participating in war may be traced back to early philosophers and ancient Greek tragedians (Nash et al., 2013; Shay, 2014). Throughout the modern era of combat, the experience and acknowledgment of suffering due to military service, has long been documented as well. In the United States, during the Civil War, the phrase "Soldier's Heart" was used to describe physical manifestations of combat related reactions. During the First World War, the phrase "Shell Shock" described soldiers' responses to their war-related stressors and experiences. "Combat Fatigue" or "Exhaustion" were the descriptors for similar experiences during the Second World War Era. During the Vietnam War Era, psychologists began to acknowledge the chronicity of soldiers' symptomology, increasing awareness and research efforts. As a result, diagnostic criteria and the diagnosis of PTSD appeared for the first time, in the *DSM-III* (American Psychiatric Association, 1980).

United States veterans are a distinct subpopulation of the general United States population, in that they are exposed to inherent and at times unpredictable hazards at rates often higher than the general population. Furthermore, their experiences often lack the clear physical trauma that would hasten detection and diagnosis of PTSD in the general population (United States Army, 2012). For instance, in a study of Army and Marine service members deployed to Iraq, a majority reported experiencing events such as seeing, handling, or uncovering dead bodies or human remains, seeing ill or injured women or children and being unable to help, knowing someone seriously injured or killed, clearing or searching homes and buildings, and being responsible for the death of an enemy combatant (Hoge et al., 2004). In

addition to combat related trauma, it is also important to recognize that veterans may be at higher risk, compared to the general population, for noncombat, service related, traumatic events, such as military sexual trauma and family and intimate partner violence. Historically, the principal "framework" for understanding military related trauma has been PTSD (Drescher et al., 2013). However, military service may result in challenges, alterations, or core transformations of beliefs and expectations about how the world "should" work, greatly impacting the lives and functioning of military service members and veterans (Drescher & Foy, 2012). The growing awareness and interest in how military service may affect "deeper," more global, core beliefs and the gaps in the scientific literature will be discussed, as well as their importance in the lives of veterans, and the role that injury to such beliefs may have in the development and maintenance of mental illness, substance related problems, and suicidal ideation that veterans frequently encounter returning from deployment and after separation from the military. These problems will then be further examined among the justice-involved veteran population in particular, a group highly susceptible to all of these problems.

Problem with Criterion A

Since the emergence of PTSD in the *DSM-III* (American Psychological Association, 1980), the definition, measurement, and understanding of the relation between traumatic stress and PTSD has heavily centered upon the stressor criterion (i.e., Criterion A). Criterion A has gone though an evolution of language (e.g., in regards to expected frequency of occurrence or magnitude), with the conceptualization of a traumatic event having remained relatively stable (Weathers & Keane, 2007). In the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (*DSM-IV-TR*; American Psychological Association, 2000), the Criterion A language for traumatic stressors required "actual or

threatened death or serious injury, or a threat to the physical integrity of self or others" (p. 467). In addition, the *DSM-IV-TR* required a response of "intense fear, helplessness, or horror" (p. 467). First, the grouping of objective and subjective experiences in the etiologic criteria creates a problem in a clear and normative conceptualization of the link between trauma and PTSD. Second, such language has been argued to be too narrow, possibly neglecting broader potentially traumatic events. An experience that does not meet Criterion A, but results in PTSD identical symptoms, would result in a diagnosis of adjustment disorder (Weathers & Keane, 2007). The counter argument is that the absence of strict qualifying events may dilute the PTSD construct, placing primary justification of a diagnosis on symptom criteria (Rosen & Lilienfeld, 2008). At present, the construct of PTSD appears to be broadening in the scientific literature, with increased theoretical and empirical attention on supplementary signs and symptoms such as shame and anger (Brewin, Andrews, & Rose, 2000).

In response, the newly updated *DSM-5* (American Psychiatric Association, 2013) redefined the language of Criterion A, removing "or a threat to the physical integrity of self or others," adding "or sexual violence" (p. 271), and removing criteria relating to how one *must* respond to the stressor (i.e., with "intense fear, helplessness, or horror"). This may increase the prevalence of veterans eligible for diagnosis of PTSD, as veterans have been shown to occasionally respond to trauma in a manner inconsistent with civilians. For example, not experiencing intense fear, helplessness, or horror, due to desensitization and/or normalization from repeated exposure (Cabrera, Hoge, Bliese, Castro, & Messer, 2007). Further, according to the *DSM-5*, the event must now be experienced directly, witnessed, learned about (if involving a close family member or friend), or involve exposure to

repetitive, aversive, details of a traumatic event. The redefined criteria allow for a wider range of subjective responses to a broader set of traumatic experiences. However, Criterion A still necessitates an event to be related to actual or threatened death or safety. An adjustment disorder remains diagnosed "when the symptom pattern of PTSD occurs in response to a stressor that does not meet PTSD criterion A" (p. 279).

At present, both the *DSM-IV-TR* and *DSM-5* diagnostic criteria overlook some possible traumatic event exposure common among veterans. For instance, Drescher and Foy (2012) express that the criteria that define traumatic events does not incorporate the infliction of, or failure to prevent, trauma. Thus, service members and veterans having killed or attacked the enemy may not fit the Criterion A qualifier for PTSD. Although it is clear that strong definitions and thresholds are desirable clinically, and in empirical research, a wider variety of traumatic experiences and responses should be considered and further studied. Among veterans in particular, the specific nature of trauma exposure and response pattern hold great importance, as it may create a barrier to treatment. For instance, if criteria for Criterion A, and PTSD, are not met, many veterans may not be able to receive a diagnosis and therefore treatment for their symptoms.

Spirituality, Religion, and Military Service

Much like the general United States population, veterans hold diverse cultural, spiritual, and religious beliefs. In addition to the clear impact of military service on one's psychological well-being, military service may also lead to confusion and/or challenges of faith (Drescher & Foy, 2012). In a study of Vietnam veterans receiving residential treatment for PTSD, 74% reported difficulty reconciling their religious beliefs with witnessing or directly experiencing war-related trauma, 51% reported abandoning their religious faith in

Vietnam, and 51% reported that feelings of guilt about experiences in Vietnam caused their religious faith to diminish (Drescher & Foy, 1995). Such injury has been referred to as spiritual-based traumatization (Hasanović & Pajević, 2010), and has been associated with poorer outcomes. In a study of veterans receiving residential treatment for PTSD as a result of military related trauma, Tran, Kuhn, Waiser, and Drescher (2012) observed associations between religiosity, PTSD, and depressive symptoms, such that a negative concept of God correlated to severity of PTSD and depressive symptoms. In regards to specific beliefs, Hasanović and Pajević (2010) explored the association between religious moral beliefs and problems common to veterans. In a study of postwar veterans of Bosnia and Herzegovina, findings revealed inverse associations between moral beliefs and the severity of PTSD symptoms, depression symptoms, anxiety symptoms, alcohol use, and tobacco use. Such associations have also been documented independent of war and combat related trauma. Sexually assaulted male veterans have demonstrated poorer mental health status and more severe depression, compared to nonsexually assaulted male veterans, with regression analyses suggesting the effects were lower among those who reported higher levels of both religiosity and religious service attendance, suggestive of a buffering effect of religiosity (Chang, Skinner, Zhou, & Kazis, 2003). Theory and preliminary evidence suggests that trauma exposure may lead to spiritual questioning or tension, abandonment or reduction of spiritual-based coping skills and resources, a decreased sense of safety, trust and confidence, goodness and meaningfulness in the world, and increased experience of guilt, shame, and inability for forgiveness, leading to continued loss of protective factors and poorer psychological functioning (e.g., Drescher & Foy, 2012). The examination of traumatic experiences and consequences through the lens of spiritual values and meaning appears to

offer a more integrated and holistic view of how to understand and treat problems common among veterans (Hasanović & Pajević, 2010).

The United States military has long recognized the importance of spirituality and religion, providing confidential spiritual care through military chaplains, dating before the Revolutionary War, and including them into the Department of Veterans Affairs healthcare system since World War II (Drescher & Foy, 2012). Chaplains may be able to provide care for symptoms that do not align with or extend beyond those of diagnostic criteria, and treat in a manner psychologists may not demonstrate competency in (Johnson, 2014). Among service members experiencing emotional difficulties, it has been reported that chaplains are extensively sought out and involved in caring for veterans with mental health problems (Nieuwsma et al., 2013), with some suggesting requests for religious care providers are more frequent than mental health care providers (Drescher & Foy, 2012). At present, the integration between mental health and chaplaincy has been reported as limited due to difficulties between the disciplines, such as establishing familiarity and trust. (Nieuwsma et al., 2013). This is unfortunate, given the known potential benefits to including a spiritual dimension to some problems, such as alcohol abuse (Leigh, Bowen, & Marlatt, 2005; Leukefeld & Leukefeld, 1999). The associations of spiritual wounds, psychological injury, and psychopathology are minimally understood in the context of military service and in need of further empirical study (Tran et al., 2012) to inform prevention and treatment efforts.

Moral Injury as a Unique Trauma

Morality in the context of human experience and behavior has long been studied, from many perspectives (e.g., Bandura, 1999; Kohlberg & Kramer, 1969). Litz et al. (2009) define morals as "the personal and shared familial, cultural, societal, and legal rules for social

behavior, either tacit or explicit. Morals are fundamental assumptions about how things should work and how one should behave in the world" (p. 699). In the context of military service, veterans often have unique moral and ethical challenges related to their service. For instance, as experienced by Vietnam Era veterans, the sociopolitical concerns of their service era, such as perceived betrayals by leaders and the nation that sent them to war (Freidman, 1981), as well as lack of support from friends and family and social rejection at homecoming. Such homecoming factors, which would not be conventionally described as traumatic events, have been found to contribute to PTSD (Fonatna & Rosenheck, 1994).

Moral injury is theorized to be distinct from PTSD, and complex grief reactions, in that it is not inherently fear or loss based. In addition, moral injury includes an undefined and broad array of experiences such as betrayals of trust, witnessing depraved behavior, and failing to prevent unethical acts (Nash, 2007) and the perpetration of or responsibility for trauma. Former Marine Captain Tyler Boudreau has written:

> Moral injury is about the damage done to our moral fiber when transgressions occur by hands, through our orders, or with our connivance. When we accept these transgressions, however pragmatic (for survival, for instance), we sacrifice a piece of our moral integrity. (Boudreau, 2011, p. 749)

Over the past few years, members of the clinical and science communities have demonstrated renewed interest in the emotional, spiritual, and psychological wounds that stem from ethical and moral challenges of military service (Litz et al., 2009; United States Department of Veterans Affairs, National Center for Posttraumatic Stress Disorder, 2014). Moral injury is not a diagnosis; rather it is an emerging concept to better explain the development of PTSD and related mental health and behavioral problems service members and veterans may face than the traditionally assumed fear-based models of threats to life and safety (Nash & Litz, 2013) and traumatic losses (Drescher et al., 2011). Moral injury has

been thought to be a deeper and more global injury (Litz et al., 2009; Nash & Litz, 2013). Thus, there may be a need for more complex conceptualizations of suffering.

A working definition of moral injury was first posited in 2009 by Litz and colleagues, as "perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations" (p. 700). They note that this perception may occur "either during the event or at some point afterword." More recently, Drescher and Foy (2012) offered an additional definition of moral injury as "disruption in an individual's confidence and expectations about their own or others' motivation or capacity to behave in a just and ethical manner brought about by bearing witness to perceived immoral acts, failure to stop such actions, or perpetration of immoral acts, in particular actions that are inhumane, cruel, depraved, or violent, bringing about pain and suffering of others or their death" (p. 91). These working definitions speak to a broader context of traumatic event exposure and reaction. For instance, betrayals of trust, acts of omission as well as commission, and the participation of violence directly or indirectly through affiliation.

Conceptual Model of Moral Injury. Moral injury may be employed within many theories of trauma, however, has drawn predominantly from cognitive (Ehlers & Clark, 2000; Litz et al., 2009) and social cognitive theories (Dombo, Gray, & Early, 2013), in which events that are deemed morally injurious are those that do not align with existing schemas about the self and the world (e.g., safety, trust, self-worth a just and benevolent world; Loeffler, 2013). However, additional existing theoretical contributions have also been adapted from the literature (Litz et al., 2009). Such contributions include fear acquisition through classical conditioning, enduring negative emotional distress through an inability for extinction and habituation (e.g., Foa, Steketee, & Rothbaum, 1989), and a production of

constant threat through excessive negative appraisals and attributions, poor elaboration, maladaptive and symptom maintain coping strategies (e.g., Ehlers & Clark, 2000).

A working causal framework for moral injury was proposed by Litz and colleagues (2009), in an effort to stimulate dialogue and empirical research and to offer preliminary treatment recommendations. First, an act of transgression must occur conflicting with or contradicting one's expectations, either presently during the transgression or at a later point in time. Such events may evoke dissonant reactions and create conflict, violating assumptions and beliefs about was or is right or overall goodness. Dissonant experiences may be especially dependent on the reaction of one's peers, leaders, and others in their environment. This additional distress may likely consume many psychological and emotional resources, further stressing the assimilation and accommodation process among self and relational schemas, affecting injury. Guilt and shame are commonly experienced in regards to remorse and blame, respectively. Litz and colleagues (2009) theorize that at this point, one's causal attributions play a significant role in affecting outcome, such that global (vs. specific), internal (vs. external), and stable (vs. unstable), attributions will cause enduring distress and moral emotions, such as guilt and shame, as well as psychological symptoms such as anxiety. If such experiences and symptoms lead one towards withdrawal, an individual is unable to engage in moral repair, through adaptively processing the experience in a flexible manner. For instance, the inability to challenge attributions (e.g., unstable and external), and engage in corrective and repairing experiences (e.g., with peers, leaders, faith). This will continue to interfere and prevent the assimilation or accommodation process. In addition, withdrawal may likely lead to failure for forgiveness/self-condemnation, tarnished relational expectations, and the continued experience intrusive experiencing, emotional numbing and

avoidance, hopelessness, self-harm, and self-medication.

Moral schemas are particularly complex among veterans, as they are not developed and maintained in isolation, but rather through a complex network involving social systems, spiritual and religious systems, family, and community (Nash & Litz, 2013). Among veterans, military training affects schemas, as the military trains service members in a foundation of values (e.g., discipline, respect, responsibility, courage) and to follow rules of action and communication (e.g., rules of engagement). However, one's behavior or what is witnessed or learned about, especially in combat, may contradict and challenges these values (e.g., hostility engaging enemy combatants in their homes among innocent civilians, directly endangering women and children). The high frequency of such dissonant reactions and difficulty assimilating and accommodating experiences may contribute to the increased rates of PTSD, compared to prior conflicts, currently being seen in Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND; Ruzek, 2003; Wells et al., 2012). However, it is important to recall that moral injury is distinct from PTSD, and complex grief reactions, as moral injury and traumatic stress are not necessarily mutually exclusive. Many service members and veterans may have both. As former Marine Infantry Captain Boudreau (2011) states, "when veterans or soldiers feel something hurt inside themselves, there is still only one brand to choose – PTSD. That's not good. It's not always accurate. And it renders soldiers automatically into mental patients instead of wounded souls" (p. 749).

Given the potential unpredictability and ambiguity of some unconventional experiences in the current conflicts of OEF/OIF/OND in particular (e.g., guerilla warfare), many experiences may fail to conform existing schematic beliefs (Litz et al., 2009). These

experiences are most likely successfully assimilated while deployed, as a result of one's current role, culture, training, orders, acceptance of such actions, and so forth. However, upon separation from the military, and rejoining a civilian culture, such experiences may be reexamined and judged and veterans may find it difficult accommodating experiences which do not align with their present moral, ethical, and spiritual context (Litz et al., 2009), perhaps leading to the known increase in psychological injury posttrauma and postdeployment (Grieger et al., 2006; Milliken et al., 2007; Thomas et al., 2010).

In a study categorizing war-related traumatic events in multiple types and contexts, Stein et al. (2012) reviewed interviews of active duty service members and examined psychiatric outcome measures. Of 127 events, 12% were nonexclusively categorized as moral injury by self (committing or nearly committing an act), while 22% were nonexclusively categorized as moral injury by others (directly or indirectly witnessing or being the victim). Both categories of morally injurious traumatic events were more strongly associated with posttrauma than peritrauma reactions, consistent with theory (e.g., Maguen & Litz, 2012) that moral injury may be more related to guilt and shame based re-experiencing symptoms than physiological fear-based reactions to trauma. Further, in regression analyses, moral injury by others only predicted the experience of anger, and moral injury by self-predicted a hindsight bias, wrongdoing, and re-experiencing cluster symptoms. Stein et al. (2012) suggest that these findings relating to moral injury by self indicate service members and veterans may "feel guilty about their actions even though they can understand the underlying rationale for them and the influence of the unique context" (p. 798).

Construct Development. In an effort to examine the usefulness and validation of the construct of moral injury, Drescher and colleagues (2011) conducted a semistructured

qualitative study of potentially morally injurious experiences in war and sequelae, among of a sample of 23 Department of Veterans Affairs and Department of Defense health care and religious professionals with knowledge and experience of war zones. Respondents not only universally agreed that the concept of moral injury is needed and "seen as a useful construct for describing the complex range of consequences of combat" (p. 10), but also that moral injury was "not adequately covered by the PTSD diagnostic criteria and related features… (with) unanimity in considering PTSD and moral injury as separate but frequently co-occurring problems" (p. 10). This study also provided the first empirical evidence of specific themes that appear to be linked to the experience of moral injury. Specific to war zone events, 78% of respondents reported events related to incidents with civilians (e.g., harm to property, assault), 74% of respondents reported events related to disproportionate violence (e.g., mistreatment of enemy combatants, acts of revenge), 70% of respondents reported events related to betrayal (e.g., leadership or peer failures, failure to live up to one's own moral standards, betrayal by a trusted civilian), and 30% reported events related to within-ranks violence (e.g., military sexual trauma, friendly-fire, fragging).

Vargas, Hanson, Kraus, Drescher, and Foy (2013) conducted a study to extend validation efforts of the construct of moral injury, examining qualitative data collected from The National Vietnam Veterans Readjustment Study (Kulka et al., 1990). Upon examination of narrative responses to questions about the lingering effects of their combat participation for themes consistent with moral injury, Vargas and colleagues (2013) found several types of war experiences that were thought to lead to moral injury among veterans: civilian deaths and/or acts of disproportionate violence, within ranks violence, and acts of betrayal (e.g., laughing at people being killed, a child stealing a hand grenade). In addition, quantitative

research has identified the most commonly endorsed morally injurious experiences among both community and clinical samples of combat exposed veterans are those related to guilt about surviving or overly harsh treatment of civilians, in addition to feelings of betrayal of both personal values and from leaders (Currier et al., 2013).

The military has been aware of and increasingly engaged in prevention and treatment efforts regarding the problems facing service members, both before and during combat, as well as after separation from the military, to strive for "a stronger force in the short run and a healthier society in the future" (United States Navy & United States Marine Corps, 2010, p. Forward). In this literature and community, the term "stress injury," or "inner conflict," has been used by the military as a synonym for moral injury, as the term moral injury has been controversial, with veterans responding to the term as insulting, implying immorality. Researchers have continued with the terminology of moral injury, because it is evocative and based on its specificity, compared to the broadness of combat stress (McCloskey, 2011). The military's definition of inner conflict is when "stress arises due to moral damage from carrying out or bearing witness to acts or failures to act that violate deeply held belief systems" (United States Navy & United States Marine Corps, 2010, p. 1-11), as a distinct mechanism to stress injury from life-threat and loss, criteria often associated with PTSD. These moral wounds may often be experienced as an intensely and deeply private, sincere, and distressing self-questioning and soul-searching (Drescher et al., 2013), accompanied by inner turmoil, shame, guilt, concealment, and withdrawal (Drescher & Foy, 2012). Such wounds have been theorized and shown to often overlap with those of PTSD, leading to a number of similar signs and symptoms such as difficulty falling or staying asleep, vivid nightmares, attacks of panic or rage, inability to think rationally or clearly, loss of interest in

pleasurable activities, persistent and intense guilt or shame, losing confidence in deeply help moral values, feeling remorseful or cold, changes in physical appearance, and serious suicidal and/or homicidal thoughts (United States Navy & United States Marine Corps, 2010).

Health care and religious professionals have also expressed that they have experienced such signs and symptoms among veterans with moral injury. Professionals have reported the most prevalent problems being those related to social support, trust and betrayal concerns, spiritual and existential apprehensions, and other psychological concerns. The typical psychological concerns are related to problems with depression, anxiety, occupational dysfunction, exacerbation of current mental illness, denial, self-loathing, loss of self-worth, and feelings of being damaged (Drescher et al., 2011). What appears distinct to moral injury, and uncaptured by the PTSD diagnostic criteria, is additional change in ethical attitudes and behavior, spirituality, guilt, shame, alienation, trust in others and society, anger, rage, and aggression, as well as poor self-care and the potential for self-harm (Drescher & Foy, 2012).

Although a new concept, these signs and symptoms have been found across many service eras. In their examination of themes of moral injury among Vietnam veterans, Vargas and colleagues (2013) identified several themes that reflect moral injury, such as loss of trust (e.g., suspicious attitudes about politicians and the government), self-deprecation (e.g., I am a loser now), spiritual/existential issues (e.g., questioning of personal religious values; acting opposed to personal beliefs), psychological problems (e.g., problems with emotions and anxiety), and social problems (e.g., rejection by family and friends). Interestingly, civilian deaths, as compared to betrayal and within rank violence events, resulted in higher rates across all five of these signs and symptoms, consistent with the literature on the impact of

killing in combat (e.g., Maguen et al., 2010; 2011b).

***Scale Development and Validation*.** The scientific understanding of moral injury and inner conflict is still in its infancy, however, at present, there is great need for attention not only on the signs and symptoms of moral injury, but assessment efforts. In a principal effort to increase the empirical understanding and clinical utility of the construct, Nash and colleagues (2013) used an iterative, rational approach to scale construction, developing a tool for assessing moral injury, as well as its impact. The Moral Injury Events Scale (MIES) is a nine-item likert scale measure of perceived potentially morally injurious events, consisting of items related to both perceived violation of moral beliefs or betrayal by self or others. The MIES originally had 11 items, however, after pilot study, two items related to trust were removed due to low item-total correlations. Given the novelty of moral injury, an independent second measure, the Moral Injury Questionnaire-Military Version (MIQ-M; Currier et al., 2013), was constructed to assess morally injurious experiences among veterans. Rather than assessing perceptions of potentially morally injurious experiences, the MIQ-M is a 20-item self-report likert scale measure to assess possible morally injurious experiences among military populations. The MIQ-M contains a mix of both objective acts/incidents, termed "causes" (e.g., I saw/was involved in the death(s) of an innocent in the war) as well as subjective, perceptions/dilemmas, termed "effects" (e.g., I feel guilt for surviving when others didn't). The MIQ-M appears to be created to solely address potentially morally injurious events related to combat experiences, whereas the MIES may capture broader experiences relating to military service. Additionally, the MIES measures the intensity of a potential event, while the MIQ-M measures the frequency at which one experienced the cause and effect events.

In initial analyses, the MIES was completed by a sample of combat exposed Marines at approximately one week and three months postdeployment. As predicted, the MIES was not associated with combat exposure, as it was theorized to not be reliant on those events, but was associated with PTSD symptoms, depressive symptoms, anxiety symptoms, negative affect, and inversely associated with social support and positive affect. The MIQ-M was given to both a community sample of OEF/OIF combat exposed veterans (average of three years since returning from the war-zone) and a clinical sample of OEF/OIF veterans receiving residential PTSD treatment. The MIQ-M was associated with combat exposure, impairment in work and social adjustment, PTSD symptoms, and depressive symptoms, but not suicide risk. Furthermore, in regression analysis to examine the unique influence of the MIQ-M, mental health outcomes were regressed onto veteran demographics of age, gender, ethnicity, military branch, number of deployments, recency since last deployment, general combat exposure, and last, morally injurious experiences. Age and morally injurious experiences were both uniquely associated with impairment in work and social adjustment, suicide risk, PTSD symptoms, and depressive symptoms.

Overall, both measures of moral injury show associations to negative psychological outcomes, such as PTSD and depressive symptoms, however, the two scales distinguish themselves from one another, in that the MIES is not directly dependent on combat exposure, and measures perceptions of and intensity of injury rather than the frequency of an event. These studies have provided valuable preliminary data on the influence of morally injurious experiences. Unfortunately, the impact of moral injury on mental health outcomes, compared to other traumatic events, has not yet been studied. Furthermore, the influence on other common problems facing veterans, such as substance use, remains unknown.

Mental Illness

For decades, epidemiological studies have demonstrated the disproportionate prevalence rates of mental illness among veterans compared to both civilians and the general United States population. Traditionally, PTSD has been the problem of focus among veterans (e.g., United States Army, 2012). However, research has consistently revealed other problems, comorbid with, and independent of, PTSD. In the current conflicts of OEF/OIF, traumatic brain injuries have joined PTSD as a "signature wound" (Hoge et al., 2008; Tanielian & Jaycox, 2008). Depression, generalized anxiety, aggression, substance use, abuse, and misuse, and suicidal ideation, attempts, and completed death by suicide have all also consistently also been shown to be prevalent problems and increase with combat (e.g., Hoge et al., 2004; Jacobson et al., 2008; Kuehn, 2009; Lapierre et al., 2007; Maguen et al., 2011a; 2011b; Milliken et al., 2007) and PTSD symptom severity (e.g., Bullman & Kang, 1994; Calabrese et al., 2011; Hendin, & Haas, 1991; Jakupcak et al., 2009; Maguen et al., 2011a; McDevitt-Murphy et al., 2010; Pietrzak et al., 2010; Taft et al., 2009). In addition, many of these problems have been found to increase temporally, postdeployment, suggesting that reintegration into civilian life may be a critical period for veterans' mental health and well-being.

Posttraumatic Stress Disorder. United States veterans are exposed to high-risk situations and more frequent and intense traumatic events, violence, and psychological and physical aggression than the general population through their training and military-related experiences. The effects of this are seen in regards to mental health, as the lifetime prevalence of PTSD among the general United States population is around 6.8% (Kessler et al., 2005), while researchers have found rates of PTSD among veterans as high as 30%,

increasing from predeployment to postdeployment, as well as in the year after postdeployment (Thomas et al., 2010). The youngest veterans have been shown to be at highest risk for developing PTSD as a result of being more likely to be active duty and therefore experience more frequent and intense trauma, as well as potentially having fewer coping skills and resources.

Until recently, veterans of the Vietnam Era have historically been considered to be at the highest risk of any service era in history for developing PTSD (Ruzek, 2003). It was once thought that leading contributors for Vietnam Era veterans presenting with such high PTSD prevalence rates were sociopolitical (e.g., public opposition of the war and negative homecoming experiences) and enlistment (e.g., involuntary recruitment, joining for personal advancement such as education) reasons. Yet, higher odds of developing PTSD among current era veterans (Wells et al., 2012), compared to those prior to entering September 11, 2001, seem to oppose this theory. Current era of veterans (post September 11, 2001) have tended to join the military out of patriotism and have received higher levels of sociopolitical support. It is more likely that Vietnam Era veterans experienced PTSD that was not treated upon return from deployment (the psychological impact of PTSD was not fully recognized and compensation for such problems was questioned) and in many cases has been untreated for decades. Although World War II and Korean veterans have been found to have a lower prevalence rate of PTSD, among those who are treatment-seeking, they present with similar severity to Vietnam veterans (Ruzek, 2003).

The increase in PTSD prevalence among the current cohorts of veterans, resulting in the "PTSD epidemic" (United States Army, 2012) is likely the result of the unique type of warfare, battlefields, technology, and service-related conditions of this era of service. First,

there is increasing awareness and acceptability of mental health problems among service members in the military, the United States government, and the Department of Veterans Affairs. This change in culture appears to have resulted in an increased recognition of symptoms and diagnosis (United States Army, 2012). Second, military personnel are subject to longer and more deployments to war zones than ever before (Hosek, Kavanagh, & Miller, 2006). Therefore, they may experience stress and combat exposure that have not been seen among other service eras (Adler, Huffman, Bliese, & Castro, 2005). Third, due to medical and body armor advances, service members are more likely to survive physical injuries that would have led to death in prior service eras, resulting in an increased number of veterans returning home with deep physical, mental, and emotional wounds (e.g., Hoge et al., 2008; Warden, 2006). In addition, the development and use of improvised explosive devices as weapons for the first time in history has resulted in increased physical injuries and traumatic experiences due to explosions, blast waves, and indirect experiences such as increased psychological and physiological arousal from simple tasks such as traveling on roads. Mild traumatic brain injury has been associated with the development of PTSD, postdeployment (Hoge et al., 2008).

Certainly, the relation between frequency and intensity of combat trauma and PTSD is well established; however, researchers have also demonstrated great interest in identifying specific types of traumatic events that are most predictive of PTSD symptoms. Not surprisingly, killing of others is often found as the most predictive, across multiple service eras and conflicts (Maguen, Stalnaker, McCaslin, & Litz, 2009; Maguen et al., 2010; 2011a; 2011b). Another strong predictor is the experience of victimization. For instance, among combat roles, having been the target of others has been found to be the most likely predictive

of PTSD (Fontana, Rosenheck, & Brett, 1992). In both the case of killing or experiencing victimization, it appears that one's experience of his or hers individual role in a traumatic situation, rather than simply being exposed to combat, is associated with the development of PTSD.

Compared to the general population, military-related traumatic experiences often lack the clear physical trauma that would hasten detection and diagnosis of PTSD (United States Army, 2012). For instance, in a study of Army and Marine personnel deployed to Iraq and Afghanistan, more than 90% of personnel reported experiencing an event such as seeing or handling dead bodies or human remains, or knowing someone who was killed, in addition to the physical threat of being attacked or ambushed (Hoge et al., 2004). The findings from this study demonstrate the high percentage of combat exposed veterans who may have experienced traumatic events that do not directly threaten life or safety, diagnostic criteria required by the *DSM-IV-TR* (American Psychiatric Association, 2000) and *DSM-5* (American Psychiatric Association, 2013) for a diagnosis of PTSD.

Continued understanding of military trauma has long been important to military medical and mental health professionals. The emergence of the concept of moral injury as a unique trauma adds to the understanding of broader, nontraditional psychological injury. Moral injury may be a unique mechanism to PTSD and related adverse outcomes among veterans (Currier et al., 2013; Nash et al., 2013). Further, given the potential for noncombat service-related traumatic events, such as military sexual trauma, physical/psychological aggression, and handling injured/dead bodies, moral injury may provide a unique causal pathway for symptom development among nondeployed veterans.

Depression. Depressive symptoms have also been widely studied among veterans, with prevalence rates found between 12% (Thomas et al., 2010) and 38% among recent OEF/OIF cohorts (Lapierre et al., 2007). Further, among veterans with PTSD, depression has been consistently found as the most common co-occurring disorder (e.g., Calabrese et al., 2011; Hasanovic & Pajevic, 2010). Among those with PTSD, the prevalence of depression has been found to be approximately 50%, with 88% of combat veterans reporting PTSD, depression, or both (e.g., Lapierre et al., 2007). Similarly to PTSD, prevalence rates of depression have been found to significantly increase temporally in the year after both traumatic events (Grieger et al., 2006) and postdeployment (e.g., Milliken et al., 2007; Thomas et al., 2010). Interestingly, prevalence rates of depression (as well as PTSD) in the year postdeployment have been found to remain more stable for active component soldiers, while they significantly increase for National Guard soldiers (Thomas et al., 2010) and Army Reserves (Milliken et al., 2007). Even though all groups in these studies reported similar combat exposure, Thomas and colleagues (2010) as well as Milliken and colleagues (2010) pose that the differences likely have to do with variables related to readjustment to civilian life, protective factors, and reduced ability to access and utilize equal levels of healthcare as active component soldiers upon readjustment to postdeployment and civilian life. Given the comorbidity among symptoms of PTSD and depression, it is not surprising that moral injury has been correlated with both symptoms of depression as well as negative affect (Currier et al., 2013; Nash et al., 2013). However, moral injuries' unique contribution to these symptoms, particularly after separation from the military and re-integration into civilian life when perceptions of potentially morally injurious events may shift, remains unknown.

Substance Use, Misuse, and Abuse

The Unites States' military has long had problems with alcohol and drug misuse and abuse, even though the Department of Defense and individual branches of the military have had long-standing principles regarding legal and illegal substance use, its detection, treatment and rehabilitation, and prevention (Ames & Cunradi, 2005; Institute of Medicine of the National Academies, 2012). However, the lifetime prevalence of SUDs among the general United States population is around 14.6% (Kessler et al., 2005), while researchers have consistently found rates of SUDs among military service members and veterans as high as 20%-80% (McCauley & Killeen, 2012; Ruzek, 2003). Although illicit drug use has decreased among military personnel since 1980 (Bray et al., 2010), research has shown that alcohol use among veterans has remained at the same level (Wells et al., 2012) with some studies showing slight increases since 1998 (Bray et al., 2010).

Alcohol Use. Alcohol use is the most prevalent substance use, misuse, and abuse problem among service members and veterans, and more prevalent than among the general population (Ames & Cunradi, 2005). For instance, 32.2% of young male veterans reported drinking patterns consistent with heavy drinking (i.e., more than 14 drinks per week for men and more than seven for women) compared to 17.8% among nonveteran men (Ames & Cunradi, 2005). In addition, up to 43% of active duty soldiers have engaged in binge drinking (i.e., consuming five or more drinks for men; four for women) over the previous month (United States Army, 2012). Problems related to alcohol have been found to appear to begin before or while in the military, and carry-over after exit from the military.

In line with the general United States population, younger and male veterans, in particular, have been found to be at the highest-risk for developing new onset alcohol use disorders, heavy weekly drinking, binge drinking, and alcohol related problems (e.g.,

interference with work or school, drinking and driving; Capone, McGrath, Reddy, & Shea, 2013; Jacobson et al., 2008; Jakupcak et al., 2010). In the United States, 17.8% of men 18-25 years of age (the primary recruiting demographic for the military; United States Army, 2012) engage in heavy drinking (Ames & Cunradi, 2005). Among active duty soldiers, this trend surges, as the U.S. Army states that over one-quarter of reported binge drinking episodes are by underage minors alone (United States Army, 2012). Although many younger service members and veterans are not of legal drinking age, alcohol remains a much more accessible, socially and culturally acceptable, and financially obtainable option than illicit drugs. Upon reintegrating to civilian life, many veterans are continually exposed to alcohol use in socialization and often-ritualized binge drinking or heavy use opportunities, and culturally and socially expected to participate. United States Substance Abuse and Mental Health Services Administration (SAMHSA; 2010) survey data reveals that over half of the United States population reports regular consumption of alcohol, making alcohol use widely accepted. It is also likely that alcohol use surges among the youngest veterans because this group is the most likely to be exposed to combat. However, some insightful studies among combat veterans have observed that National Guard and Reserve soldiers have been found to be at increased risk for alcohol related problems, in comparison to active duty members. This is likely due to fewer healthcare resources, different stressors, and a dissimilar amount of protective factors both during service and upon reintegration into civilian life (Milliken et al., 2007; Thomas et al., 2010); in the case of younger age, less sophisticated, developed, and adaptive coping skills.

Co-Occurring Mental Illness and Substance Use. Recent research among veterans accessing Department of Veterans Affairs outpatient services has found an association

between mental illness and substance use (Petrakis, Rosenheck, & Desai, 2011). Such associations are most often seen among those with symptoms of PTSD (Hasanović & Pajević, 2010; McDevitt-Murphy et al., 2010), as at least 20% of veterans with PTSD have been consistently shown to also meet criteria for a co-occurring SUD (Petrakis et al., 2011; United States Department of Veterans Affairs, National Center for Posttraumatic Stress Disorder, 2013). Unfortunately, prevalence rates such as these likely underrepresent the true number of veterans suffering from a co-occurring mental health and SUD diagnosis. Existing mental health and substance use research among veterans almost always occurs with Department of Veterans Affairs samples, which excludes many veterans at high-risk and likely to struggle with co-occurring disorders such as homeless or incarcerated veterans and those with dishonorable discharges and no Department of Veterans Affairs healthcare eligibility. Therefore, a clear understanding of co-occurring mental health and SUD problems among veterans, as well as a comparison of a co-occurring disorder prevalence between non-veterans and veterans is not available. However, compared to the general population, the higher individual prevalence rates of PTSD, depression, and SUDs among veterans in diverse epidemiological studies, suggest that co-occurring mental health and SUDs is likely prevalent at equal or greater rates.

***Self-Medication Theory*.** Substance-use disorders are frequently observed to follow symptoms of mental illness, such as PTSD (e.g., Bremner, Southwick, Darnell, & Charney, 1996). This functional relation between of co-occurring mental illness and SUDs is most often posited to occur as a self-medication process. The self-medication hypothesis is the most prominent theory linking the two disorders and posits that substances are used in an attempt relieve or change unpleasant affective states or generate new affects when absent,

inaccessible, or uncontrollable (Khantzian, 1997) and is associated with psychiatric illness (Khantzian, 2003). Thus, individuals with a psychiatric disorder may be more susceptible to developing SUDs.

Contrary to popular opinion, the self-medication theory does not support the idea that substance abusers seek pleasure from substance use. Rather, the use of substances develops from an attempt to cope with suffering (e.g., hyperarousal, intrusions). Among those with psychiatric symptoms, substance use provides only a temporary reduction of symptoms. The individual must continue to use substances to reduce symptoms over an extended period of time. As a result, developing a physical tolerance, requiring increasing amounts of the substance and at shorter intervals, often culminating in a SUD. This negative reinforcement cycle continues, where, for example, in the context of PTSD, the individual experiences an inability to adaptively process trauma, habituate to traumatic memories, and overcome symptoms. Once past the onset of both co-occurring disorders, a maintenance cycle begins between them. In a studies of veterans and nonveterans with PTSD and SUDs, veterans report that they perceived their substance use symptoms improved or worsened as their PTSD symptoms did, while they were also more likely to report that their PTSD symptoms improved or worsened as their substance related symptoms did (Bremner et al., 1996; Brown, Stout, & Gannon-Rowley, 1998). Thus, it appears that there is a conscious to the individual, interactional relation, between the two disorders.

Empirical research has supported the self-medication hypothesis through a variety of research methodologies, perhaps the most important of which are prospective studies. In a five-year longitudinal community-based sample, Chilcoat and Breslau (1998) observed PTSD increasing the risk of SUD for respondents, while those who experienced a traumatic

event without developing PTSD were not at risk for developing a SUD. Prospective studies such as these show evidence of a gradient of effect, whereby the outcome increases as the exposure to the causal agent increases. An assumption of the self-medication hypothesis, in the context of PTSD, is that symptoms of PTSD mediate the relation between trauma and SUD. Supporting this, Kehle et al. (2012) surveyed a sample of deployed veterans at predeployment and three to six months postdeployment, finding the development of new alcohol use disorders after deployment was uniquely predicted by PTSD symptom severity, higher levels of avoidance-specific PTSD symptoms, and lower levels of positive emotionality (Kehle et al., 2012).

Further, substance abuse has been found to be situation specific. This is important to veterans who have separated from the military and have re-entered civilian life, as they are likely no longer around direct cues, more often experiencing indirect situational cues. Among veterans with a co-occurring PTSD-SUD, PTSD was associated with greater substance use in situations involving unpleasant emotions, physical discomfort, and interpersonal conflict situations, rather than a range of other situations (Sharkansky, Brief, Peirce, Meehan, & Mannix, 1999). These findings are important in understanding the veteran specific triggers of PTSD symptoms and as a result, substance use. For instance, alcohol use to reduce the tension of trauma related cues that the veteran may be unknowingly exposed to while driving a car down the road (e.g., memories and similar physical sensations of driving on a road, such as peculiar looking trash appearing like an improvised explosive device).

*Specificity of Symptoms and Substance of Choice***.** Rather than substances in general relieving psychological suffering, preference for a particular substance is meaningful and involves some degree of psychopharmacological specificity. Through susceptibility and

experimentation, a substance which provides the desired psychological and central nervous system effects becomes the abused substance, even if unappealing (Khantzian, 2003). The relation of trauma and the "signature injury" of PTSD to substance use is in some ways more complex than other psychiatric disorders. For instance, one who experiences posttraumatic stress may experience a range of both emotional and physical states, such as a flooding of overwhelming and painful emotions and intrusions to feelings of numbness. Khantzian (1997) theorizes that in the former case, many individuals may be likely to use opiates, binge drink, or drink heavily to reduce physical manifestations of anxiety, attenuate or inhibit intense and uncomfortable emotions and intrusive memories, and provide temporary relief from rigid states, which produce isolation and emptiness; while in the later, stimulants or low to moderate alcohol consumption are the substances used, due to their behavioral and emotional activation tendencies.

Research among combat veterans with PTSD supports this, illuminating that alcohol use disorders are prevalent and problematic, uniquely predicted by PTSD symptom severity, avoidance, and lower positive emotionality (Kehle et al., 2012). Veterans have reported that they have perceived depressants (e.g., alcohol, marijuana) tended to make PTSD hyperarousal symptoms better, while stimulants (e.g., cocaine, methamphetamine) made hyperarousal symptoms worse (Bremner et al., 1996). Further, in a longitudinal study of Vietnam combat veterans admitted to an inpatient PTSD treatment program, Bremner and colleagues (1996) reported that the individuals first described experiencing symptoms of hyperarousal, then avoidant related symptoms, and then intrusive related. Given the temporal precedence of hyperarousal symptoms among combat veterans with PTSD, and the effect of depressant use on hyperarousal symptom improvement (e.g., sleep aid, startle response),

these findings were expected and supported among this veteran sample. Interestingly, research reveals that a majority of veterans who will be diagnosed with an alcohol use disorder are prone to developing symptoms pre-enlistment or early on in their military experience (Kehle et al., 2012). However, the temporal understanding of when substance use becomes clinically significant and in what way use is directly related to military experiences and a co-occurrence with PTSD remains debated.

In an effort to gain an increased understanding of trauma-related risk factors for the co-occurrence of PTSD and SUDs, specifically alcohol abuse, an investigation of trauma related correlates of alcohol use was recently posed by Capone et al. (2013). In a sample of recently postdeployed OEF/OIF veterans, the authors found correlations between PTSD and total drinks and number of heavy drinking days in the month prior to assessment. In addition, in regression analyses, after accounting for demographic variables and history of alcohol use disorders, total PTSD symptoms but not combat exposure, were found to be predictive of total drinks, drinks per drinking day, and number of heavy drinking days. These findings support the self-medication hypothesis, in that rather than simply exposure to trauma, it is the experience of symptoms at present, which predicts alcohol misuse and abuse. Further, Capone and colleagues (2013) found a unique association between the PTSD symptom cluster of re-experiencing and alcohol use. Although these findings are consistent with some prior research on PTSD symptoms clusters predicting alcohol use (e.g., Maguen et al., 2009) and inconsistent with others (Kehle et al., 2012; Shea, Vujanovic, Mansfield, Sevin, & Liu, 2010), they pose an interesting implication for moral injury. Perhaps perceptions and recollections of a traumatic experience, rather than the physiological symptoms, may have a prominent role in predicting problematic alcohol consumption. As moral injury is not

inherently fear-based, it does not necessarily lead to physiological symptoms. Rather, moral injury may likely lead to re-experiencing cluster symptoms (Maguen & Litz, 2012). As re-experiencing occurs in combination with a potential shift in moral context, broad inner changes, such as guilt, shame, and personal responsibility may ensue. Substances may be used in an attempt to reduce and suppress these symptoms, independent of or in addition to physiological symptoms. At present, the relation between moral injury and substance use has yet to be empirically examined. However, given that SUDs are often treated in a manner that traditionally relies upon spiritual values and moral integrity for continued growth (e.g., Alcoholics Anonymous, Narcotics Anonymous) it may be that the problems, uncertainty, or ambiguity, regarding one's moral perceptions of self and/or the world, could be influential in predicting substance misuse and abuse.

Suicide

Suicide has been described by Armed Forces court of appeals judge Walter T. Cox III as "the worst enemy the armed forces have…in terms of killing soldiers, sailors, airmen, and Marines" (Tilghman, 2012). As of the 2010 United States Census, it was estimated that 9.3% of the United States' population had served in the Armed Forces (American Community Survey, 2010). In the same year, the Department of Veterans Affairs estimated that 22.2% of all completed suicides in the United States were those of veterans (Kemp & Bossarte, 2012), a shockingly disproportionate statistic.

In an attempt at a broader review of suicide related problems among veterans, the Department of Veterans Affairs Mental Health Services Suicide Prevention Program tracked attempted and completed suicides in a national internal database (Kemp & Bossarte, 2012). Based on death certificate data available from 21 states between the years of 1999 and 2010,

veterans have been estimated to be between 18%-26% of all completed suicides, with 22 veterans estimated to commit suicide per day in 2010. This number has continued to rise over the past decade, even though the percentage of veterans who die by suicide has slightly decreased. In addition, nonfatal suicide attempts are common. In 2012, 15,000 nonfatal suicide events were reported for almost 11,000 veterans who utilized Department of Veterans Affairs services within the year preceding the suicidal event (Kemp & Bossarte, 2012). Moreover, because the nonfatal suicide events were tracked by an internal Department of Veterans Affairs system, the true number of such problems remains unknown, as many veterans do not access the Department of Veterans Affairs for care or are aware of available resources (e.g., dishonorably discharged; homeless; justice-system involved). Furthermore, it has been suggested that many veterans have been known to end their life in manners that may not clearly appear to be suicide (e.g., motorcycle accidents). In addition to veterans, suicide problems continue to rise among active duty service members, surpassing the rate among nonveterans with similar demographics, with problems also noted among the non-active duty Army reserve and National Guard troops (Kuehn, 2009). Problems may emerge while in the military, and be missed upon postdeployment screening and/or exacerbate upon return to the United States and/or civilian life (Jacobson et al., 2008; Milliken et al., 2007; Thomas et al., 2010).

There are strong connections between suicidal ideation, combat, and mental health problems commonly experienced by veterans. Pietrzak et al. (2010) examined risk factors of suicidal ideation in a sample of OEF/OIF veterans, finding that suicide contemplators, compared to those with no suicidal ideation, were more likely to meet criteria for PTSD and depression, and endorse alcohol problems, more severe combat exposure, psychosocial

difficulties, perceived stigma of their problems, and barriers to accessing care. Posttraumatic stress disorder, in particular, has been consistently identified as the greatest sole predictor of suicide ideation, attempts, and death by suicide among veterans (e.g., Bullman & Kang, 1994; Hendin, & Haas, 1991; Jakupcak et al., 2009). Among those with co-occurring disorders, suicidal ideation rates have been found to be at higher prevalence rates. In a study of National Guard soldiers, Calabrese et al. (2011) found that in comparison to those without PTSD, those with PTSD were 5.4 times more likely to report suicidal ideation, while, compared to those with only PTSD, those with PTSD and one other comorbid condition and two or more comorbid conditions had 2.1 and 7.5 times greater odds of reporting suicidal ideation, respectively, with depression and alcohol dependence as the two most commonly co-occurring comorbid conditions to PTSD. These findings support Jakupcak et al. (2009) who found that among deployed OEF/OIF veterans, those with PTSD and two or more co-occurring conditions were 5.7 times more likely to report suicidal ideation. However, they contrast with Guerra and Calhoun (2011), who found that among deployed OEF/OIF veterans with PTSD, co-occurring major depressive disorder and alcohol use disorders did not result in a statistically significant increased suicidal ideation rate.

As with other problems, such as PTSD, specific combat experiences have been linked to suicidal ideation. In an investigation of PTSD and depression symptomology as risk factors for suicidal ideation among a combat exposed OIF sample of veterans at postdeployment screening, Maguen et al. (2011a) found PTSD and depressive symptoms mediated the relation between killing and suicidal thinking. Additionally, PTSD symptoms mediated the relation between killing and desire for self-harm.

Research exploring the roles and personal responsibility of Vietnam veterans in war

zone trauma has suggested that roles involving higher personal responsibility of a traumatic event (i.e., having been an agent of killing or having been a failure at preventing death and injury) compared to roles of less personal responsibility (i.e., being a target or observer) are the strongest related roles to psychiatric distress and suicide attempts (Fontana et al., 1992). Furthermore, research has found guilt to be a strong predictor of suicidal ideation and attempts, above and beyond that of PTSD and depression (Bryan et al. 2013a; Bryan, Ray-Sannerud, Morrow, & Eitenne, 2013b), and that guilt and combat exposure interact, such that a stronger association with guilt and suicidal ideation exist among those with direct combat exposure, compared to those without direct combat exposure (Bryan et al., 2013b). Bryan and colleagues (2013a) also examined the association of shame, in addition to guilt and suicidal ideation, finding shame and guilt fully mediated the relations of depression and PTSD symptom severity with suicidal ideation. The only research examining moral injury and suicidal ideation follows these findings. Bryan, Bryan, Morrow, Etienne, and Ray-Sannerud (2014) divided the MIES into three subscale scores of transgressions-self, transgressions-others, and betrayals. In a generalized linear regression analysis, controlling for gender, age, PTSD and depressive symptoms, and hopelessness and pessimism, transgressions-self scores were associated with significantly more suicidal ideation, while betrayal scores were associated with significantly less suicidal ideation, and transgression-other scores demonstrated no association to suicidal ideation. Perhaps vulnerability factors to suicide, such as experienced guilt and shame, might be more severe as a result of transgressions committed by oneself, compared to transgressions committed by others, and betrayals committed by others. These findings certainly fit with prior theory and research. Maguen et al. (2011a; 2011b) have suggested that such findings about inner conflict, shame,

and guilt, highlight the nonconventional risk factors for problems such as suicidal ideation, implying there may be more specific symptom profiles that place veterans at greater risk for suicide. The authors suggest that Litz et al.'s (2009) emerging model of moral injury may elucidate how one's shame, guilt, and personal responsibility of war zone events may effect deeply held expectations and beliefs of self and world, altering the impact of combat stressors and potentially expanding the risk factors of suicide. Overall, the increasingly high rate of suicidal ideation and attempts among veterans, and the evidence that factors such as guilt, shame, and victimization, in addition to combat related experiences and mental health problems are associated with self-harm, suggest that moral injury may also have a distinct association to suicide. Further examination of the link between PTSD, related and co-occurring disorders, and their association to suicidal ideation is vital in better understanding and preventing suicide, especially among at-risk veterans.

Reintegration to Civilian Life and Increase in Problems

The phases of postdeployment, or separation from the military and readjustment to civilian life, appear to be particularly vulnerable periods for veterans in regards to their mental health and overall well-being. Research has often shown that symptoms of PTSD and substance use are persistent and significantly increase during the first year after reintegration (Thomas et al., 2010). In addition, psychosocial problems such as high divorce rates and family problems (Sayer et al., 2010), aggression (Sayers et al., 2009), spouse or partner abuse, unemployment and job loss (Prigerson et al., 2002), and physical health symptoms (Andersen, Wade, Possemato, & Ouimette, 2010) are frequent. A diagnosis of PTSD appears to exacerbate many of these problems. For instance, veterans with a diagnosis of PTSD have demonstrated increased odds of disease as well as its early onset (Andersen et al., 2010).

The reintegration period may also be a particularly important period in regards to the perception of morally injurious events. Upon reintegrating, adjustments in surroundings, sense of purpose, social and relational models, and moral motives may change (Drescher et al., 2013). As a result, it may be that the moral context in which actions, observations, and knowledge of events, which have occurred in the past, are re-examined, interpreted, and judged according to shifting schemas. As Drescher and Foy (2012) state, "personnel can later come to question or doubt the appropriateness of their action or decision. Such second-guessing may lead them down a path of harsh judgment about their own character and hopelessness about the very nature of humankind" (p. 92). This change in moral context, and re-examination, interpretation, and judgment of events, appears to co-occur, temporally, with the increase in PTSD and other psychiatric problems, substance use, misuse, and abuse, and psychosocial problems during the reintegration period. However, the functional nature of the relation is unknown.

Justice-System Involvement

The involvement of veterans in the criminal justice system has been declining steadily since 1986, from 20%, to its most recently estimated percentages of 9-10%, in both 2004 and 2012 (Elbogen et al., 2012a; Noonan & Mumola, 2007). Compared to nonveterans, veterans in prison and jail are more frequently male, older, have more years of formal education, and are more likely to be married (Blodgett, Fuh, Maisel, & Midboe, 2013; Noonan & Mumola, 2007). In regards to criminal offending, compared to nonveterans, veterans tend to have shorter criminal records, yet receive longer sentences for similar crimes, with common offenses being violent (including sexual assault), property, drug related, and public-order offenses (Blodgett et al., 2013; Noonan & Mumola, 2007).

One of the most widely cited studies of veteran offending is The National Vietnam Veterans Readjustment Study (Kulka et al., 1990), which estimated that approximately 35% of Vietnam veterans had been arrested. Studies of the current, post September 11, 2001, cohorts of OEF/OIF/OND veterans indicate that 10% of men and 3% of women have been arrested at least once since returning from deployment (Elbogen et al., 2012a). It may be that high levels of trauma exposure, psychiatric, substance related, and psychosocial problems related to military service place veterans at increased risk for incarceration.

Interestingly, Saxon et al. (2001) found that 87% of a convenience sample of incarcerated veterans reported a history of trauma, with half of the sample reporting assault related incidents, yet only one-quarter reporting combat experience. In regards to the prevalence of psychiatric and substance related problems, justice-involved veterans, compared to veterans generally, appear to have higher rates of PTSD, mood disorders, and substance dependence, at 39%, 28%, and 44%, respectively (Saxon et al., 2001). These rates have been found to be much higher for current service era, OEF/OIF/OND veterans (Saxon et al., 2001; Tsai et al., 2013) as well. In comparison to nonveteran offenders, justice-involved veterans appear to have similar, or in regards to substance use, lower, prevalence rates (Noonan & Mumola, 2007). However, this may be surprising, given that veterans may tend to have more protective factors such as older age and a higher education. In regards to suicide, those involved with the justice system have been found to be at up to five times more likely to commit suicide, than those unaffiliated with the justice-system (Blodgett et al., 2013; Wortzel, Binswanger, Anderson, & Adler, 2009). Yet, there appears to be no empirical research examining the prevalence rates of suicidal ideation, suicide attempts, or completed death by suicide among justice-involved veterans (Blodgett et al., 2013).

It is likely that veterans with co-occurring disorders are the most likely to be in contact with and widely overrepresented in the justice-system. In a three-year study of Department of Veterans Affairs utilizers, 16% had been incarcerated at least once (Rosenheck et al., 2000), similar to the rates of nonveteran hospital patients in the same area. Yet, veterans with a co-occurring diagnosis were arrested the most (25%), followed by those with a substance abuse diagnosis (21%), and a mental health diagnosis (11%).

As a result of their military service, veterans appear to have an increased risk of justice-system involvement. However, combat exposure may not play a significant contributing role. Only 20%-25% of incarcerated veterans have been found to have experienced combat duty and/or exposure (Noonan & Mumola, 2007; Saxon et al. 2001). Rather, multiple studies have demonstrated the high rates of trauma, generally, and mental illness among those justice-system involved, suggesting those as the most likely causal factors. In the National Vietnam Veterans Readjustment Study (Kulka et al., 1990) justice-system involvement rates were higher among those with active PTSD, with approximately half of male Vietnam Era veterans with PTSD having been arrested or placed in custody on multiple occasions. Saxon et al. (2001) found 27% of a convenience sample of justice-involved veterans met criteria for PTSD, with that group, compared to those without PTSD, reporting a greater variety of traumas, and greater psychiatric and medical concerns, serious current legal problems, more severe use of and expenditure on alcohol, cocaine, and heroin. In addition to PTSD, traumatic brain injuries, substance misuse, anger and irritability, having witnessed family violence, and a prior record with law enforcement have been found to be related to arrests, while none of these were associated with combat exposure (Elbogen et al., 2012a).

In addition to psychiatric and substance related problems placing veterans at higher risk for justice-system involvement, the low level of veteran engagement with the mental health care system and low motivation to seek assistance (Hoge et al., 2004) may also contribute to contact with the justice-system. This may occur through maladaptive coping and participation in high-risk and criminal behavior, such as drug seeking for self-medication. In a study of veterans at postdeployment screening, of those who screen positive for PTSD, depression, or alcohol problem, less than half scheduled a visit in the following month, while only 24% of veterans who screened positive for a problem followed through with a visit in the following three months (Seal et al., 2008), consistent with other studies (e.g., Hoge et al., 2004). Unfortunately, during postdeployment, it has been shown that veterans with a mental health disorder were generally twice as likely as veterans without a disorder to report stigma and other barriers to accessing and receiving care, such as, "I would be seen as weak," "it would be embarrassing," and "it is difficult to schedule an appointment" (Hoge et al., 2004). It may be that if treatment services are not sought, problems may develop and continue to grow, leading to justice-involvement.

Although Department of Veterans Affairs prevention programs targeting serious psychiatric and substance related problems among incarcerated veterans have been in place since the 1990s (McGuire, 2007), there has been an increasing level of awareness and political attention to such problems lately. The United States Substance Abuse and Mental Health Association recently highlighted justice-involved combat veterans of recent cohorts as an important target for services (SAMHSA National Gains Center, 2008). This attention has also resulted in an effort to increase resources and services available to justice-involved

veterans, at a critical point in their lives, one in which their military service may have greatly contributed to their justice-involvement in the first place.

High Risk Hypothesis. Upon return to civilian life veterans have been found to behave aggressively and engage in illegal activity at higher rates than nonveterans. For instance, in a recent study of OEF/OIF Era theater veterans across the United States, one-third self-reported committing an act of aggression towards another person over the past year. Younger age, a past criminal arrest record, combat exposure, PTSD, and alcohol misuse were found to be associated with aggressive behavior (Elbogen et al., 2012b). The high-risk hypothesis theorizes that those who volunteer for military service are more likely to place themselves in situations in which they may experience traumatic events, as well as intense emotional and adrenaline filled activity, which training and combat often provide. Thus, veterans may inherently be predisposed to behaving in manners that may result in criminal offending, post military separation.

Additionally, through military training and experience, veterans are trained to think and act in ways which are aggressive and not allowed or approved of in civil society, and in their profession, are exposed to inherent and often unpredictable hazards. Although adaptive in combat, veterans who have returned to civilian life may experience an altered perceived threshold of invincibility (Killgore et al., 2008). As such, veterans may be more likely than nonveterans to seek out situations which are adrenaline provoking, dangerous, and engage in in risk-taking and thrill seeking behavior to re-experience physiological and emotionally stimulating experiences, especially while under the influence of substances, or as mental health problems increase postdeployment (e.g., aggressive acts such as domestic violence and reckless driving). Killgore et al. (2008) observed this in a survey of veterans at three months

postdeployment, finding greater exposure to violent combat, killing another person, and contact with high levels of human trauma, were predictive of greater risk-taking propensity and the actual risk related behaviors of more frequent and greater quantity of alcohol use as well as increased verbal and physical aggression toward others. Unfortunately, this study did not examine the use of substances prior to high-risk activity or PTSD postdeployment, therefore no conclusions may be drawn about the causal relation of SUD to trauma and PTSD as a result of high-risk activity.

Veterans' Treatment Courts. Veterans' treatment courts (VTCs) are responses by communities to address the increasing amount of veterans facing charges related to their military service, and their frequent "revolving-door-like" contact with the justice-system. Due to the newness of VTCs, there is currently no consensus on the structure of a VTC. However, generally, VTCs are designed after the successful drug and mental health court models (see Cosden, Ellens, Schnell, Yamini-Diouf, & Wolfe, 2003; Wilson, Mitchell, & MacKenzie, 2006). Veterans' treatment courts typically promote collaboration among county alcohol, drug, and mental health services, judiciary and corrections agencies, private mental health and substance use treatment providers, the United States Department of Veterans Affairs, and other community resources, to serve the specialized population of United States veterans. Agencies may provide treatment, resources, and supervision to veteran criminal offenders suffering from underlying psychological and substance related problems, as a result of their military service, to promote and sustain psychological treatment and recovery, while reducing incarceration and recidivism to ensure public safety, reduce the tax burden of veterans on local communities, and reduce prison overcrowding.

Over the past few years, there have been increasing legislative efforts by states in regards to implementation of VTCs. At present, California Penal Code §1170.9 authorizes treatment for veterans convicted of criminal offenses, in lieu of incarceration, for those who committed the offense as a "result of sexual trauma, traumatic brain injury, PTSD, substance abuse, or mental health problems stemming from service in the United States military." However, this was not always the case. Prior to September 2010, a veteran's offense was required to be related to problems stemming directly from combat. The legislative system appears to be following the pattern of the scientific literature, increasing attention to the broader experiences and consequences veterans may face as a result of their service.

Conclusion

Veterans involved with the criminal justice system have experienced a disproportionately high amount of trauma compared to both non-justice-involved veterans and their nonveteran offender peers. In addition, justice-involved veterans face a disproportionately large amount of psychiatric and psychosocial problems compared to non-justice involved veterans, with many also experiencing substance related problems, at equivalent rates to their nonveteran offender peers. Empirical research has identified that such problems increase postdeployment and after separation from the military, perhaps not coincidentally when veterans engage in high risk and illegal activities and become involved with the justice system. It is likely that one's military service might have contributed to involvement with the justice system in the first place. Preliminary research has shown that only approximately one-quarter of justice-involved veterans were exposed to combat. These findings in particular suggest there might be a prevalence of noncombat related trauma among the justice-involved veteran population. Such experiences might stem from a wide

array of military related factors and not necessarily follow traditional fear-based models of threats to life and safety (Nash & Litz, 2013) and traumatic loss (Drescher et al., 2011) predicting problems.

Moral injury is a novel concept and manner in which to understand the trauma veterans might experience and resulting psychological injury. Moral injury might hold an important role among justice-involved veterans in particular, given many have not experienced combat directly, were not deployed, or in the military recently. Moral injury is not required to occur either during the event, or even close in proximity to it, but may occur at some point afterword, such as in reintegration to civilian life. Therefore, the re-experiencing of events and reinterpretation and rejudgment, based on shifting moral contexts and environments, may occur at varying intervals of time. Further, moral injury captures the broader, shame, guilt, self-handicapping, and self-medicating behaviors that existing models and the diagnostic criteria for existing disorders do not (Maguen & Litz, 2012). At present, few systematic, empirical, research has been conducted on the epidemiology, etiology, or signs and symptoms of veterans exposed to morally injurious events. Moral injury, as a potentially unique mechanism to psychological injury, may explain the prevalence of psychiatric, substance related, and psychosocial problems facing justice-involved veterans. Investigations into these links may provide valuable information to inform and guide continually evolving policy, prevention, and intervention efforts.

Chapter III

Method

Veterans' Treatment Court

The VTC was a jail diversion, trauma informed, treatment program for veterans who became involved with the Santa Barbara county criminal justice system due to problems stemming from their military service. The VTC program was founded in 2011, with SAMHSA funding awarded in 2013, to expand and enhance services. This VTC was a 12 to 18 month duration postconviction program in which veterans who successfully completed the program received consideration for conversion to court probation (rather than formal probation) or a dismissal of charges. Veterans were eligible regardless of combat exposure and military discharge status. Exclusionary criteria included residing outside of Santa Barbara county, serious or violent felony cases, cases in which offenders were charged with a crime related to or were mandated to register as a sex offender, felony domestic violence, felony driving under the influence, driving under the influence with injury, substance use sales that were not solely for funding the defendant's own addiction, split sentences[1] requiring over three years of supervision, or cases in which a prior "strike[2]" is alleged.

Participants

Eighty-two veterans who presented for consideration into the VTC program between August 2013 and February 2015 were recruited and participated in the study. Although there were no veterans who refused to participate, some data (i.e., alcohol use, drug use, and

[1] A split sentence may allow a defendant to serve up to half of their term of imprisonment outside of prison, usually under the supervision of a probation officer.

[2] The California three strikes law designates a "strike" as a violent crime or serious felony. Conviction of three strikes significantly increases prison sentences of offenders, mandating a sentence of 25 years to life.

suicidal ideation) was not collected from some veterans for a variety of logistic and time constraint reasons. Veterans ranged in age from 21 to 84 (M = 43.24, SD = 16.06) and a majority were a parent to at least one child (60%) with further demographic information participated in Table 1. For those with a offense level records available (n = 56), a majority of veterans presented to the VTC with a misdemeanor offense (70%), with common presenting charges (n = 55), including: Under the influence of a controlled substance plus another crime (47%), driving under the influence/driving while intoxicated (22%), drug possession (18%), theft (7%), and other crimes related to mental health and/or substance use issues (6%).

Military demographics are presented in Table 2. Veterans represented multiple braches, highest rank, service eras, and discharge status. A majority of veterans deployed at least once (60%; M = 1.29, SD = 2.69), did not have a service related disability (60%), and had previously accessed the Veterans Affairs Health Care System (66%). In regards to prior use of mental health and/or substance use services, 52% had previously accessed mental health and/or substance abuse services in general, and only 33% reported accessing such services through the Veterans Affairs Health Care System.

Table 1

Demographics

Variable	*n*	Percent
Gender		
Male	74	90%
Female	8	10%
Age		
18-25	9	11%
26-64	61	74%
65+	12	15%
Race		
White (not Hispanic)	53	65%
Hispanic-Mexican	19	23%
Black (not Hispanic)	4	5%
Hispanic-Other	3	4%
Asian/Pacific Islander	2	2%
American Indian	1	1%
Marital Status		
Never Married	32	39%
Divorced	26	32%
Married	10	12%
Separated	11	13%
Widowed	3	4%
Highest Level of Education		
Some High School	1	1%
High School/GED	56	68%
Some College	9	11%
Associates Degree	8	10%
Bachelors Degree	7	9%
Graduate Degree	1	1%

Table 2

Military Demographics

Variable	*n*	Percent
Service		
Active Duty	79	96%
Reserve	2	3%
National Guard	1	1%
Branch		
Army	36	44%
Marine Corps	18	22%
Navy	14	17%
Air Force	12	15%
Coast Guard	2	2%
Highest Rank		
Enlisted	39	48%
Non-Commissioned Officer	41	50%
Commissioned Officer	2	2%
Service Era		
OIF/OEF/OND	33	40%
Vietnam War	20	24%
Other	10	12%
Persian Gulf	9	11%
Lebanon	3	4%
Kosovo	3	4%
Bosnia	3	4%
Korea	1	1%
Discharge Status		
Honorable	70	85%
Other than Honorable	9	11%
Dishonorable	3	4%

Note. OEF is an acronym for Operation Enduring Freedom, OIF is an acronym for Operation Iraqi Freedom, and OND is an acronym for Operation New Dawn.

Measures

Demographic and military service information. Basic demographics and military service history were collected. Basic demographic questions included (but were not limited to): gender, age, marital status, and highest level of education. Military demographic questions included (but were not limited to) branch of service, highest rank, deployment history, discharge status, and previous Department of Veterans Affairs and mental health and substance abuse treatment access (see Appendix for additional questions).

Moral Injury Events Scale. The *Moral Injury Events Scale* (MIES; Nash et al., 2013) measured the intensity of acts in a military context that might have been perceived to transgress deeply held moral and ethical beliefs and expectations (e.g., "I am troubled by having witnessed others immoral acts"), resulting in the experience of morally injurious events (Nash et al., 2013). The MIES was a nine-item measure, with responses given on a six-point scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Items were summed, revealing a total score ranging from 9-54, with a higher score being indicative of having experienced a greater intensity of events. Initial psychometric evaluation among postdeployed combat Marines revealed a two-factor structure consisting of *perceived transgressions* (items 1-6) and *perceived betrayals* (items 7-9). This evaluation revealed good internal consistency for perceived transgressions (Chronbach's $\alpha = .89$) and perceived betrayals (Chronbach's $\alpha = .82$), as well as great internal consistency for the construct overall (Chronbach's $\alpha = .90$). Re-administration of the MIES at three months postdeployment revealed no statistically significant differences between time point for the total score and two subscale scores, suggesting short-term temporal stability. The MIES demonstrated discriminant validity from combat exposure ($r = .08$) and convergent validity with PTSD ($r =$

.28) and depression (r = .40) and was associated with lower social support (r = -.29). Although developed and initially examined among deployed veterans, the scale's general language in reference to morally injurious events makes is applicable to this study, which included nondeployed and noncombat exposed veterans. This is important, given the potential for morally injurious events to occur outside of combat (e.g., leadership failures, within ranks violence, military sexual trauma). To further the understanding of perceptions of morally injurious events, a qualitative question was added to the end of this measure. If respondents endorsed agreement with at least one item, they were asked "If you have experienced anything related to these statements, what types of events contributed to that?"

In this study of justice-involved veterans, the MIES demonstrated similar psychometric properties. The MIES had good overall internal consistency (Chronbach's α = .88) as well as good internal consistency among the perceived transgressions subscale (Chronbach's α = .87). However, the perceived betrayals subscale (Chronbach's α = .68) was slightly below an acceptable threshold. Re-administration of the MIES at three months after VTC enrollment revealed no statistically significant differences between time points for the overall score $t(51) = -0.07$, $p = .95$, $\eta^2 = 0.00$, perceived transgressions subscale score $t(51) = 0.05$, $p = 0.96$, $\eta^2 = 0.00$, and perceived betrayals subscale score $t(51) = -0.28$, $p = .78$, $\eta^2 = 0.00$, further suggesting short-term temporal stability. As expected, The MIES also demonstrated discriminant validity from combat exposure (r = .00, p = .98) and convergent validity with PTSD (r = .35, p = .002) and depression (r = .28, p = .01).

Combat Exposure Scale. The *Combat Exposure Scale* (CES; Keane et al., 1989) measured the subjective experience of combat exposure of veterans (e.g., "Were you ever surrounded by the enemy?"). The widely used CES consisted of seven-items, and responses

for each item ranged from 1-5, with a possible range of raw scores of 7-35. The CES items, and responses to select items, were weighted differently according to a predetermined order of severity of exposure (Keane et al., 1989). Converted raw scores could have ranged from 0-41, and provided membership to one of the categories of light, light-moderate, moderate, moderate-heavy, and heavy combat exposure. The CES has been found to have internal stability (Chronbach's α = .83-.92) and test-retest reliability (r = .97; Keane et al., 1989; Spiro, Schnurr, & Aldwin, 1994; Taft et al., 2009). The CES has been used in studies of diverse samples of veterans, making it applicable to the current study. Previous studies of veterans responding to the CES have varied in current age, years separated from the military, branch of service, as well as service era and conflict, including, but not limited to veterans of pre-World War II, World War II, the Korean War, Vietnam War, Operation Desert Storm, OEF/OIF, and nonwartime and noncombat service (Keane et al., 1989; Spiro et al., 1994; Taft et al., 2009). In this study of justice-involved veterans, the CES had good overall internal consistency (Chronbach's α = .91).

Trauma History Screen. The *Trauma History Screen* (THS; Carlson et al., 2011) measured exposure to high magnitude stressor events (HMS) and of events associated with significant and persisting posttraumatic distress (PPD). The14-item THS was created to measure traumatic events at an easy reading level, in a short amount of time, and in a way that does not require complex judgments. The THS was used to assess noncombat related trauma. Respondents were asked if they experienced a unique event (e.g., "a really bad car, boat, train, or airplane accident"), and if so, on how many independent occasions. Additional questions are traditionally asked for endorsed events. For example, to describe the event and the age at which it first occurred. Given time constraints in the data collection process, these

additional questions were excluded from the administration procedure. To distinguish between (and be able to statistically control for) traumatic experiences before and during/after military service, participants were be asked about each of the 14 independent events twice, before their first deployment and during/after their first deployment (if applicable). If they did not deploy, veterans were asked to respond before joining the military and during/after joining the military. The unique events experienced and quantity of events were summed to produce total scores for the period before the first deployment/joining the military and during or after the first deployment/joining the military. For this study only the total unique HMS events were used in analysis, as many veterans reported experiencing an array of traumatic events too many times to provide an accurate frequency. The THS has been found to have excellent temporal stability (r = .93 for HMS and .73 for PPD) among clinical and nonclinical samples, including veterans (Carlson et al., 2011). Further, the THS has shown convergent validity (r = .77) with longer, and previously used measures of traumatic event exposure with veterans, and weak to moderate correlations with PTSD symptoms (HMS r = .41; PPD r = .25; Carlson et al., 2011). Internal reliability has not been studied with the THS, as the trauma experiences as a whole are not expected to demonstrate high internal consistency (Carlson et al., 2011).

PTSD Checklist-Civilian Version. The *PTSD Checklist-Civilian Version* (PCL-C; Weathers, Litz, Herman, Huska, & Keane, 1993) measured PTSD symptom severity among veterans that correspond to the *DSM-IV-TR* criteria. Respondents answered 17 questions on a five-point scale, ranging from 1 (*not at all*) to 5 (*extremely*), rating how often they were bothered by each symptom over the past month. The civilian version of the PCL was used to capture symptoms associated with both civilian and military "stressful experiences," as none

of the participants were presently in the military and many were separated from the military for years to decades and have experienced postmilitary traumatic events in their communities. The PCL-C may be scored according to both civilian and military normative samples, rendering a severity score by summing all the items, ranging from 17-85, and a categorical score consisting of categories of nonclinical, above civilian cutoff, and above military cutoff. The PCL-C has demonstrated high internal validity (Chronbach's α = .94-.97) and short-term test-retest reliability (r = .87-.96; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Currier et al., 2013; Gore et al., 2013; Karstoft, Andersen, Bertelsen, & Madsen, 2013; Ruggiero, Del Ben, Scotti, & Rabalais, 2003; Weathers et al., 1993). The PCL-C has been used across diverse samples of veterans and has been found to be predictive of PTSD (Norris & Hamble, 2003). In this study of justice-involved veterans, the PCL-C had good overall internal consistency (Chronbach's α = .95)

The Patient Health Questionnaire. The *Patient Health Questionnaire* (PHQ-9; Kroenke, Spitzer & Williams, 2001) measured severity of depressive symptoms that correspond to the *DSM-IV* criteria. The widely used nine-item PHQ-9 also contained a question of functional impairment regarding how difficult the nine problems have made it at work, home, or in getting along with other people. The PHQ-9 has been used in studies among diverse samples of veterans in primary care, treatment, and epidemiological research (e.g., Jakupcak et al., 2010; Thomas et al., 2010). Respondents replied to each question on a four-point scale, ranging from 0 (*not at all*) to 3 (*nearly every day*), rating how often they were bothered by each problem over the past two weeks. The PHQ-9 rendered a severity score by summing all the items, ranging from 0-27, and a categorical score consisting of categories of no symptoms, minimal symptoms, minor depression, major depression

moderate, and major depression severe. The PHQ-9 has demonstrated excellent internal reliability (Chronbach's α = .86-.89) and short-term test-retest reliability (*r* = .84; Currier et al., 2013; Kroenke et al., 2001). The PHQ-9 has also demonstrated reliability in *DSM-IV* criteria based diagnoses of major depression, as well as a measure of depression severity (Kroenke et al., 2001). In this study of justice-involved veterans, the PHQ-9 had good overall internal consistency (Chronbach's α = .88).

Addiction Severity Index. The *Addiction Severity Index* (ASI; McLellan, et al., 1992) structured interview captured past 30 day and lifetime problems across seven domains: medical, employment, alcohol, drug, legal, family and social, and psychiatric. Across each domain three summary scores were generated: composite *t*-scores summarized and standardized functioning over the past 30 days using weighted responses to key items in each domain; severity scores were based on interviewer perceptions of problems at present on a 0-9 scale with higher ratings indicative of more severe problems; and clinical factor scores were comprised of select 30 day and lifetime questions in each domain. In this study, the composite scores among the domains of alcohol, drug, and psychiatric problems were used to assess problem severity over the 30-day period prior to engagement with the criminal justice system. In addition, a dichotomous suicidal ideation question from the psychiatric domain was utilized, that assessed serious thoughts of suicidal ideation over one's lifetime. Only the alcohol and drug 30-day composite score questions were used in data collection until SAMHSA funding was awarded, allowing for the full ASI interview to be conducted.

The ASI has been used among civilian and veteran samples to assess problems, aid in treatment planning, and for measurement of treatment outcomes. The ASI has demonstrated strong internal consistencies across all domains, including alcohol problems (Chronbach's α

= .87) and drug problems (Chronbach's α = .77) among veterans with substance abuse problems being treated at a Department of Veterans Affairs facility (Rosen, Henson, Finney, & Moos, 2000). In addition, the ASI has shown test-retest reliability (Cacciola, Koppenhaver, McKay, & Alterman, 1999) and discriminant validity among both composite and severity rating subscales among a diverse sample of substance abusers (Leonhard, Mulvey, Gastfriend, & Shwartz, 2000). Strong correlations between the composite and severity scores of both alcohol (r = .78) and drug (r = .71) domains have demonstrated concurrent validity. Independently, both composite and severity score interrater reliability findings have varied from excellent to unsatisfactory in the literature, among a wide array of studies and samples. However, composite score interrater reliabilities have been found to generally be more stable (Mäkelä, 2004).

Procedure

After each veteran's initial public hearing, court staff asked the veteran if they would be willing to speak with the primary author. The author explained the purpose of the study and written consent was obtained from each participant. One hundred percent veterans that were recruited agreed to participate. Clinical psychology doctoral graduate students and treatment providers administered surveys in a semistructured interview format, in person, in a private location outside of the courtroom or at a treatment facility. A semistructured interview format was chosen to increase "buy-in," allow participants to ask clarification questions more easily throughout the process, as well as accommodate for visual, cognitive, and other disabilities and impairments. Participants were offered an option to complete the survey in a self-report manner if they expressed such a desire. The court and the University Institutional Review Board sanctioned this study.

Chapter IV

Results

Quantitative data were analyzed using SPSS Version 22, using pairwise deletion to reach the maximum possible sample size in each analysis. Univariate and multivariate assumptions, as well as power, were assessed and prior to each primary analysis. In regards to tests of statistical significance, corrections for family-wise error were not applied across primary analyses. Reasons for this include: Theory and empirical research, rather than large-scale exploratory data fishing informed all hypotheses (Glickman, Rao, & Schultz, 2014), family-wise corrections to type I errors do so at the expense of type II error and the ability to detect an important effect (Gelman, Hill, & Yajima, 2012; O'Keefe, 2003; Perneger, 1998), and family-wise corrections are not consistently applied in health care and social science research, leading to artificial, undesirable, and potentially illogical consequences (Glickman et al., 2014; O'Keefe, 2003). Rather than implementing a method that alters *p* values, the process of describing each hypothesis, the analysis procedure, and the possible interpretations was utilized (Perneger, 1998).

Descriptive Analysis

Sample size, means, standard deviations, and the range of each measure are summarized in Table 3. In regards to traumatic event exposure, a majority of veterans reported experiencing a greater number of unique traumatic events during/postdeployment than predeployment. Veterans also reported a wide range of combat exposure and perceived moral injury. In regards to psychiatric distress, veterans reported a wide array of PTSD and depressive symptom severity. Further, 34% of veterans endorsed a period in their life when they experienced serious thoughts and suicidal ideation. In addition to the severity scores of

psychiatric distress variables depicted in Table 3, categorical (i.e., diagnostic) classification of scores are presented in Tables 4 and 5.

Table 3

Descriptive Statistics for all Variables

Variable	*n*	*M*	*SD*	Range
1. Moral Injury	82	22.29	12.24	9-54
2. Predeployment Trauma	82	2.48	2.61	0-9
3. Combat Exposure	82	10.70	12.08	0-40
4. During/Postdeployment Trauma	82	5.12	2.87	0-11
5. PTSD Symptoms	82	45.26	17.84	17-83
6. Depressive Symptoms	82	10.87	7.18	0-29
7. Alcohol Use	80	.28	.25	0-.98
8. Drug Use	80	.08	.10	0-.44

Note. Moral injury scores were obtained by the Moral Injury Events Scale. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. PTSD and depressive symptoms were obtained by the PTSD Checklist-Civilian Version and the Patient Health Questionnaire-9, respectively. Alcohol and drug use scores were obtained by the Addiction Severity Index alcohol and drug composite scores.

Table 4

Posttraumatic Stress Disorder Categorical Scores

Diagnostic Category	*n*	Percent
Nonclinical	39	48%
PTSD Positive: Civilian Cut-off	6	7%
PTSD Positive: Military Cut-off	37	45%

Note. The diagnostic categories were obtained by the PTSD Checklist-Civilian Version.

Table 5

Depression Categorical Scores

Diagnostic Category	*n*	Percent
Nonclinical	19	23%
Minimal Symptoms	20	24%
Minor Depression	15	18%
Major Depression Moderate	17	21%
Major Depression Severe	11	14%

Note. The diagnostic categories were obtained by the Patient Health Questionnaire-9.

In addition to the continuous scores for alcohol and drug use presented in Table 3, these variables were also dichotomized; to assess the percentage of veterans who did versus did not endorse any recent substance use. Eighty-five percent of veterans reported some alcohol use in the prior 30 days while 56% of veterans reported some drug use in the prior 30 days. As veterans often reported use of more than one substance, each veteran also reported his or her singular most problematic substance. The two most problematic were alcohol and methamphetamines, with other veterans' most problematic substances presented in Table 6.

Table 6

Problem Substance

Substance	*n*	Percent
Alcohol	43	54%
Methamphetamines	15	19%
Polysubstance	8	10%
None	5	6%
Cannabis	4	5%
Opiates	4	5%
Barbiturates	1	1%

Note. Problem substances were obtained by the alcohol use section of the Addiction Severity Index. Polysubstance use is comprised of alcohol use plus an additional problem substance.

Primary Analysis

Hypothesis 1. Hypothesis 1 stated that moral injury would be positively correlated with predeployment trauma, combat exposure, and during/postdeployment traumatic events. Pearson intercorrelations were conducted to determine the association among variables, depicted in Table 7. Moral injury was weakly and not significantly associated with predeployment trauma, combat exposure, and during/postdeployment traumatic events. These findings do not support the hypothesis and suggest that moral injury might be independent of other common traumatic experiences among justice-involved veterans.

Table 7

Pearson Intercorrelation Matrix Between Trauma Variables (n = 82)

Variable	1	2	3	4
1. Moral Injury	-			
2. Predeployment Trauma	.21	-		
3. Combat Exposure	-.01	.06	-	
4. During/Postdeployment Trauma	.21	.21	.49***	-

Note. Moral injury scores were obtained by the Moral Injury Events Scale. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale.

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

Hypothesis 2. Hypothesis 2 stated that moral injury, posttraumatic stress disorder symptoms, depression symptoms, suicidal ideation, alcohol use, and drug use, would be positively correlated with each other. Pearson intercorrelation coefficients were conducted to determine the association between moral injury, psychiatric, and substance use variables, and Spearman rank order intercorrelation coefficients were conducted between the dichotomous suicidal ideation variable and the continuous moral injury, psychiatric, and substance use variables. Results of these intercorrelations are depicted in Table 8. Moral injury weakly to moderately, positively, and significantly correlated with PTSD symptoms, depressive symptoms, and drug use, but not alcohol use. Interestingly, PTSD symptoms and depressive symptoms were not correlated with alcohol use or drug use. These findings partially support the hypothesis, and suggest an association between moral injury and the psychiatric and substance use problems facing justice-involved veterans.

Table 8

Pearson and Spearman Rank Order Intercorrelation Matrix Between Moral Injury and Outcome Variables (n = 64-82)

Variable	1	2	3	4	5	6
1. Moral Injury	-					
2. PTSD Symptoms[a]	.35**	-				
3. Depressive Symptoms[a]	.28*	.71***	-			
4. Alcohol Use[b]	.21	.08	.15	-		
5. Drug Use[b]	.26*	.00	.10	.27*	-	
6. Lifetime Suicidal Ideation[c]	.17	.19	.23	-.11	.11	-

Note. Statistics were reported in the format of: *r* (*n*). Moral injury scores were obtained by the Moral Injury Events Scale. PTSD and depressive symptoms were obtained by the PTSD Checklist-Civilian Version and the Patient Health Questionnaire-9, respectively. Alcohol and drug use scores were obtained by the Addiction Severity Index alcohol and drug composite scores. Lifetime suicidal ideation was obtained from a dichotomous item in the psychiatric section of the Addiction Severity Index.

[a]Pearson Intercorrelations; $n = 82$

[b]Pearson Intercorrelations; $n = 80$

[c]Spearman Rank Order Intercorrelations; $n = 64$

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

Hypothesis 3.1. Hypothesis 3.1 stated that predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma would predict PTSD symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma. A two-step hierarchical linear regression was chosen to examine the individual variance of each trauma predictor on PTSD symptoms, as well as the unique variance contributed by moral injury.

Assumptions of normality, linearity, and homoscedasticity were examined. A collinearity diagnostics tolerance test and a covariance matrix review of the independent variables revealed an absence of mulitcollinearity. The dependent variable, PTSD symptoms, demonstrated an association to the independent variable of moral injury. No violations of kurtosis were detected, however, predeployment trauma and combat exposure were slightly positively skewed (0.94, *SE* = .27 and 0.89, *SE* = .27, respectively). The minor nature of the skewness along with adequate power suggests that visual histogram inspection and the ability to confidently interpret findings was more important than formal statistical analysis of assumptions (Tabachnick & Fidell, 2013). Visually, histograms revealed a relatively normal curve. Further, transforming this trauma data would no longer represent the reality of these variables, complicating and potentially misguiding statistical analysis and interpretation. Transformation was not applied to predeployment trauma and combat exposure. A review of the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed no major outliers. Further, calculation of Mahalanobis distances revealed no outliers using the chi square critical value at the alpha level of .001 as suggested by Tabachnick & Fidell (2013).

In the first step, the order of entry of the independent variables was based on temporal exposure (i.e., predeployment trauma, combat exposure, during/postdeployment trauma). These traumatic events explained 19% of the variance of PTSD symptoms, F (3, 78) = 6.07, p = .001. In the second step, moral injury was added to the model, to assess for the individual variance of moral injury, after controlling for the variance of other traumatic events. After adding moral injury to the model, the total variance explained rose to 28%, F (4, 77) = 7.39, p < .001. As a unique predictor, moral injury explained an additional 9% of the variance of PTSD symptoms after controlling for predeployment trauma, combat exposure, during/postdeployment trauma, R^2 change = .09, F change (1, 77) = 9.38, p = .003. In the final model both combat exposure and moral injury were statistically significant contributors to PTSD symptoms (see Table 9). These findings support the hypothesis that moral injury uniquely contributes to PTSD symptoms, compared to other common traumatic events facing justice-involved veterans.

Table 9

Hierarchical Linear Regression Analysis of Trauma Predicting Posttraumatic Stress Disorder Symptoms (n = 82)

	PTSD Symptoms	
Predictor	ΔR^2	β
Step 1	.19**	
Predeployment Trauma		.09
Combat Exposure		.26*
During/Postdeployment Trauma		.23
Step 2	.09**	
Predeployment Trauma		.03
Combat Exposure		.30**
During/Postdeployment Trauma		.15
Moral Injury		.31**
Total R^2	.28***	

Note. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. Moral injury scores were obtained by the Moral Injury Events Scale. PTSD symptoms were obtained by the PTSD Checklist-Civilian Version.
β values are standardized
*$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis 3.2. Hypothesis 3.2 stated that predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma would predict depressive symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma. A two-step hierarchical linear regression was chosen to examine the individual variance of each trauma predictor on depressive symptoms, as well as the unique variance contributed by moral injury.

Assumptions of normality, linearity, and homoscedasticity were examined. A collinearity diagnostics tolerance test and a covariance matrix review of the independent variables revealed an absence of mulitcollinearity. The dependent variable, depressive symptoms, demonstrated an association to the independent variable of moral injury. As in hypothesis 3.1, no violations of kurtosis were detected, however, predeployment trauma and combat exposure were slightly positively skewed (0.94, *SE* = .27 and 0.89, *SE* = .27, respectively). As in hypothesis 3.1, transformation was not applied to predeployment trauma and combat exposure. A review of the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed no major outliers. Further, calculation of Mahalanobis distances revealed no outliers using the chi square critical value at the alpha level of .001 as suggested by Tabachnick & Fidell (2013).

In the first step, the order of entry of the independent variables was based on temporal exposure (i.e., predeployment trauma, combat exposure, during/postdeployment trauma). These traumatic events explained 10% of the variance of depressive symptoms, F (3, 78) = 2.94, p = .04. In the second step, moral injury was added to the model, to assess for the individual variance of moral injury, after controlling for the variance of other traumatic events. After adding moral injury to the model, the total variance explained rose to 15%, F

(4, 77) = 3.34, p = .01. As a unique predictor, moral injury explained an additional 5% of the variance of depressive symptoms after controlling for predeployment trauma, combat exposure, during/postdeployment trauma, R^2 change = .05, F change (1, 77) = 4.19, p = .04. In the final model only moral injury was a statistically significant contributor to depressive symptoms (see Table 9). These findings support the hypothesis that moral injury uniquely contributes to depressive symptoms, compared to other common traumatic events facing justice-involved veterans.

Table 10

Hierarchical Linear Regression Analysis of Trauma Predicting Depressive Symptoms (n = 82)

	Depressive Symptoms	
Predictor	ΔR^2	β
Step 1	.11*	
Predeployment Trauma		.09
Combat Exposure		.03
During/Postdeployment Trauma		.27*
Step 2	.05*	
Predeployment Trauma		.05
Combat Exposure		.07
During/Postdeployment Trauma		.22
Moral Injury		.23*
Total R^2	.15*	

Note. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. Moral injury scores were obtained by the Moral Injury Events Scale. Depressive symptoms were obtained by the Patient Health Questionnaire-9.
β values are standardized
*$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis 4.1. Hypothesis 4.1 stated that predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms would predict alcohol use, with moral injury uniquely adding to the prediction. There were 2 cases missing from this analysis. A two-step hierarchical linear regression was chosen to examine the individual variance of each trauma predictor on alcohol use, as well as the unique variance contributed by moral injury.

Assumptions of normality, linearity, and homoscedasticity were examined. A collinearity diagnostics tolerance test and a covariance matrix review of the independent variables revealed an absence of mulitcollinearity. The dependent variable, alcohol use, did not demonstrate a statistically significant association to the independent variable of moral injury at an alpha level of .05, but did at the alpha level of .06 (r = .21). Given this, combined with theory and prior empirical research suggesting an association between trauma and alcohol use, the regression analysis proceeded, however, should be interpreted with caution. As in hypothesis 3.1 and 3.2, no violations of kurtosis were detected, however, predeployment trauma and combat exposure were slightly positively skewed (0.94, *SE* = .27 and 0.89, *SE* = .27, respectively). Alcohol use was also slightly positively skewed (0.88, *SE* = .27). As in hypothesis 3.1 and 3.2, transformation was not applied to predeployment trauma and combat exposure. However, given that the dependent alcohol use variable was slightly skewed, artificially calculated, and not a direct representation of the reality of the reality of alcohol use severity, a square root transformation was applied. Because the smallest value on the scale is 0, 1 was added to each case's score during transformation. Skewness was reduced from 0.88 (*SE* = .27) to 0.74 (*SE* = .27) and a review of the alcohol use histogram, as well as the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed

no substantial improvement to the distribution. As an attempt to further correct for positive skewness, a logarithmic transformation was applied. Because the smallest value on the scale is 0, 1 was added to each case's score during transformation. Skewness was reduced from the original value of 0.88 (*SE* = .27) to 0.60 (*SE* = .27) and a review of the alcohol use histogram, as well as the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed no substantial improvement to the distribution. Given that transformation did not substantially aid in creating a normalized distribution, effect the overall regression model, and that untransformed variables aid in interpretation, the original alcohol use variable was retained as the dependent variable, as there is no advantage to transformation (Tabachnick & Fidell, 2013).

The Normal Probability Plot of the Regression Standardized Residual was generally relatively linear with the Scatterplot revealing a roughly rectangular shape. There were no major deviations or outliers. Further, calculation of Mahalanobis distances revealed no outliers using the chi square critical value at the alpha level of .001 as suggested by Tabachnick & Fidell (2013).

In the first step, predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, and depressive symptoms explained 12% of the variance of alcohol use, F (5, 74) = 1.94, p = .10. In the second step, moral injury was added to the model, to assess for the individual variance of moral injury, after controlling for the variance of other traumatic events and psychiatric symptoms. After adding moral injury to the model, the total variance explained rose to 16%, F (6, 73) = 2.36, p = .04. As a unique predictor, moral injury explained an additional 5% of the variance of drug use after controlling for predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms,

and depressive symptoms, R^2 change = .05, F change (1, 73) = 4.07, p = .047. In the final model during/postdeployment trauma and moral injury were both statistically significant contributors to alcohol use (see Table 11). These findings support the hypothesis that moral injury uniquely contributes to alcohol use, compared to common traumatic events and psychiatric symptoms facing justice-involved veterans.

Table 11

Hierarchical Linear Regression Analysis of Trauma and Psychiatric Symptoms Predicting Alcohol Use (n = 80)

	Alcohol Use	
Predictor	ΔR^2	β
Step 1	.12	
Predeployment Trauma		.19
Combat Exposure		.14
During/Postdeployment Trauma		-.33*
PTSD Symptoms		-.04
Depressive Symptoms		.23
Step 2	.05*	
Predeployment Trauma		.15
Combat Exposure		.20
During/Postdeployment Trauma		-.36**
PTSD Symptoms		-.13
Depressive Symptoms		.23
Moral Injury		.24*
Total R^2	.16*	

Note. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. Moral injury scores were obtained by the Moral Injury Events Scale. PTSD symptoms were obtained by the PTSD Checklist-Civilian Version. Depressive symptoms were obtained by the Patient Health Questionnaire-9. Alcohol use was obtained by the Addiction Severity Index alcohol composite score.
β values are standardized
*$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis 4.2. Hypothesis 4.2 stated that predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms would predict drug use, with moral injury uniquely adding to the prediction. There were 2 cases missing from this analysis. A two-step hierarchical linear regression was chosen to examine the individual variance of each trauma predictor on drug use, as well as the unique variance contributed by moral injury.

Assumptions of normality, linearity, and homoscedasticity were examined. A collinearity diagnostics tolerance test of the independent variables revealed an absence of mulitcollinearity, however a covariance matrix review revealed a minor concern between the independent variables of PTSD and depressive symptoms (r = .71). However, values below r = .90 should not result in severe statistical problems (Tabachnick & Fidell, 2013) and their entry as two separate predictors is informed by theory and empirical support. The dependent variable, drug use demonstrated an association to the independent variable of moral injury. As in hypothesis 3.1 and 3.2, no violations of kurtosis were detected, however, predeployment trauma and combat exposure were slightly positively skewed (0.94, SE = .27 and 0.89, SE = .27, respectively). Drug use was moderately positively skewed (1.39, SE = .27). As in hypothesis 3.1, 3.2, and 4.1, transformation was not applied to predeployment trauma and combat exposure. However, given that the dependent drug use variable was moderately skewed, artificially calculated, and not a direct representation of the reality of the reality of drug use severity, a square root transformation was applied. Because the smallest value on the scale is 0, 1 was added to each case's score during transformation. Skewness was reduced from 1.39 (SE = .27) to 1.31 (SE = .27) and a review of the drug use histogram, as well as the Normal Probability Plot of the Regression Standardized Residual and

Scatterplot revealed no substantial improvement to the distribution. As an attempt to further correct for positive skewness, a logarithmic transformation was applied. Because the smallest value on the scale is 0, 1 was added to each case's score during transformation. Skewness was reduced from the original value of 1.39 (*SE* = .27) to 1.23 (*SE* = .27) and a review of the drug use histogram, as well as the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed no substantial improvement to the distribution. Given that transformation did not substantially aid in creating a normalized distribution, effect the overall regression model, and that untransformed variables aid in interpretation, the original drug use variable was retained as the dependent variable, as there is no advantage to transformation (Tabachnick & Fidell, 2013).

The Normal Probability Plot of the Regression Standardized Residual was generally relatively linear with the Scatterplot revealing a roughly rectangular shape with a concentration around 0. There were no major deviations or outliers. Further, calculation of Mahalanobis distances revealed no outliers using the chi square critical value at the alpha level of .001 as suggested by Tabachnick & Fidell (2013).

In the first step, predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, and depressive symptoms explained 8% of the variance of drug use, F (5, 74) = 1.35, p = .25. In the second step, moral injury was added to the model, to assess for the individual variance of moral injury, after controlling for the variance of other traumatic events and psychiatric symptoms. After adding moral injury to the model, the total variance explained rose to 13%, F (6, 73) = 1.85, p = .10. As a unique predictor, moral injury explained an additional 5% of the variance of drug use after controlling for predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, and depressive

symptoms, R^2 change = .05, F change (1, 73) = 4.09, p = .047. In the final model only moral injury was a statistically significant contributor to drug use (see Table 12). Although the model as a whole was not statistically significant, there was evidence that might partially support the hypothesis that moral injury uniquely contributes to drug use, compared to common traumatic events and psychiatric symptoms facing justice-involved veterans.

Table 12

Hierarchical Linear Regression Analysis of Trauma and Psychiatric Symptoms Predicting Drug Use (n = 80)

	Drug Use	
Predictor	ΔR^2	β
Step 1	.08	
Predeployment Trauma		.02
Combat Exposure		-.25
During/Postdeployment Trauma		.24
PTSD Symptoms		-.10
Depressive Symptoms		.13
Step 2	.05*	
Predeployment Trauma		-.02
Combat Exposure		-.20
During/Postdeployment Trauma		.20
PTSD Symptoms		-.18
Depressive Symptoms		.13
Moral Injury		.25*
Total R^2	.13	

Note. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. Moral injury scores were obtained by the Moral Injury Events Scale. PTSD symptoms were obtained by the PTSD Checklist-Civilian Version. Depressive symptoms were obtained by the Patient Health Questionnaire-9. Drug use was obtained by the Addiction Severity Index drug composite score.
β values are standardized
*$p < .05$. **$p < .01$. ***$p < .001$.

Hypothesis 5. Hypothesis 5 stated that moral injury would have equal or greater odds of predicting suicidal ideation as predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, depressive symptoms, alcohol use, and drug use. A priori power analyses indicated that a sample size of 163 would have been necessary to detect a small effect (1.5; Cohen, 1988) and a sample size of 42 to detect a medium effect (2.5; Cohen, 1988) at the $p < .05$ level, assuming a power level of .80 (G*Power, 2009). Therefore, the sample size of 64 ($n = 22$ reported and $n = 42$ did not report a period of serious suicidal ideation) is not adequate for detecting detect small effects, thus this analysis should be interpreted with extreme caution. A collinearity diagnostics tolerance test and covariance matrix review of the independent variables revealed an absence of mulitcollinearity. A review of the Normal Probability Plot of the Regression Standardized Residual and Scatterplot revealed no major outliers. Further, calculation of Mahalanobis distances revealed no outliers using the chi square critical value at the alpha level of .001 as suggested by Tabachnick & Fidell (2013).

As a whole, the overall model showed good fit according to the Hosmer and Lemeshow Test, χ^2 (8, $N = 64$) = 9.21, $p = .33$. However, the overall model was not statistically significant χ^2 (8, $N = 64$) = 6.50, $p = .59$, according to the omnibus test of model coefficients, indicating that the model was not able to distinguish between participants who reported and did not report a period in their lifetime of serious suicidal ideation. The overall classification success rate was 72%. Specifically, 8 veterans were correctly classified as reporting suicidal ideation and 38 were correctly classified as not reporting suicidal ideation, while 4 veterans were incorrectly classified as reporting suicidal ideation and 14 were

incorrectly classified as not reporting suicidal ideation. The model explained between 9.7% (Cox and Snell R^2) and 13.3% (Nagelkerke R^2) of the variance in lifetime suicidal ideation.

Individually, no predictors significantly contributed uniquely to the model, as depicted in Table 13. A number of methods have been proposed to calculate individual effect sizes in logistic regression that approximate R^2, one of the simplest being running one-way ANOVA with the logistic regression's dichotomous outcome variable grouping the predictors, then calculating eta squared (Tabachnick & Fidell, 2013). All effect sizes were classified as small according to Cohen (1988), with PTSD and depressive symptoms demonstrating similar but larger effects than moral injury (see Table 13). These findings do not support the hypothesis, however, may be a function of low power due to a smaller than expected sample size.

Table 13

Binary Logistic Regression Predicting Suicidal Ideation (n = 64)

Predictor	B	S.E.	*Wald*	*df*	Odds Ratio	*p*	η^2
Predeployment Trauma	0.09	0.12	0.53	1	1.09	.47	.01
Combat Exposure	-0.03	0.03	0.89	1	0.97	.35	.01
During/Postdeployment Trauma	-0.07	0.13	0.30	1	0.93	.58	.00
Moral Injury	0.02	0.03	0.42	1	1.02	.52	.03
PTSD Symptoms	0.02	0.02	0.89	1	1.02	.35	.04
Depressive Symptoms	0.03	0.06	0.28	1	1.03	.60	.04
Alcohol Use	-0.54	1.39	0.15	1	0.59	.70	.00
Drug Use	0.01	3.93	0.00	1	1.01	1.00	.01

Note. Predeployment trauma and during/postdeployment trauma scores were obtained by the Trauma History Screen. Combat exposure scores were obtained by the Combat Exposure Scale. Moral injury scores were obtained by the Moral Injury Events Scale. PTSD symptoms were obtained by the PTSD Checklist-Civilian Version. Depressive symptoms were obtained by the Patient Health Questionnaire-9. Alcohol and drug use was obtained by the Addiction Severity Index alcohol and drug composite scores.

Qualitative Analysis. Qualitative analysis was conducted to examine the specific experiences that justice-involved veterans reported perceiving to be morally injurious. If a veteran agreed with an item of moral injury quantitatively on the MIES they were asked, "If you have experienced anything related to these statements, what types of events contributed to that?" This question was implemented partway through data collection, and thus was only able to be administered to a subsample of 52 veterans. An independent-samples *t*-test was performed to examine the difference in severity of moral injury between the earlier group of veterans who was not able to be asked the qualitative question (n = 30, M = 27.80, SD = 12.68) compared to the group who was able to complete the qualitative question (n = 52, M = 28.58, SD = 12.10). Homogeneity of variance was assessed by the Levene's test. There were no violations and equal variances were assumed. Results of the *t*-test indicated that there was no significant difference between groups $t(80) = -2.75$, $p = .78$, $\eta^2 = 0.00$. Of the 52 veterans who were able to potentially complete the qualitative question, five veterans strongly disagreed with every moral injury item and were not asked about their morally injurious events.

Qualitative data was analyzed using consensual qualitative research methodology (CQR; Hill, Thompson, & Williams, 1997; Hill et al., 2005). The CQR approach has been described as ideal for individual, in depth study of novel, infrequent, and hidden inner experiences, for which few to no quantitative measures exist (Hill et al., 2005). Hill and colleagues (2005) describe CQR containing elements from phenomenological, grounded theory, and comprehensive process analysis, with a predominately constructivist and partly postpositivist philosophical stance. These philosophies inform their procedures. Rigorous methodology and utilization of multiple researchers is employed in analysis in attempts to

encourage analysis through diverse perspectives, while reducing researcher bias and misinterpretation that might occur in an individual analysis.

The primary analysis team was comprised of three undergraduate students who volunteered their time. The author served as the auditor. Two of the team members were currently research assistants in the field of psychology. None of them had prior experience with qualitative data analysis. Major fields of interest and study included psychology, biology, and literature. The three primary team members reported no prior knowledge of moral injury. All members completed University human subjects training prior to beginning the training and data analysis process.

As part of training, team members read the recommended training articles by Hill et al. (1997; 2005) and were also trained by the author in CQR philosophy and methodology. Biases are a natural part of the analysis process. In an effort to understand and bring into awareness potential expectations and biases, team members were asked to individually reflect on topics relevant to the research question (e.g., military service, psychiatric distress). During training, a conversation about the influence of expectations and biases on the research process, as well as well as a candid discussion of feelings and reactions to the topic of trauma and moral injury also occurred.

Data analysis occurred in the three stages: Domains, core ideas, and cross-analysis, as described below by Hill and colleagues (1997; 2005). First, general domains were constructed individually and independently by team members to group and/or cluster data. Team members were not provided a "start list" of domains. There was a concerted effort to remain "close to the data, rather than making major leaps of interpretation" (Hill et al., 2005, p. 197). Second, a common understanding of the data was sought, in the form of core ideas

(i.e., fewer words and greater clarity with some interpretation). The primary team met together to attain consensus through discussion of agreements and disagreements. Discrepancies that arose were addressed through a collaborative process until a consensus among the group was reached. Third, in cross-analysis, categories based upon common core ideas were created, in an evolving team process, with team members placing core ideas into categories. The auditor was involved at the conclusion of each stage, reducing groupthink and providing detailed feedback on each decision the group made (e.g., creation of a domain, placement of a core idea, lack of a potential category), serving as both an editor and guiding the larger process. Given the power differential between the auditor and primary team members, effort was made to discuss and address mutual respect, equal involvement, and shared power. The complete data analysis process was first practiced using sample qualitative data from a demographically similar, non-veteran, jail diversion, trauma informed, treatment program, until all team members felt proficient and comfortable with the process.

Emergent themes were quantified and summarized in Table 14. The most common morally injurious theme was that of personal betrayal, endorsed by over one-third of veterans (e.g., "People I was in the Army with pissed me off and were able to get away with stupid crap, [so] I do not trust people in positions of authority" and "…other [veterans] turned their back on me"). Personal betrayal was followed by systemic betrayal, as the second most common morally injurious theme, endorsed by over one-quarter of veterans (e.g., "During the downsize they found a loophole to kick me out medically").

There were two surprising findings. First, as the third most common theme, more than one-fourth of veterans refused to elaborate on the specific morally injurious experience they endorsed, often expanded upon to the interviewer by the response content being too personal

or difficult to speak about or write down (e.g., “It is too personal” and “A lot I cannot talk about, I don’t feel comfortable answering that question to be honest with you”). This was unexpected, given that 100% of veterans who refused to answer this question did speak about or write about traumatic experiences while completing other trauma measures (i.e., predeployment trauma, combat exposure, during/postdeployment trauma). This might be further anecdotal evidence that morally injurious events are unique traumas, or, that moral injury is experienced uniquely, even if also a traditional trauma (e.g., firefight). A second surprising finding was that combat violence (e.g., “Iraqi squads using kids as a shield and leaving the dead bodies for us to bury” and “Witnessing the violence in war”) was only the fourth most endorsed experience. The literature has tended to focus on moral injury as it relates to conventional combat trauma, notably experiences such as killing. However, these findings suggest that justice-involved veterans likely experience moral injury in unconventional and noncombat related incidents (e.g., “How [the military] treated people with mental problems” and “Probably getting things through the vet association, delays, appeals”), as well as systemic related experiences that might be a point to focus prevention and intervention efforts. However, it should be noted that this might be because only 62% of the sample was deployed.

Other themes included shocking and unjust actions by others, within military abuse, and substance use. Shocking and unjust actions by other included experiences such as, “Leaving people behind that were going to die, how do you leave someone back that’s on your side and when you leave them they're dead, I did what I was told to do, I never would have done that” and “My military friends showed me some pictures of things they’ve done, I didn’t like them at all.” Within military abuse included sexual, physical, and/or emotional

abuse between two active duty service members. Some experiences included, "My senior drill instructor, I don't know if he was diagnosed with PTSD [but] he kept me in the duty hut and he beat the shit outta me, wouldn't feed me, or let me go to medical, I just tried to think of it like a game, I tried to get help and people just laughed" and "Sexual assault." Substance use included both alcohol and drug use during and after military service, as related to character, values, and responsibility, such as "Drinking when I should not have been drinking" and "[The] wearing down of moral values though the use of drugs for so many years, I still know right from wrong, but things are slightly blurred."

Table 14

Emergent Themes of Morally Injurious Experiences (n = 47)

Core Idea	*n*	Percent Endorsed
Personal Betrayal	16	34%
Systemic Betrayal	12	26%
Not Willing to Elaborate	12	26%
Combat Violence	8	17%
Shocking and Unjust Actions by Others	6	13%
Within Military Abuse	6	13%
Substance Use	5	11%

Note. Some participants reported morally injurious experiences that were grouped into multiple themes. Therefore the total percentage of all themes will not equal 100.

Post Hoc Analyses

Moral Injury and Suicidal Ideation. Given that the binary logistic regression was underpowered, an independent-samples *t*-test was performed to examine the severity of moral injury by groups of those who did not report a period in their life when they experienced serious thoughts of suicide (n = 42, M = 26.83, SD = 13.04) compared to those who did (n = 22, M = 31.36, SD = 10.76). Homogeneity of variance was assessed by the Levene's test. There were no violations and equal variances were assumed. Results of the *t*-test indicate that there was no significant difference between groups $t(62) = -1.40$, $p = .17$, $\eta^2 = 0.03$.

Qualitative Analysis by Deployment Status. Given the unexpected findings regarding refusal to elaborate on morally injurious experiences and that combat violence was only the fourth most prevalent morally injurious experience, further clarity about morally injurious experiences was sought. Responses were divided by deployment status of veterans (see Table 15). In regards to severity of moral injury, there were no differences in MIES scores between those who reported no deployments (n = 18, M = 34.28, SD = 13.05) compared to veterans who reported at least one deployment (n = 29, M = 28.41, SD = 8.60). Homogeneity of variance was assessed by the Levene's test. There were no violations and equal variances were assumed. Results of the *t*-test indicate that there was no significant difference between groups $t(45) = 1.86$, $p = .07$, $\eta^2 = 0.07$.

Among only those who deployed, combat violence remained the fourth most prevalent theme, with the three most prevalent response themes remaining systemic betrayal, refusal to elaborate, and personal betrayal. Personal betrayal moved from the most prevalent response theme to the third, behind systemic betrayal and refusal to elaborate. Further, the

types of and prevalence of morally injurious experiences between deployed and nondeployed veterans were relatively similar. Among nondeployed veterans, responses of combat violence decreased, only endorsed by 11% of veterans, while personal betrayal increased, to 50% of responses. Overall, personal betrayal, systemic betrayal, and refusal to elaborate were the three most prevalent response themes among both deployed and nondeployed veterans. These findings provide further evidence that broader and unconventional conceptualizations of moral injury are incredibly important to consider. Investigation of moral injury among diverse experiences and groups (e.g., nondeployed, non combat exposed) of veterans may aid in understanding of psychiatric injury and substance abuse.

Table 15

Emergent Themes of Morally Injurious Experiences by Deployment Status (n = 47)

	Deployed (*n* = 29)		Nondeployed (*n* = 18)	
Theme	*n*	Percent Endorsed	*n*	Percent Endorsed
Systemic Betrayal	8	28%	4	22%
Not Willing to Elaborate	8	28%	4	22%
Personal Betrayal	7	24%	9	50%
Combat Violence	6	21%	2	11%
Shocking and Unjust Actions by Others	4	14%	2	11%
Substance Use	4	14%	1	6%
Within Military Abuse	3	10%	3	17%

Note. Some participants reported morally injurious experiences that were grouped into multiple themes. Therefore the total percentage of all themes will not equal 100.

Table 16

Summary of Quantitative Findings

Hypothesis	Result
Hypothesis 1. Moral injury will be positively correlated with predeployment trauma, combat exposure, and deployment/postdeployment related trauma, demonstrating discriminant validity.	Unsupported
Hypothesis 2. Moral injury, PTSD symptoms, depression symptoms, suicidal ideation, alcohol use, and drug use, will be positively correlated with each other.	Partially Supported
Hypothesis 3.1. Predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma will predict PTSD symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma.	Supported
Hypothesis 3.2. Predeployment trauma, combat exposure, during/postdeployment trauma, and moral injury trauma will predict depressive symptoms, with moral injury uniquely adding to the prediction, after controlling for predeployment, combat exposure, and during/postdeployment trauma.	Supported
Hypothesis 4.1. Predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms will predict alcohol use.	Supported
Hypothesis 4.2. Predeployment trauma, combat exposure, during/postdeployment trauma, moral injury, PTSD symptoms, and depressive symptoms will predict drug use.	Partially Supported
Hypothesis 5. Moral injury will have equal or greater odds of predicting suicidal ideation as predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, depressive symptoms, alcohol use, and drug use.	Unsupported

Chapter V

Discussion

Mounting clinical wisdom and theory suggest that veterans may suffer deep and long-term psychological injuries that are not adequately captured by current conceptualizations (Litz et al., 2009). Among a highly trauma exposed and mentally ill sample of justice-involved veterans, the psychometric properties of the MIES were assessed, the impact of moral injury as a unique mechanism to the development of PTSD symptoms, depressive symptoms, alcohol and drug use, and suicidal ideation, compared to other traumatic event exposure commonly experienced by justice-involved veterans were examined, and veterans were asked about the specific events that led to their moral injury. There were five major findings: Moral injury 1) demonstrated good psychometric properties among a diverse "clinical" sample of veterans, 2) uniquely predicted psychiatric symptoms compared to other traumatic events commonly experienced by justice-involved veterans, 3) uniquely predicted substance use compared to other traumatic events and psychiatric symptoms commonly experienced by justice-involved veterans, 4) did not uniquely predict suicidal ideation compared to other traumatic events and psychiatric problems commonly experienced by justice-involved veterans, and 5) most frequently was a result of perceived betrayal.

First, this study successfully expanded upon the current knowledge of moral injury by examining the MIES among a sample of diverse, justice-involved veterans. The sample was comprised of veterans from a variety of service eras, and who varied in terms of deployment status, combat exposure, and length of time since separation from the military. The MIES demonstrated adequate and expected psychometric properties among this group, a group that has been consistently found to have a much higher prevalence of traumatic event exposure,

psychiatric and substance use symptoms, suicidal ideation, and psychosocial problems, than non-justice-involved veterans and civilians. Internal consistencies and test-retest reliability were good. The perceived betrayal subscale demonstrated the lowest internal consistency, suggesting that the three betrayal events were somewhat distinct from each other in their perceived occurrence. Discriminant and convergent validity also replicated previous findings.

A second major finding was that moral injury uniquely contributed to the development of symptoms of the two most prevent psychiatric problems facing justice-involved veterans, PTSD and depression, even after controlling for the impact of predeployment trauma, combat exposure, and during/postdeployment trauma. Fitting with conventional patterns of PTSD conceptualization, combat exposure was also a significant predictor of PTSD symptoms in the final step of the model. In regards to depressive symptoms, during/postdeployment trauma was a significant individual predictor, but after moral injury was added to the final model, moral injury was the only individually significant predictor of depressive symptoms. These findings are consistent with Litz et al.'s (2009) broader conceptual model of traumatic stressors.

The finding that moral injury predicted increased psychiatric distress, specifically PTSD, supports arguments in favor of modifying Criterion A, and the continued evolution of the understanding between traumatic stressors and the development of PTSD. Although changes to PTSD have been occurring since first introduced in the *DSM-III*, the *DSM-5* still necessitates an event to be related to actual or threatened death or safety and specifies subjective reactions. Such language may still overlook common morally injurious experiences that do predict negative outcomes, such as the infliction of, or failure to prevent,

trauma (Drescher and Foy, 2012), as well as broader signs and symptoms such as shame and anger (Brewin, Andrews, & Rose, 2000).

A third major finding was that moral injury was a unique contributor to alcohol and drug use. These findings are important in the evolving framework of understanding moral injury as a trauma. For example, the common consequences of trauma, such as avoidance and numbing as well as physiological arousal have been suggested to both be applicable (Litz et al., 2009) and not applicable to morally injurious events (Shay, 2014). These findings provide evidence that moral injury, as conceptualized by Litz et al. (2009), may encapsulate consequences such as avoidance and numbing and physiological arousal, that may follow self-medication theory, leading to substance use in an attempt to alter or eliminate such experiences. Future research might investigate these patterns in more detail through the examination of specific symptom clusters and sophisticated modeling approaches.

A fourth major finding was that, unexpectedly, moral injury did not demonstrate equal or greater odds of predicting suicidal ideation as predeployment trauma, combat exposure, during/postdeployment trauma, PTSD symptoms, depressive symptoms, alcohol use and drug use. Further, post hoc analyses revealed that there were not significant differences in the severity of moral injury between groups of those who had experienced suicidal ideation and those who had not. It might be that these findings are a function of lower than anticipated sample size, due to missing data. More intricate examinations of moral injury may add further clarification. For instance, the experience of guilt and shame after moral injury (predictive factors of suicidal ideation), might be dependent on whether the transgression or betrayal was perceived to have been committed by oneself or another, as

well as the perceived causal nature of the injury (e.g., global vs. specific, internal vs. external, and stable vs. unstable).

A fifth major finding was that justice-involved veterans experienced betrayal related moral injury most frequently, with a majority of injuries not related to combat. Previous qualitative studies of moral injury have found that betrayals were either the least frequently or second the least frequently endorsed (Drescher et al. 2011; Vargas et al., 2013) moral injury. However, both these analyses concentrated on combat and war-zone events. When the responses of justice-involved veterans were analyzed by deployment status, betrayal-related events remained two of the three most prevalent responses in both the deployed and nondeployed veteran groups, above combat violence. This is a novel finding among deployed veterans, however, among nondeployed veterans, it was consistent with Vargas et al.'s (2013) findings of the high prevalence of betrayal among non-war zone Vietnam Era veterans. These findings provide further evidence that moral injury may be experienced quite broadly, and among the justice-involved veteran population in particular, is likely to be related to subjective feelings of betrayal.

Further, the unexpected finding that over one-quarter of veterans were not comfortable sharing their morally injurious experiences either verbally with the interviewer or writing them on paper suggests that these experiences might also be more personal in nature and perhaps associated with loss of trust (Vargas et al., 2013), increased guilt and shame, and self-condemnation, than other non morally injurious traumatic stressors veterans tended to disclose. Morally injurious experiences also tended to involve experiences with other veterans, while in the military or after separation, rather than experiences with non-veterans or independent experiences, perhaps contributing to perception of betrayal.

Limitations

There were several limitations to this study. First, the construct of moral injury is a relatively novel idea. Although there is a growing amount of evidence supporting the validity of the measure, findings, and lack-thereof, should be interpreted cautiously. Second, in regards to the justice-involved veteran population, obtaining a substantial sample size, as well as a sample representative of the population was difficult. In addition to being limited to central California and the potentially unique problems facing veterans in that location, veterans who were alleged to have committed violent or sexual offenses, or offenses that were unrelated to their military service, were not recruited for participation in the study. Generalization of findings to other samples of justice-involved and non-justice-involved veterans may not be appropriate. Third, a majority of the questions related to sensitive topics, such as past trauma exposure as well as mental illness, substance use, and suicidal ideation. The impact of social desirability bias has been extensively documented among the offender, substance using, and veteran populations (e.g., Rosen et al., 2000; Sloan, Bodapati, & Tucker, 2004; Walker & Cosden, 2007). Although there were efforts to reduce social desirability in responding to sensitive items, such as clear informed consent and limit to confidentiality explanations (Singer, Von Thurn, & Miller, 1995), it may be that veterans did not endorse or discuss the full extent of their problems. Another concern limiting endorsement of items might be the perceived impact on the veteran's criminal case and mandatory treatment. The effect of social desirability bias on the findings was unknown. Caution should be taken in generalizing findings to justice-involved veterans at-large.

Impact of Study

As the current conflicts in Iraq and Afghanistan come to an end, there will be an influx of veterans separating from the military, reintegrating into society. There will be a need for mental health care providers to understand and address complex problems such as moral injuries and resulting psychiatric and substance related symptoms. This study helped to clarify the role of moral injury, as a unique mechanism to psychological injury, and an explanation for the prevalence of issues facing justice-involved veterans. Although research on the consequences of and treatment of moral injury remains in its infancy, the findings of this study provide valuable information contributing to the understanding of these issues, and will inform and guide continually evolving policy, prevention, and intervention efforts.

Implications for Policy. Given that moral injury uniquely contributes to psychiatric and substance related problems among justice-involved veterans, programs should begin implementing procedures for assessing for and treating moral injury. Some, such as VTCs have tended to restrict enrollment to veterans who have been exposed to combat and meet diagnostic criteria for a mental illness as a result of their service. These findings suggest that such veterans might benefit from services broadening eligibility criteria, to include noncombat and nondeployed veterans, as veterans also experience broader military and postmilitary moral injury and subsequent long-term problems. Furthermore, given the evidence that the diagnostic criteria for PTSD (e.g., Criterion A) might be missing some important traumatic stressor and symptom information, these findings may have important impacts on broader policy (e.g., compensation and pension assessments). As Shay (2014) states, "this sounds expensive…but so is…incarceration; so is crime itself, if only the losses and injuries to the victims, not to speak of policing, courts, and incarceration" (p. 189).

Furthermore, moral injury and the resulting problems are likely to occur in populations of veterans outside the justice-system as well. Expansion of efforts to assess and treat moral injury as well as the examination of the effectiveness of such efforts, across various settings, will be important to further understanding of this unique trauma and prevention and treatment efforts. As veterans are returning from service in Iraq and Afghanistan, longitudinal studies across the separation and reintegration periods might be a next step to best understanding the etiology and development of moral injury.

Implications for Treatment. Over the past few years, brief treatment approaches, such as adaptive disclosure (Steenkemp et al., 2011) for active duty combat exposed service members have been developed and have demonstrated effectiveness in psychiatric symptom reduction and consumer satisfaction (Gray et al., 2012). Such approaches, at their core, attempt to address breakdowns in global meaning (Currier, Holland, & Malott, 2015) and include psychological and emotional processing of the experience, meaning making of the injurious event through accommodation, and provision of corrective experiences (Gray et al., 2012; Loeffler, 2013). Given the findings of this study, modification of existing treatment approaches might be necessary for specific veteran populations, such as justice-involved veterans. For example, the prevalence of betrayal related injuries (and likely subsequent loss of trust, increased guilt and shame, and self-condemnation) among justice-involved veterans might increase the need for attentiveness to the interpersonal process of intervention. As Shay (2014) described, the trust between the clinician and veteran, both verbally and behaviorally, is one, if not the most important, questions consistently "on the table" in the therapeutic process, vital in mending the veterans' expectation of harm, exploitation, and

humiliation. This, theoretically, would be especially important in working with betrayal related injuries.

Further, in this study morally injurious experiences among justice-involved veterans often included other veterans, rather than non-veterans or independent experiences. The inclusion of other veterans might be particularly harmful. For example, identifying as part of the injuring group, even when another veteran committed the moral injury, might lead to increased likelihood of integration of moral injury into self-schemas, which has been shown to predict PTSD and depressive symptoms among war veterans (Ferrãjao & Oliverira, 2014). The results could increase the likelihood of global, internal, and stable attributions of morally injurious experiences, decreasing motivation for corrective action (Litz et al., 2009) and the ability to integrate moral violations into an intact, flexible, and functional belief system (Farnsworth, Drescher, Nieuwsma, Walser, & Currier, 2014). A vital point of future research would be to examine the association between moral injury and outcomes through attribution bias.

In addition, current approaches to moral injury treatment do not adequately, or directly, address maladaptive behaviors such as substance abuse. However, treatments such as adaptive disclosure do demonstrate promising potential effects on substance use reduction, with a lower percentage of Marines reporting alcohol abuse after, compared to before adaptive disclosure (Gray et al., 2012). Future research might examine how existing approaches could most effectively be modified to include addressing a range of common co-occurring problems.

Conclusions

This study supports the conceptual model of moral injury as proposed by Litz et al. (2009), and expands the applicability of this model and the use of the MIES to the highly trauma exposed and mentally ill justice-involved veteran population. The findings suggest that moral injury is a unique mechanism to the development of PTSD and depressive symptoms as well as alcohol and drug use among justice-involved veterans, compared to other common traumatic events and psychiatric problems. However, moral injury and the resulting problems are likely not limited to the justice-involved veterans population. Thus, these findings have broader implications for existing assessment and treatment approaches, as well as benefit and service provision policies (e.g., disability or compensation and pension assessment). Specifically, these findings support the continued evolution of Criterion A for the diagnosis of PTSD, to broaden objective and subjective experiences. Interestingly, betrayal related moral injury was the most frequently experienced type of injury, even when examining injury by deployment status. These are novel findings, suggesting that future research may be needed to better understand the impact of type of morally injurious event and attribution bias on symptom development and treatment. As the construct of moral injury is becoming increasingly understood and agreed upon, more sophisticated methodological approaches and statistical analysis may provide more insight into the etiology, development, and treatment of moral injury. Overall, there is evidence that attention to the emerging construct of moral injury will provide valuable information to inform and guide continually evolving policy, prevention, and intervention efforts.

References

Adler, A. B., Huffman, A. H., Bliese, P. D., & Castro, C. A. (2005). The impact of deployment length and experience on the well-being of male and female soldiers. *Journal of Occupational Health Psychology*, *10*(2), 121-137. doi:10.1037/1076-8998.10.2.121

American Community Survey. (2010). [Table of the percent of the civilian population 18 years and over who are veterans]. *United States Census Bureau*. Retrieved from http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_1YR_R2101.US01PRF&prodType=table

American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III)*. Washington, DC, American Psychiatric Association.

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR)*. Washington, DC, American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5)*. Washington, DC, American Psychiatric Association.

Ames, G., & Cunradi, C. (2005). Alcohol use and preventing alcohol-related problems among young adults in the military. *Alcohol Research & Health*, *28*(4), 252-257.

Andersen, J., Wade, M., Possemato, K., & Ouimette, P. (2010). Association between posttraumatic stress disorder and primary care provider-diagnosed disease among Iraq and Afghanistan veterans. *Psychosomatic Medicine*, *72*(5), 498-504. doi:0033-3174/10/7204-0001

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review, 3*(3), 193-209. doi:10.1207/s15327957pspr0303_3

Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behaviour Research and Therapy, 34*(8), 669-673. doi:10.1016/0005-7967(96)00033-2

Blodgett, J. C., Fuh, I. L., Maisel, N. C., & Midboe, A. M. (2013). *A structured evidence review to identify treatment needs of justice-involved veterans and associated psychological interventions*. Retrieved from the Center for Health Care Evaluation, V.A. Palo Alto Health Care System: http://blogs.utexas.edu/jdtr/files/2013/06/Justice-Involved-Veterans-Structured-Evidence-Review-FINAL.pdf

Boudreau, T. (2011). The morally injured. *Massachusetts Review*, *52*(3-4), 746-754.

Bray, R. M., Pemberton, M. R., Lane, M. E., Hourani, L. L., Mattiko, M. J., & Babeu, L. A. (2010). Substance use and mental health trends among U.S. military active duty personnel: Key findings from the 2008 DoD Health Behavior Survey. *Military Medicine, 175*(6), 390-399. doi:10.7205/MILMED-D-09-00132

Bremner, J. D., Southwick, S. M., Darnerll, A., & Charney, D. S. (1996). Chronic PTSD in Vietnam combat veterans: Course of illness and substance abuse. *American Journal of Psychiatry, 153*(3), 369-375.

Brewin, C. R., Andrews, B., & Rose, S. (2000). Fear, helplessness, and horror in posttraumatic stress disorder: Investigating *DSM-IV* Criterion A2 in victims of violent crime. *Journal of Traumatic Stress, 13*(3), 499-509. doi:10.1023/A:1007741526169

Brown, P. J., Stout, R. L., & Gannon-Rowley, J. (1998). Substance use disorder-PTSD comorbidity: Patients' perceptions of symptom interplay and treatment issues.

Journal of Substance Abuse Treatment, *15*(5), 445-448. doi:10.1016/S0740-5472(97)00286-9

Bryan, A. O., Bryan, C. J., Morrow, C. E., Etienne, N., & Ray-Sannerud, B. (2014). Moral injury, suicidal ideation, and suicide attempts in a military sample. *Traumatology*, *20*(3), 154-160. doi: 10.1037/h0099852

Bryan, C. J., Morrow, C. E., Etienne, N., & Ray- Sannerud, B. (2013a). Guilt, shame, and suicidal ideation in a military outpatient clinical sample. *Depression and Anxiety*, *30*(1), 55-60. doi:10.1002/da.22002

Bryan, C. J., Ray-Sannerud, B., Morrow, C. E., & Etienne, N. (2013b). Guilt is more strongly associated with suicidal ideation among military personnel with direct combat exposure. *Journal of Affective Disorders*, *148*(1), 37-41. doi:10.1016/j.jad.2012.11.044

Bullman, T. A., & Kang, H. K. (1994). Posttraumatic stress disorder and the risk of traumatic deaths among Vietnam veterans. *The Journal of Nervous and Mental Disease*, *182*(11), 604-610. doi:10.1097/00005053-199411000-00002

Cabrera, O. A., Hoge, C. W., Bliese, P. D., Castro, C. A., & Messer, S. C. (2007). Childhood adversity and combat as predictors of depression and post-traumatic stress in deployed troops. *American Journal of Preventive Medicine*, *33*(2), 77-82. doi:10.1016/j.amepre.2007.03.019

Cacciola, J. S., Koppenhaver, J. M., McKay, J. R., & Alterman, A. I. (1999). Test–retest reliability of the lifetime items on the Addiction Severity Index. *Psychological Assessment, 11*(1), 86-93. doi:10.1037/1040-3590.11.1.86

Calabrese, J. R., Prescott, M., Tamburrino, M., Liberzon, I., Slembarski, R., Goldmann, E., … Galea, S. (2011). PTSD comorbidity and suicidal ideation associated with PTSD within the Ohio Army National Guard. *Journal of Clinical Psychiatry*, *72*(8), 1072-1078. doi:10.4088/JCP.11m06956

California Penal Code §1170.9, Retrieved from http://law.onecle.com/california/penal/1170.9.html

Capone, C., McGrath, A. C., Reddy, M. K., & Shea, M. T. (2013). Trauma- related correlates of alcohol use in recently deployed OEF/OIF veterans. *Journal of Traumatic Stress*, *26*(3), 354-360. doi:10.1002/jts.21817

Carlson, E. B., Smith, S. R., Palmieri, P. A., Dalenberg, C., Ruzek, J. I., Kimerling, R., … Spain, D. A. (2011). Development and validation of a brief self-report measure of trauma exposure: The Trauma History Screen. *Psychological Assessment*, *23*(2), 463-477. doi:10.1037/a0022294

Chang, B. H., Skinner, K. M., Zhou, C., & Kazis, L. E. (2003). The relationship between sexual assault, religiosity, and mental health among male veterans. *The International Journal of Psychiatry in Medicine*, *33*(3), 223-239. doi:10.2190/NM3D-EWYR-4B59-DFM8

Chilcoat, H. D., & Breslau, N. (1998). Posttraumatic stress disorder and drug disorders. *Archives of General Psychiatry*, *55*(10), 913-917. doi:10.1001/archpsyc.55.10.913

Cohen, J. W. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cosden, M., Ellens, J. K., Schnell, J. L., Yamini-Diouf, Y., & Wolfe, M. M. (2003). Evaluation of a mental health treatment court with assertive community treatment. *Behavioral Sciences & The Law, 21*(4), 415-427. doi:10.1002/bsl.542

Currier, J. M., Holland, J. M., Drescher, K., & Foy, D. (2013). Initial Psychometric Evaluation of the Moral Injury Questionnaire-Military Version. *Clinical Psychology & Psychotherapy, 22*(1), 54-63. doi:10.1002/cpp.1866

Currier, J. M., Holland, J. M., & Malott, J. (2015). Moral injury, meaning making, and mental health in returning veterans. *Journal of Clinical Psychology, 71*(3), 229-240. doi: 10.1002/jclp.22134

Dombo, E. A., Gray, C., & Early, B. P. (2013). The trauma of moral injury: Beyond the battlefield. *Journal of Religion & Spirituality in Social Work: Social Thought, 32*(3), 197-210. doi:10.1080/15426432.2013.801732

Drescher, K. D., & Foy, D. W. (1995). Spirituality and trauma treatment: Suggestions for including spirituality as a coping resource. *National Center for PTSD Clinical Quarterly, 5*(1), 4-5. Retrieved from http://napa.networkofcare.org/veterans/library/article.aspx?id=384&cat=473

Drescher, K. D., & Foy, D. W. (2012). When they come home: Posttraumatic stress, moral injury, and spiritual consequences for veterans. *Reflective Practice: Formation and Supervision in Ministry, 32*, 85-102.

Drescher, K. D., Foy, D. W., Kelly, C., Leshner, A., Schutz, K., & Litz, B. (2011). An exploration of the viability and usefulness of the construct of moral injury in war veterans. *Traumatology, 17*(1), 8-13. doi:10.1177/1534765610395615

Drescher, K. D., Nieuwsma, J. A., & Swales, P. J. (2013). Morality and moral injury: Insights from theology and health science. *Reflective Practice: Formation and Supervision in Ministry, 33*, 50-61.

Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Rherapy*, *38*(4), 319-345. doi:10.1016/S0005-7967(99)00123-0

Elbogen, E. B., Johnson, S. C., Newton, V. M., Straits-Troster, K., Vasterling, J. J., Wagner, H. R., & Beckham, J. C. (2012a). Criminal justice involvement, trauma, and negative affect in Iraq and Afghanistan war era veterans. *Journal of Consulting and Clinical Psychology*, *80*(6), 1097. doi:10.1037/a0029967

Elbogen, E. B., Johnson, S. C., Wagner, H. R., Newton, V. M., Timko, C., Vasterling, J. J., & Beckham, J. C. (2012b). Protective factors and risk modification of violence in Iraq and Afghanistan War veterans. *The Journal of Clinical Psychiatry*, *73*(6), e767-73. doi:10.4088/JCP.11m07593

Farnsworth, J. K., Drescher, K. D., Nieuwsma, J. A., Walser, R. B., & Currier, J. M. (2014). The role of moral emotions in military trauma: Implications for the study and treatment of moral injury. *Review of General Psychology*, *18*(4), 249-262. doi: 10.1037/gpr0000018

Ferrãjao, P. C. & Oliverira, R. A. (2014). Self-awareness of mental states, self-integration of personal schemas, perceived social support, posttraumatic and depression levels, and moral injury: A mixed-method study among Portuguese war veterans. *Traumatology*, *20*(4), 277-285. doi: 10.1037/trm0000016

Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioral/cognitive conceptualizations of post-traumatic stress disorder. *Behavior Therapy, 20*(2), 155-176. doi:10.1016/S0005-7894(89)80067-X

Fontana, A., Rosenheck, R., & Brett, E. (1992). War zone traumas and posttraumatic stress disorder symptomatology. *The Journal of Nervous and Mental Disease, 180*(12), 748-755. doi:10.1097/00005053-199212000-0

Friedman, M. J. (1981). Post-Vietnam syndrome: Recognition and management. *Psychosomatics, 22*(11), 931-942. doi:10.1016/S0033-3182(81)73455-8

G*Power (Version 3.1.2) [Computer software]. Kiel, Germany: Universitat Kiel.

Gelman, A., Hill, J., & Yajima, M. (2012). Why we (usually) don't have to worry about multiple comparisons. *Journal of Research on Educational Effectiveness, 5*(2), 189-211. doi: 10.1080/19345747.2011.618213

Glickman, M. E., Rao, S. R., & Schultz, M. R. (2014). False discovery rate control is a recommended alternative to Bonferroni-type adjustments in health studies. *Journal of clinical epidemiology, 67*(8), 850-857. doi: 10.1016/j.jclinepi.2014.03.012

Gore, K. L., McCutchan, P. K., Prins, A., Freed, M. C., Liu, X., Weil, J. M., & Engel, C. C. (2013). Operating characteristics of the PTSD Checklist in a military primary care setting. *Psychological Assessment, 25*(3), 1032-1036. doi:10.1037/a0033325

Gray, M. J., Schorr, Y, Nash, W., Lebowitz, L., Amidon, A., Lansing, A., … Litz, B. T. (2012). Adaptive disclosure: An open trial of a novel exposure-based intervention for service members with combat-related psychological stress injuries. *Behavior Therapy, 43*, 407-415. doi: 10.1016/j.beth.2011.09.001

Grieger, T., Cozza, S., Ursano, R., Hoge, C., Martinez, P., Engel, C., & Wain, H. (2006). Posttraumatic stress disorder and depression in battle-injured soldiers. *American Journal of Psychiatry, 163*(10), 1777-1783. doi:10.1176/appi.ajp.163.10.1777

Guerra, V. S., & Calhoun, P. S. (2011). Examining the relation between posttraumatic stress disorder and suicidal ideation in an OEF/OIF veteran sample. *Journal of Anxiety Disorders, 25*(1), 12-18. doi:10.1016/j.janxdis.2010.06.025

Hasanović, M., & Pajević, I. (2010). Religious moral beliefs as mental health protective factor of war veterans suffering from PTSD, depressiveness, anxiety, tobacco and alcohol abuse in comorbidity. *Psychiatria Danubina, 22*(2), 203-210.

Hendin, H., & Haas, A. P. (1991). Suicide and guilt as manifestations of PTSD in Vietnam combat veterans. *American Journal of Psychiatry, 148*(5), 586-591.

Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist, 25*(4), 517-572.

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology, 52*(2), 196-205. doi: 10.1037/0022-0167.52.2.196

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England Journal of Medicine, 351*(1), 13-22. doi:10.1056/NEJMoa040603

Hoge, C. W., McGurk, D., Thomas, J. L., Cox, A. L., Engel, C. C., & Castro, C. A. (2008). Mild traumatic brain injury in U.S. soldiers returning from Iraq. *The New England Journal of Medicine, 358*(5), 453-463. doi:10.1056/NEJMoa072972

Hosek, J., Kavanagh, J., & Miller, L.L. (2006). *How deployments affect service members*. Santa Monica, CA: RAND Corporation.

Institute of Medicine of the National Academies. (2012). *Substance use disorders in the U.S. Armed Forces*. Retrieved from http://www.iom.edu/~/media/Files/Report%20Files/2012/Military-SUD/SUD_rb.pdf

Jacobson, I. G., Ryan, M. A. K., Hooper, T. I, Smith, T. C., Amoroso, P. J., Boyko, E. J., … Bell, N. S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *Journal of the American Medical Association*, *300*(6), 663-675. doi:10.1001/jama.300.6.663

Jakupcak, M., Cook, J., Imel, Z., Fontana, A., Rosenheck, R., & McFall, M. (2009). Posttraumatic stress disorder as a risk factor for suicidal ideation in Iraq and Afghanistan war veterans. *Journal of Traumatic Stress*, *22*(4), 303-306. doi:10.1002/jts.20423

Jakupcak, M., Tull, M. T., McDermott, M. J., Kaysen, D., Hunt, S., & Simpson, T. (2010). PTSD symptom clusters in relationship to alcohol misuse among Iraq and Afghanistan war veterans seeking post-deployment VA health care. *Addictive Behaviors, 35*(9), 840-843. doi:10.1016/j.addbeh.2010.03.023

Johnson, W. B. (2014). The morally-injured veteran: Some ethical considerations. *Spirituality in Clinical Practice*, *1*(1), 16-17. doi:10.1037/scp0000006

Karstoft, K. I., Andersen, S. B., Bertelsen, M., & Madsen, T. (2013). Diagnostic accuracy of the Posttraumatic Stress Disorder Checklist–Civilian Version in a representative military sample. *Psychological Assessment, 26*(1), 321-325. doi:10.1037/a0034889

Keane, T. M., Fairbank, J. A., Caddell, J. M., Zimering, R. T., Taylor, K. L., & Mora, C. A. (1989). Clinical evaluation of a measure to assess combat exposure. *Psychological Assessment: A Journal of Consulting and Clinical Psychology*, *1*(1), 53-55. doi:10.1037/1040-3590.1.1.53

Kehle, S. M., Ferrier-Auerbach, A. G., Meis, L. A., Arbisi, P. A., Erbes, C. R., & Polunsy, M. A. (2012). Predictors of postdeployment alcohol use disorders in National Guard soldiers deployed to Operation Iraqi Freedom. *Psychology of Addictive Behaviors*, *26*(1), 42-50. doi:10.1037/a0024663.

Kemp, J., & Bossarte, R. (2012). *Suicide data report, 2012, Department of Veterans Affairs, Mental Health Services, Suicide Prevention Program*. Retrieved from the United States Department of Veterans Affairs website http://www.va.gov/opa/pressrel/pressrelease.cfm?id=2427

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of *DSM-IV-TR* disorders in the national comorbidity survey replication. *Archives of General Psychiatry*, *62*(6), 593-602. doi:10.1001/archpsyc.62.6.593

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: A reconsideration and recent applications. *Harvard Review of Psychiatry*, *4*(5), 231-244. doi:10.3109/10673229709030550

Khantzian, E. J. (2003). The self-medication hypothesis revisited: The dually diagnosed patient. *Primary Psychiatry*, *10*(47-48), 47-54.

Killgore, W. D., Cotting, D. I., Thomas, J. L., Cox, A. L., McGurk, D., Vo, A. H., … Hoge, C. W. (2008). Post-combat invincibility: violent combat experiences are associated

with increased risk-taking propensity following deployment. *Journal of Psychiatric Research, 42*(13), 1112-1121. doi:10.1016/j.jpsychires.2008.01.001

Kohlberg, L., & Kramer, R. (1969). Continuities and discontinuities in childhood and adult moral development. *Human Development, 12*(2), 93-120. doi:10.1159/000270857

Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9. *Journal of General Internal Medicine, 16*(9), 606-613. doi:10.1046/j.1525-1497.2001.016009606

Kuehn, B. M. (2009). Soldier suicide rates continue to rise: Military, scientists work to stem the tide. *Journal of the American Medical Association, 301*(11), 1111–1113. doi:10.1001/jama.2009.342.

Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., & Weiss, D. S. (1990). *Trauma and the Vietnam War Generation: Report of Findings from the National Vietnam Veterans Readjustment Study*. Philadelphia, PA: Brunner/Mazel.

Lapierre, C. B., Schwegler, A. F., & LaBauve, B. J. (2007). Posttraumatic stress and depression symptoms in soldiers returning from combat operations in Iraq and Afghanistan. *Journal of Traumatic Stress*, *20*(6), 933-943. doi:10.1002/jts.20278

Leigh, J., Bowen, S., & Marlatt, G. A. (2005). Spirituality, mindfulness and substance abuse. *Addictive Behaviors, 30*(7), 1335-1341. doi:10.1016/j.addbeh.2005.01.010

Leonhard, C., Mulvey, K., Gastfriend, D. R., & Shwartz, M. (2000). The Addiction Severity Index: A field study of internal consistency and validity. *Journal of Substance Abuse Treatment, 18*(2), 129-135. doi:10.1016/S0740-5472(99)00025-2

Leukefeld, C. G., & Leukefeld, S. (1999). Primary socialization theory and a bio/psycho/social/spiritual practice model for substance use. *Substance Use & Misuse, 34*(7), 983-991. doi:10.3109/10826089909039390

Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review, 29*(8), 695-706. doi:10.1016/j.cpr.2009.07.003

Loeffler, G. (2013). Moral injury: An emerging concept in combat trauma. *The Residents' Journal*, *8*(4), 2-3.

Maguen, S., & Litz, B. T. (2012). Moral injury in veterans of war. *PTSD Research Quarterly, 23*(1), 1-6.

Maguen, S., Lucenko, B. A., Reger, M. A., Gahm, G. A., Litz, B. T., Seal, K. H., … Marmar, C. R. (2010). The impact of reported direct and indirect killing on mental health symptoms in Iraq war veterans. *Journal of Traumatic Stress*, *23*(1), 86-90. doi:10.1002/jts.20434

Maguen, S., Luxton, D. D., Skopp, N. A., Gahm, G. A., Reger, M. A., Metzler, T. J., & Marmar, C. R. (2011a). Killing in combat, mental health symptoms, and suicidal ideation in Iraq war veterans. *Journal of Anxiety Disorders*, *25*(4), 563-567. doi:10.1016/j.janxdis.2011.01.003

Maguen, S., Stalnaker, M., McCaslin, S., & Litz, B. T. (2009). PTSD subclusters and functional impairment in Kosovo peacekeepers. *Military Medicine*, *174*(8), 779-785. doi:10.7205/MILMED-D-03-2808

Maguen, S., Vogt, D. S., King, L. A., King, D. W., Litz, B. T., Knight, S. J., & Marmar, C.

R. (2011b). The impact of killing on mental health symptoms in Gulf War veterans. *Psychological Trauma: Theory, Research, Practice, and Policy*, *3*(1), 21-26. doi:10.1037/a0019897

Mäkelä, K. (2004). Studies of the reliability and validity of the Addiction Severity Index. *Addiction*, *99*(4), 398-410. doi:10.1111/j.1360-0443.2004.00665.x

McCauley, J. L., & Killeen, T. (2012). Posttraumatic stress disorder and co-occurring substance use disorders: Advances in assessment and treatment. *Clinical Psychology Science and Practice*, *19*(3), 283-304. doi:10.1111/cpsp.12006

McCloskey, M. (2011, April 28). Combat stress as 'moral injury' offends Marines. *Stars and Stripes*. Retrieved from www.stripes.com/blogs/stripes-central/stripes-central-1.8040/combat-stress-as-moral-injury-offends-marines-1.142177

McDevitt-Murphy, M. E., Williams, J. L., Bracken, K. L., Fields, J. A., Monahan, C. J., & McGuire, J. (2007). Closing a front door to homelessness among veterans. *The Journal of Primary Prevention*, *28*(3-4), 389-400. doi:10.1007/s10935-007-0091-y

McLellan, A. T., Kushner, H., Metzger, D., Peters, R., Smith, I., Grissom, G., … Argeriou, M. (1992). The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment*, *9*(3), 199-213. doi:10.1016/0740-5472(92)90062-S

Milliken, C. S., Auchterlonie, J. L., & Hoge, C. W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association*, *298*(18), 2141-2148. doi:10.1001/jama.298.18.2141

Nash, W. P. (2007). Combat/operational stress adaptations and injuries. In C. R. Figley & W. P. Nash (Eds.), *Combat stress injury theory, research, and management* (pp. 33-64). New York, NY: Routledge.

Nash, W. P., & Litz, B. T. (2013). Moral injury: A mechanism for war-related psychological trauma in military family members. *Clinical Child and Family Psychology Review, 16*(4), 365-375. doi:10.1007/s10567-013-0146-y

Nash, W. P., Marino Carper, T. L., Mills, M. A., Au, T., Goldsmith, A., & Litz, B. T. (2013). Psychometric evaluation of the moral injury events scale. *Military Medicine, 178*(6), 646-652. doi:10.7205/MILMED-D-13-00017

Nieuwsma, J. A., Rhodes, J. E., Jackson, G. L., Cantrell, W. C., Lane, M. E., Bates, M. J., … Meador, K. G. (2013). Chaplaincy and mental health in the Department of Veterans Affairs and Department of Defense. *Journal of Health Care Chaplaincy*, *19*(1), 3-21. doi:10.1080/08854726.2013.775820

Noonan, M. E., & Mumola, C. J. (2007). *Veterans in state and federal prison, 2004* (Report No. NCJ 217199). Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics Special Report.

O'Keefe, D. J. (2003). Colloquy: Should familywise alpha be adjusted?. *Human Communication Research, 29*(3), 431-447.

Perneger, T. V. (1998). What's wrong with Bonferroni adjustments. *BMJ: British Medical Journal*, *316*(7139), 1236-1238.

Petrakis, I. L., Rosenheck, R., & Desai, R. (2011). Substance use comorbidity among veterans with posttraumatic stress disorder and other psychiatric illness. *The*

American Journal of Addictions, *20*(3), 185-189. doi:10.1111/j.1521-0391.2011.00126.x

Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., & Southwick, S. M. (2010). Risk and protective factors associated with suicidal ideation in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders*, *123*(1), 102-107. doi:10.1016/j.jad.2009.08.001

Prigerson, H. G., Maciejewski, P. K., & Rosenheck, R. A. (2002). Population attributable fractions of psychiatric disorders and behavioral outcomes associated with combat exposure among U.S. men. *American Journal of Public Health*, *92*(1), 59-63. doi:10.2105/AJPH.92.1.59

Rosen, C. S., Henson, B. R., Finney, J. W., & Moos, R. H. (2000). Consistency of self-administered and interview-based Addiction Severity Index composite scores. *Addiction*, *95*(3), 419-425. doi:10.1046/j.1360-0443.2000.95341912.x

Rosen, G. M., & Lilienfeld, S. O. (2008). Posttraumatic stress disorder: An empirical evaluation of core assumptions. *Clinical Psychology Review*, *28*(5), 837-868. doi:10.1016/j.cpr.2007.12.002

Rosenheck, R. A., Banks, S., Pandiani, J., & Hoff, R. (2000). Bed closures and incarceration rates among users of Veterans Affairs mental health services. *Psychiatric Services*, *51*(10), 1282-1287. doi:10.1176/appi.ps.51.10.1282

Ruggiero, K. J., Del Ben, K., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD Checklist-Civilian version. *Journal of Traumatic Stress*, *16*(5), 495-502. doi:10.1023/A:1025714729117

Ruzek, J. I. (2003). Concurrent posttraumatic stress disorder and substance use disorder among veterans: Evidence and treatment issues. In P. Ouimette & P. J. Brown (Eds.), *Trauma and substance abuse* (pp. 191-208). Washington DC: American Psychological Association.

SAMHSA National GAINS Center, & United States of America. (2008). Responding to the needs of justice-involved combat veterans with service-related trauma and mental health conditions. Retrieved from http://gainscenter.samhsa.gov/pdfs/veterans/CVTJS_Report.pdf

Sayer, N. A., Noorbaloochi, S., Frazier, P., Carlson, K., Gravely, A., & Murdoch, M. (2010). Reintegration problems and interests among Iraq and Afghanistan combat veterans receiving VA medical care. *Psychiatric Services, 61*(6), 589-597. doi:10.1176/appi.ps.61.6.589

Sayers, S. L., Farrow, V. A., Ross, J., & Oslin, D. W. (2009). Family problems among recently returned military veterans referred for a mental health evaluation. *Journal of Clinical Psychiatry, 70*(2), 163-170. doi:10.4088/JCP.07m03863

Saxon, A. J., Davis, T. M., Sloan, K. L., McKnight, K. M., McFall, M. E., & Kivlahan, D. R. (2001). Trauma, symptoms of posttraumatic stress disorder, and associated problems among incarcerated veterans. *Psychiatric Services, 52*(7), 959-964. doi:10.1176/appi.ps.52.7.959

Seal, K. H., Bertenthal, D., Maguen, S., Gima, K., Chu, A., & Marmar, C. R. (2008). Getting beyond "Don't ask; don't tell": An evaluation of US Veterans Administration postdeployment mental health screening of veterans returning from Iraq and

Afghanistan. *American Journal of Public Health*, *98*(4), 714-720. doi:10.2105/AJPH.2007.115519

Sharkansky, E. J., Brief, D. J., Peirce, J. M., Meehan, J. C., & Mannix, L. M. (1999). Substance abuse patients with posttraumatic stress disorder (PTSD): Identifying specific triggers of substance use and their associations with PTSD symptoms. *Psychology of Addictive Behaviors*, *13*(2), 89-97. doi:10.1037/0893-164X.13.2.89

Shay, J. (2014). Moral injury. *Psychoanalytic Psychology*, *31*(2), 182-191. doi: 10.1037/a0036090

Shea, M. T., Vujanovic, A. A., Mansfield, A. K., Sevin, E., & Liu, F. (2010). Posttraumatic stress disorder symptoms and functional impairment among OEF and OIF National Guard and Reserve veterans. *Journal of Traumatic Stress*, *23*(1), 100-107. doi:10.1002/jts.20497

Singer, E., Von Thurn, D. R., & Miller, E. R. (1995). Confidentially assurances and response a quantitative review of the experimental literature. *Public Opinion Quarterly*, *59*(1), 66-77. doi:10.1086/269458

Sloan, J. J., Bodapati, M. R., & Tucker, T. A. (2004). Respondent misreporting of drug use in self-reports: Social desirability and other correlates. *Journal of Drug Issues*, *34*, 269-292. doi:10.1177/002204260403400202

Spiro, A., Schnurr, P. P., & Aldwin, C. M. (1994). Combat-related posttraumatic stress disorder symptoms in older men. *Psychology and Aging*, *9*(1), 17-26. doi:10.1037/0882-7974.9.1.17

Steenkamp, M. M., Litz, B. T., Gray, M. J., Lebowitz, L., Nash, W., Conoscenti, L., … Lang, A. (2010). A brief exposure-based intervention for service members with PTSD. *Cognitive and Behavioral Practice*, *18*(1), 98-107. doi: 10.1016/j.cbpra.2009.08.006

Stein, N. R., Mills, M. A., Arditte, K., Mendoza, C., Borah, A. M., Resick, P. A., & Litz, B. T. (2012). A scheme for categorizing traumatic military events. *Behavior modification*, *36*(6), 787-807. doi:10.1177/0145445512446945

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th ed.). Upper Saddle River, NJ: Pearson Education, Inc.

Taft, C. T., Weatherill, R. P., Woodward, H. E., Pinto, L. A., Watkins, L. E., Miller, M. W., & Dekel, R. (2009). Intimate partner and general aggression perpetration among combat veterans presenting to a posttraumatic stress disorder clinic. *American Journal of Orthopsychiatry*, *79*(4), 461-468. doi:10.1037/a0016657

Tanielian, T. L., & Jaycox, L. (Eds.). (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences, and services to assist recovery* (Vol. 720). Santa Monica, CA: RAND Corporation.

Thomas, J. L., Wilk, J. E., Riviere, L. A., McGurk, D., Castro, C. A., & Hoge, C. W. (2010). Prevalence of mental health problems and functional impairment among active component and National Guard soldiers 3 and 12 months following combat in Iraq. *Archives of General Psychiatry*, *67*(6), 614-623. doi:10.1001/archgenpsychiatry.2010.54

Tilghman, A. (2012, November 28). Military court wrestles with punishing suicide attempts. *USA Today*. Retrieved from

http://www.usatoday.com/story/news/2012/11/28/military-mulls-punishment-suicide-attempts/1731313/

Tran, C. T., Kuhn, E., Walser, R. D., & Drescher, K. D. (2012). The relationship between religiosity, PTSD, and depressive symptoms in veterans in PTSD residential treatment. *Journal of Psychology & Theology*, *40*(4), 313-322.

Tsai, J., Rosenheck, R. A., Kasprow, W. J., & McGuire, J. F. (2013). Risk of incarceration and other characteristics of Iraq and Afghanistan Era veterans in state and federal prisons. *Psychiatric Services*, *64*(1), 36-43. doi:10.1176/appi.ps.201200188

United States Army. (2012). *Army 2020: Generating health and discipline in the force, ahead of the strategic reset*. Retrieved from http://usarmy.vo.llnwd.net/e2/c/downloads/235822.pdf

United States Department of Veterans Affairs, National Center for Posttraumatic Stress Disorder. (2013). *PTSD and substance abuse in veterans*. Retrieved from http://www.ptsd.va.gov/public/pages/ptsd_substance_abuse_veterans.asp

United States Department of Veterans Affairs, National Center for Posttraumatic Stress Disorder. (2014). *Moral injury in the context of war*. Retrieved from http://www.ptsd.va.gov/professional/co-occurring/moral_injury_at_war.asp

United States Navy & United States Marine Corps. (2010). *Combat and operational stress control* (MCRP 6-11C/NTTP 1-15M). Retrieved from http://www.med.navy.mil/sites/nmcsd/nccosc/coscConference/Documents/COSC%20MRCP%20NTTP%20Doctrine.pdf

Vargas, A. F., Hanson, T., Kraus, D., Drescher, K., & Foy, D. (2013). Moral injury themes in combat veterans' narrative responses from the National Vietnam Veterans' Readjustment Study. *Traumatology*, *19*(3), 243-250. doi:10.1177/1534765613476099

Walker, S. A., & Cosden, M. (2007). Reliability of college student self-reported drinking behavior. *Journal of Substance Abuse Treatment*, *33*, 405-409. doi:10.1016/j.jsat.2007.02.001

Warden, D. (2006). Military TBI during the Iraq and Afghanistan wars. *The Journal of Head Trauma Rehabilitation*, *21*(5), 398-402. doi:10.1097/00001199-200609000-00004

Warner, R. M. (2008). *Applied statistics: From bivariate through multivariate techniques*. Thousand Oaks, CA: Sage Publications.

Weathers, F. W., & Keane, T. M. (2007). The Criterion A problem revisited: Controversies and challenges in defining and measuring psychological trauma. *Journal of Traumatic Stress*, *20*(2), 107-121. doi:10.1002/jts.20210

Weathers, F. W., Litz, B., Herman, D., Huska, J., & Keane, T. (1993, October). *The PTSD Checklist (PCL): Reliability, validity, and diagnostic utility.* Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies, San Antonio, Texas.

Wells, T. S., Ryan, M. A. K., Jones, K. A., Hooper, T. I., Boyko, E. J., Jacobson, I. G. … Gackstetter, G. D. (2012). A comparison of mental health outcomes in persons entering U.S. military service before and after September 11, 2001. *Journal of Traumatic Stress*, *25*(1), 17-24. doi:10.1002/jts.21657

Wilson, D. B., Mitchell, O., & MacKenzie, D. L. (2006). A systematic review of drug court effects on recidivism. *Journal of Experimental Criminology*, *2*(4), 459-487. doi:10.1007/s11292-006-9019-4

Wortzel, H. S., Binswanger, I. A., Anderson, C. A., & Adler, L. E. (2009). Suicide among incarcerated veterans. *Journal of the American Academy of Psychiatry and the Law Online*, *37*(1), 82-91

Appendix

Interview Consent Form

Demographics Form

Military Demographics Form

Moral Injury Events Scale

Combat Exposure Scale

Trauma History Screen

The PTSD Checklist-Civilian Version

Patient Health Questionnaire-9

Addiction Severity Index 5th Edition

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 three time periods in the program: at entrance, three months, and six 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 three month 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 Justin Gauthier at jgauthier@education.ucsb.edu/805-893-4986 or Merith Cosden, Ph.D.

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: _____ Interviewer: _____

Please circle response or write in answer.

1. What is your gender (circle one): Male Female

2. Date of Birth: _____

3. What race do you consider yourself (circle one):

White (not Hispanic)	Alaskan Native	Hispanic-Puerto Rican
Black (not Hispanic)	Asian/Pacific Islander	Hispanic-Cuban
American Indian	Hispanic-Mexican	Other Hispanic

4. Highest education level completed: _____

5. Current marital status (circle one):

Married	Widowed	Divorced
Remarried	Separated	Never Married

6. How many children do you have: _____

ID: _____ Date: _____ Interviewer: _____

Military Demographics Form

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

   If active duty, or, activated National Guard or Reserve:

   When did you enter active duty? (month/year) _____

   When did you separate from active duty? (month/year) _____

   If National Guard or Reserves:

   Are you currently still in the reserves? (This includes regular reserves, **OR** Individual Ready Reserves / inactive reserves (IRR)
   A. Yes
   B. No
   C. Don't Know

Service Era (Circle One):

OEF/OIF/OND	Persian Gulf	Grenada	Lebanon	Kosovo
Panama	Vietnam	Korea	Somalia	Bosnia

Other: _____

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

3. What was your highest rank (e.g, "E4")? _____

4. Were you ever deployed while serving? YES NO

   A. Please write in the conflict (e.g., "Gulf War") & dates of deployment period (month/year) in the space below to the best of your ability:

Conflict:	Start (MM/YY):	End (MM/YY):
Conflict:	Start (MM/YY):	End (MM/YY):

Conflict:	Start (MM/YY):	End (MM/YY):
Conflict:	Start (MM/YY):	End (MM/YY):
Conflict:	Start (MM/YY):	End (MM/YY):

5. How long was each of your deployments (in *months*)?

   1) _____ 2) _____ 3) _____ 4) _____ (continue writing below if more than 4)

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

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

8. Do you have a service related disability? YES NO

   A. What percentage disability? _____%

   9. Have you ever accessed the VA for care? YES NO

   10. Were you honorably, dishonorably or other than honorably discharged from the military (Circle one)?

   Honorably Dishonorably Other Than Honorably

11. Have you ever tried to access substance abuse or mental health services before entering this veterans treatment court program?

YES NO

If yes:

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 If yes, what place:_____

Please circle the appropriate number to indicate how much you agree or disagree with each of the following statements regarding your experiences at any time since joining the military.

	Strongly Disagree	**Moderately Disagree**	**Slightly Disagree**	**Slightly Agree**	**Moderately Agree**	**Strongly Agree**
1. I saw things that were morally wrong.	1	2	3	4	5	6
2. I am *troubled* by having witnessed others' immoral acts.	1	2	3	4	5	6
3. I acted in ways that violated my own moral code or values.	1	2	3	4	5	6
4. I am *troubled* by having acted in ways that violated my own morals or values.	1	2	3	4	5	6
5. I violated my own morals by failing to do something that I felt I should have done.	1	2	3	4	5	6
6. I am *troubled* because I violated my morals by failing to do something that I felt I should have done.	1	2	3	4	5	6
7. I feel betrayed by leaders who I once trusted.	1	2	3	4	5	6
8. I feel betrayed by fellow service members who I once trusted.	1	2	3	4	5	6
9. I feel betrayed by others outside the U.S. military who I once trusted.	1	2	3	4	5	6

If you have experienced anything related to these statements, what types of events contributed to that?

Please indicate the number above the answer that best describes your experiences.

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

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

B. Were you ever under enemy fire?

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

C. Were you ever surrounded by the enemy?

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

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

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

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

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

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

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

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.

		BEFORE **first deployment**		DURING OR AFTER **first deployment**	
		Y/N	**# of times**	**Y/N**	**# 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.	☐	____	☐	____

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**
Q. Feeling *jumpy* or easily startled?	**1**	**2**	**3**	**4**	**5**

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)

Accurate Assessments

1823 Harney Street, Suite 101
Omaha, NE 68102
800-324-7966
www.accurateassessments.com

ADULT ASI QUESTIONNAIRE

Client's Name: First _____

Middle_____

Last _____

Social Security #: ☐☐☐ - ☐☐ - ☐☐☐☐

Date of Birth: ☐☐ / ☐☐ / ☐☐

Gender (M/F): ☐

Client ID:

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

INSTRUCTIONS

1. Leave no blanks. Where appropriate code items:
   Y-Yes
   N-No
   X-Question not applicable
   Z-Question not answered
   Use only one character per item.

2. Space is provided after sections for additional comments.

SEVERITY RATINGS

The severity ratings are interview estimates of the patient's need for additional treatment in each area. The scales range from 0 (no treatment necessary) to 9 (treatment needed to intervene in life-threatening situations). Each rating is based upon the patient's history of problem symptoms, present condition and subjective assessment of the patient's treatment needs in a given area.

ADULT ASI QUESTIONNAIRE

GENERAL INFORMATION

G1. Client ID: [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

G2. Social Security #: [ ][ ][ ] - [ ][ ] - [ ][ ][ ][ ]

G3. Provider #: [ ][ ][ ][ ][ ][ ][ ][ ]

G4. Date of Admission: [ ][ ] / [ ][ ] / [ ][ ]

G5. Date of Interview: [ ][ ] / [ ][ ] / [ ][ ]

G6. Time Begun: [ ][ ] : [ ][ ]

G51. Who referred you for an evaluation? [ ]

1-Attorney
2-Probation/Parole Officer
3-Presentence Investigator
4-Self
5-Judge or Court
6-Other

G52. Referral source's name _____

Address _____

Address _____

City, State, Zip _____

Phone #: (_____) _____ - _____

G53. By when do you need this assessment? [ ][ ]/[ ][ ]/[ ][ ]

G54. Why are you receiving this assessment (1-6)? [ ]

1-OWI or DWI
2-Court ordered
3-Attorney recommended
4-Other criminal arrest
5-Self interest
6-Other

G55. BAC: [ ][ ][ ]

G56. By whom was it ordered (1-4)? [ ]

1-Judge
2-Probation
3-Presentence
4-Parole

Specify other _____

G8. Class: [ ]

1-Intake
2-Follow-up

G9. Contact Code: [ ]

1-In person
2-Phone
3-Mail

G57. Interviewer's initials: [ ][ ][ ]

G10. Gender [ ]

M-Male
F-Female

G12. Special: [ ]

1-Terminated
2-Refused
3-Unable to respond
X-Not applicable

Client's:

_____ _____ _____
First name Middle name Last name

_____
Address

_____
Address

_____ _____ _____
City State Zip

Phone number: [ ][ ][ ] - [ ][ ][ ] - [ ][ ][ ][ ]

G14. How long have you lived at this address?

Years [ ][ ] Months [ ][ ]

G15. Is this address owned by you or your family (Y/N)? [ ]

G16. Date of birth: [ ][ ] / [ ][ ] / [ ][ ]

G17. Of what race do you consider yourself? [ ]

1-White
2-Black
3-American Indian
4-Alaskan Native
5-Asian or Pacific Islander
6-Hispanic-Mexican
7-Hispanic-Puerto Rican
8-Hispanic-Cuban
9-Other Hispanic

G18. Religious preference: [ ]

1-Protestant
2-Catholic
3-Jewish
4-Islamic
5-Other
6-None

G58: Specify other religion: _____

G19. Have you been in a controlled environment in the past 30 days? [ ]

1-No
2-Jail
3-Alcohol or drug treatment
4-Medical treatment
5-Psychiatric treatment
6-Other

Specify Other: _____

G20. How many days? [ ][ ]

COMMENTS FOR GENERAL AREA: _____

_____
_____
_____
_____
_____
_____
_____
_____

MEDICAL STATUS

M1. How many times in your life have you been hospitalized for medical problems? (*Include ODs, DTs, exclude detox)* ☐☐

M2. How long ago was your last hospitalization for medical problems?

Years ☐☐ Months ☐☐

M51. What was it for? _____

M3. Do you have any chronic medical problems which continue to interfere with your life (Y/N)? ☐

Specify: _____

M4. Are you taking any prescribed medication on a regular basis for a physical problem (Y/N)? ☐

M52. What is it? _____

M53. What is it for? _____

M5. Do you receive financial compensation (pension, disability, etc.) for a physical disability (Y/N)? ☐

Specify: _____

M6. How many days have you experienced medical problems in the past 30 days? ☐☐

ASK THE CLIENT TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL
1-SLIGHTLY
2-MODERATELY
3-CONSIDERABLY
4-EXTREMELY

M7. How troubled or bothered have you been by these medical problems in the past 30 days? ☐

M8. How important to you now is treatment for these medical problems? ☐

THE QUESTIONS BELOW ARE TO BE ANSWERED BY THE INTERVIEWER ONLY

INTERVIEWER SEVERITY RATING

M9. How would you rate the patient's need for medical treatment (0-9)? ☐

CONFIDENCE RATINGS

Is the Medical Status information significantly distorted by:

M10. Patient's misrepresentation (Y/N)? ☐

M11. Patient's inability to understand (Y/N)? ☐

COMMENTS FOR MEDICAL AREA:_____

EMPLOYMENT/SUPPORT STATUS

E1. Education completed (GED = 12 years):

Years ☐☐ Months ☐☐

E2. Training or technical education completed: Months ☐☐

E3. Do you have a profession, trade or skill (Y/N)? ☐

Specify: _____

E4. Do you have a valid driver's license (Y/N)? ☐

E5. Do you have an automobile available (Y/N)? ☐

(Answer "no" if no valid driver's license)

E6. How long was your longest full-time job?

Years ☐☐ Months ☐☐

E7. Usual (or last) occupation: ☐

1a. Higher Executives
1b. Large Proprietor (Value over $180,000)
1c. Major Professionals
2a. Business Managers
2b. Proprietors of Medium-Sized Businesses
3a. Administrative Personnel
3b. Proprietors of Small Businesses (<$55,000)
3c. Minor Professionals
3d. Farmers (owners $41,000-$60,000)
4a. Clerical and Sales Workers
4b. Technicians
4c. Proprietors of Little Businesses (<$10,000)
4d.Farmers (Owners $21,000-$40,000)
5a. Skilled Manual Employees and Small Farmers
5b. Small Farmers (owners <$20,000)
6a. Machine Operators and Semi-Skilled Employees
6b. Small Farm Tenants
7. Unskilled Employees

Specify: _____

E8. Does someone contribute to your support in any way (Y/N)? ☐

Specify: _____

E9. Does this constitute the majority of your support (Y/N)? ☐

E10. Employment status: ☐

1-Full-time (35+ hrs/wk)`	5-Service
2-Part-time (reg. hrs.)	6-Retired/Disability
3-Part-time (irreg., daywork)	7-Unemployed
4-Student	8-In controlled environment

E11. How many days were you paid for working in the past 30? ☐☐

How much money did you receive from the following sources in the past 30 days??

E12. Employment (net income): ☐☐☐☐

E13. Unemployment compensation: ☐☐☐☐

E14. Welfare: ☐☐☐☐

E15. Pension, benefits or social security: ☐☐☐☐

E16. Mate, family or friends: ☐☐☐☐

E17. Illegal: ☐☐☐☐

E51. What was our gross income last year? ☐☐☐☐☐☐

E18. How many people depend on you for the majority of their food, shelter, etc.? ☐☐

E19. How many days have you experienced employment problems in the past 30? ☐☐

ASK THE CLIENT TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL	3-CONSIDERABLY
1-SLIGHTLY	4-EXTREMELY
2-MODERATELY	

E20. How troubled or bothered have you been by these employment problems in the past 30 days? ☐

E21. How important to you now is counseling for these employment problems? ☐

THE QUESTIONS BELOW ARE TO BE ANSWERED BY THE INTERVIEWER ONLY

INTERVIEWER SEVERITY RATING

E22. How would you rate the patient's need for employment counseling (0-9)? ☐

CONFIDENCE RATINGS

Is the Employment/Support Status information significantly distorted by:

E23. Patient's misrepresentation (Y/N)? ☐

E24. Patient's inability to understand (Y/N)? ☐

COMMENTS FOR EMPLOYMENT AREA: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

DRUG/ALCOHOL USE

D51. What age did you first try alcohol or drugs? ☐☐

D52. What was it? _____

		# Days Past 30	Lifetime	Route of Admin
D1.	Alcohol (any use at all)	☐☐	☐☐	☐
D2.	Alcohol (to intoxication)	☐☐	☐☐	☐
D3.	Heroin	☐☐	☐☐	☐
D4.	Methadone	☐☐	☐☐	☐
D5.	Other opiates/analgesics	☐☐	☐☐	☐
D6.	Barbiturates	☐☐	☐☐	☐
D7.	Other sedatives/hypnotics/ tranquilizers	☐☐	☐☐	☐
D8.	Cocaine	☐☐	☐☐	☐
D9.	Amphetamines	☐☐	☐☐	☐
D10.	Cannabis	☐☐	☐☐	☐
D11.	Hallucinogens	☐☐	☐☐	☐
D12.	Inhalants	☐☐	☐☐	☐
D13.	More than 1 substance per day (including alcohol)	☐☐	☐☐	☐

Route of Administration

1-Oral
2-Nasal
3-Smoking
4-Non-IV injection
5-IV injection

D14. According to the interviewer, which substance(s) are the major problem? ☐☐

00-No problem
01-Alcohol
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
12-Inhalants
15-Alcohol & one or more drugs
16-More than one drug

D15. How long was your last period of voluntary abstinence from this major substance (substance identified in D-17)?
(00-never abstinent) Months ☐☐

D16. How many months ago did this abstinence end? ☐☐
(00-never abstinent)

COMMENTS FOR DRUG/ALCOHOL AREA: _____

How many times have you:

D17. Had alcohol DTs? [ ][ ]

D18. Overdosed on drugs? [ ][ ]

How many times have you been treated for:

D19. Alcohol abuse? [ ][ ]

D20. Drug abuse? [ ][ ]

How many of these were for detox only:

D21. Alcohol? [ ][ ]

D22. Drug? [ ][ ]

D23. Alcohol? $[ ][ ][ ][ ]

D24. Drugs? $[ ][ ][ ][ ]

D25. How many days have you been treated in an outpatient setting for alcohol or drugs in the past 30 days (include AA & NA)? [ ][ ]

How many days have you experienced:

D26. Alcohol problems? [ ][ ]

D27. Drug problems? [ ][ ]

ASK THE CLIENT TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL
1-SLIGHTLY
2-MODERATELY
3-CONSIDERABLY
4-EXTREMELY

How troubled or bothered have you been in the past 30 days by these:

D28. Alcohol problems? [ ]

D29. Drug problems? [ ]

How important to you now is treatment for these:

D30. Alcohol problems? [ ]

D31. Drug problems? [ ]

THE QUESTIONS BELOW ARE TO BE ANSWERED BY THE INTERVIEWER ONLY

INTERVIEWER SEVERITY RATING

How would you rate the patient's need for treatment for (0-9):

D32. Alcohol Problems? [ ]

D33. Drug Problems? [ ]

CONFIDENCE RATINGS

Is the Drug/Alcohol Status information significantly distorted by:

D34. Patient's misrepresentation (Y/N)? [ ]

D35. Patient's inability to understand (Y/N)? [ ]

ADDITIONAL COMMENTS FOR DRUG/ALCOHOL AREA:_____

LEGAL STATUS

L1. Was this admission prompted or suggested by the criminal Justice system (judge, probation/parole officer, etc.) (Y/N)? ☐

L2. Are you on probation or parole? ☐

0-Neither
1-Probation
2-Parole

How many times in your life have you been arrested and charged with following?

		Under the influence at the time?
L3. Shoplifting/vandalism/theft?	☐☐	☐
L4. Parole/probation violations?	☐☐	☐
L5. Drug charges?	☐☐	☐
L6. Forgery?	☐☐	☐
L7. Weapons offense?	☐☐	☐
L8. Burglary/larceny/B&E?	☐☐	☐
L9. Robbery?	☐☐	☐
L10. Assault?	☐☐	☐
L11. Arson?	☐☐	☐
L12. Rape/sex-related crimes?	☐☐	☐
L13. Homicide/manslaughter?	☐☐	☐
L14. Prostitution?	☐☐	☐
L15. Contempt of court?	☐☐	☐
L16. Other?	☐☐	☐

L17. How many of these charges resulted in convictions? ☐☐

How many times in your life have you been charged with:

L18. Disorderly conduct? ☐☐

Vagrancy? ☐☐

Public intoxication? ☐☐

L19. Driving while intoxicated? ☐☐

L20 Major driving violations? ☐☐

L51. MIP (minor in possession)? ☐☐

L21. How many month(s) were you incarcerated in your life? ☐☐☐

L22. How long was your last incarceration? Months ☐☐

L23. What was it for? ☐☐

03-Shoplifting/vandalism/theft
04-Parole/probation violation
05-Drug charges
06-Forgery
07-Weapons offense
08-Burglary/larceny/B&E
09-Robbery
10-Assault
11-Arson
12-Rape/sex related crimes
13-Homicide/manslaughter
14-Prostitution
15-Contempt of court
16-Other
18-Disorderly conduct, vagrancy
19-Driving while intoxicated
20-Major driving violations

COMMENTS FOR LEGAL AREA: _____

L24. Are you presently awaiting charges, trial or sentencing (Y/N)? ☐

L25. For what? _____

L26. How many days in the past 30 were you detained ☐☐
or incarcerated??

L27. How many days in the past 30 have you engaged in illegal activities for profit? ☐☐

ASK THE CLIENT TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL
1-SLIGHTLY
2-MODERATELY
3-CONSIDERABLY
4-EXTREMELY

L28. How serious do you feel your present legal problems are? (exclude civil problems) ☐

L29. How important to you now is counseling or referral for these legal problems? ☐

THE QUESTIONS BELOW ARE BE ANSWERED BY THE INTERVIEWER ONLY

INTERVIEWER SEVERITY RATING

L30. How would you rate the patient's need for legal services or Counseling (0-9)? ☐

CONFIDENCE RATINGS

Is the Legal Status information significantly distorted by:

L31. Patient's misrepresentation (Y/N)? ☐

L32. Patient's inability to understand (Y/N)? ☐

ADDITIONAL COMMENTS FOR LEGAL AREA:_____

FAMILY HISTORY

Have any of your relatives had what you would call a significant drinking, drug use or psychological problem – one that did or should have led to treatment?

Y-Yes N-No X-Not applicable Z-Not answered

	Mother's Side	Alcohol	Drug	Psych.
H1.	Grandmother	☐	☐	☐
H2.	Grandfather	☐	☐	☐
H3.	Mother	☐	☐	☐
H4.	Aunt	☐	☐	☐
H5.	Uncle	☐	☐	☐

	Father's Side	Alcohol	Drug	Psych.
H6.	Grandmother	☐	☐	☐
H7.	Grandfather	☐	☐	☐
H8.	Father	☐	☐	☐
H9.	Aunt	☐	☐	☐
H10.	Uncle	☐	☐	☐

How many siblings do you have?

H53. Brothers: ☐☐

H54. Sisters: ☐☐

Have any of your siblings had what you would call a significant drinking, drug use or psychological problem – one that did or should have led to treatment?

Y-Yes N-No X-Not applicable Z-Not answered

	Siblings	Alcohol	Drug	Psych.
H11.	Brother #1	☐	☐	☐
H51.	Brother #2	☐	☐	☐
H12.	Sister #1	☐	☐	☐
H52.	Sister #2	☐	☐	☐

COMMENTS FOR FAMILY HISTORY AREA: _____

FAMILY/SOCIAL RELATIONSHIPS

F1. Marital status: ☐

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

F2. How long have you been in this marital status? Years ☐☐

(If never married, then since age 18) Months ☐☐

F3. Are you satisfied with this situation (0-2)? ☐

0-No
1-Indifferent
2-Yes

F51. How many children do you have? ☐☐

F4. Usual living arrangements for the past three years: ☐

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

F5. How long have you lived in these arrangements? Years ☐☐

(If with family or parents, since age 18) Months ☐☐

F6. Are you satisfied with these arrangements? ☐

0-No
1-Indifferent
2-Yes

Do you live with anyone who:

F7. Has a current alcohol problem (Y/N)? ☐

F8. Uses non-prescribed drugs (Y/N)? ☐

F9. With whom do you spend most of your free time? ☐

1-Family
2-Friends
3-Alone

F10. Are you satisfied spending your free time this way? ☐

0-No
1-Indifferent
2-Yes

F11. How many close friends do you have? ☐☐

Would you say you have had close, reciprocal relationships with any of the following people in your life?

Y-Yes N-No X-Not applicable Z-Not answered

F12. Mother ☐

F13. Father ☐

F14. Brothers/Sisters ☐

F15. Sexual Partner/Spouse ☐

F16. Children ☐

F17. Friends ☐

COMMENTS FOR FAMILY/SOCIAL RELATIONSHIPS AREA: _____

Have you had significant periods in which you have experienced serious problems getting along with:

Y-Yes N-No X-Not applicable Z-Not answered

		Past 30 Days	In Your Life	Has Alcohol or Drugs Affected This Relationship
F18.	Mother			
F19.	Father			
F20.	Brothers/Sisters			
F21.	Sexual partner/Spouse			
F22.	Children			
F23.	*Other significant family			
F24.	Close friends			
F25.	Neighbors			
F26.	Co-workers			

F23. *Specify other relative: _____

Did any of these people abuse you:

00-None
18-Mother
19-Father
20-Brother/Sister
21-Sexual partner/Spouse
22-Children
23-Other family
24-Close friends
25-Neighbors
26-Co-workers
27-Yes, but does not know who or chooses not to identify person

		Past 30 days	In Your Life
F27.	Emotionally (make you feel bad through harsh words)?		
F28.	Physically (cause you physical harm)?		
F29.	Sexually (force sexual advances or sexual acts)?		

How many days in the past 30 have you had serious conflicts:

F30. With your family?

F31. With other people (excluding family)?

ASK THE CLIENT TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL
1-SLIGHTLY
2-MODERATELY
3-CONSIDERABLY
4-EXTREMELY

How troubled or bothered have you been in the past 30 days by these:

F32. Family problems?

F33. Social problems?

How important to you now is treatment or counseling for these:

F34. Family problems?

F35. Social problems?

THE QUESTIONS BELOW ARE TO BE ANSWERED BY THE INTERVIEWER ONLY

INTERVIEWER SEVERITY RATING

F36. How would you rate the patient's need for family and/or social counseling (0-9)?

CONFIDENCE RATINGS

Is the Family/Social Relationships information significantly distorted by:

F37. Patient's misrepresentation (Y/N)?

F38. Patient's inability to understand (Y/N)?

ADDITIONAL COMMENTS FOR FAMILY/SOCIAL AREA:_____

PSYCHIATRIC STATUS

P1. How many times have you been treated for any psychological or emotional problems:

In a hospital or inpatient setting? ☐☐

As an outpatient or private patient? ☐☐

P2. Do you receive financial compensation for a psychiatric or emotional disability (include pension, SSI, SSDI, etc.) (Y/N)? ☐

Have you had a significant period (that was not a direct result of drug or alcohol use) in which you have:

Y-Yes *N-No* *X-Not applicable* *Z-Not answered*

	Past 30 Days	Lifetime
P3. Experienced serious depression - sadness, hopelessness, loss of interest, difficulty with daily functioning?	☐	☐
P4. Experienced serious anxiety/ tension - uptight, unreasonably worried, inability to feel relaxed?	☐	☐
P5. Experienced hallucinations - saw things or heard voices that others did not see or hear?	☐	☐
P6. Experienced trouble understanding, concentrating or remembering?	☐	☐
P7. Experienced trouble controlling violent behavior including episodes of rage or violence?	☐	☐
P8. Experienced serious thoughts of suicide?	☐	☐
P9. Attempted suicide?	☐	☐
P10. Been prescribed medication for any psychological/emotional problems?	☐	☐

NOTE: For questions 7-9, include incidents that occurred when the person was under the influence of substances.

P11. How many days in the past 30 have you experienced these psychological or emotional problems? ☐☐

ASK THE INMATE TO USE THIS SCALE TO RATE THE NEXT TWO QUESTIONS:

0-NOT AT ALL
1-SLIGHTLY
2-MODERATELY
3-CONSIDERABLY
4-EXTREMELY

P12. How much have you been troubled or bothered by these psychological or emotional problems in the past 30 days? ☐

P13. How important to you now is treatment for these psychological or emotional problems? ☐

THE QUESTIONS BELOW ARE TO BE ANSWERED BY THE INTERVIEWER ONLY

At the time of the interview, is the patient (Y/N)?

P14. Obviously depressed/withdrawn? ☐

P15. Obviously hostile? ☐

P16. Obviously anxious/nervous? ☐

P17. Having trouble with reality testing, thought disorders, paranoid thinking? ☐

P18. Having trouble comprehending, concentrating, remembering? ☐

P19. Having suicidal thoughts? ☐

INTERVIEWER SEVERITY RATING

P20. How would you rate the patient's need for psychiatric/psychological treatment (0-9)? ☐

CONFIDENCE RATINGS

Is the Psychiatric Status information significantly distorted by:

P21. Patient's misrepresentation (Y/N)? ☐

P22. Patient's inability to understand (Y/N)? ☐

Time Begun: ☐☐:☐☐

Time End: ☐☐:☐☐

COMMENTS FOR PSYCHIATRIC AREA: _____

INTERVIEWER'S ASSESSMENT

DIAGNOSTIC IMPRESSION

SASSI-3:

- RAP? ☐
- FVA? ☐
- FVOD? ☐
- SYM? ☐
- OAT? ☐
- SAT? ☐
- DEF? ☐
- SAM? ☐
- FAM? ☐
- COR? ☐

DSM-IV

AXIS I:

Description:

AXIS II:

Description:

AXIS III:

AXIS IV:

AXIS V:

RECOMMENDATION FOR TREATMENT

LEVEL OF CARE RECOMMENDATION

(Check one):

1. Not applicable ☐
2. Level I – (Outpatient treatment) ☐
3. Level II – (Intensive outpatient/partial hospitalization) ☐
4. Level III – (Medically monitored intensive inpatient) ☐
5. Level IV – (Medically managed intensive inpatient) ☐