COMMUNITY REINTEGRATION OF THE SEVERELY WOUNDED VETERAN: A MIXED METHODS STUDY

A DISSERTATION SUBMITTED TO THE GRADUATE DIVISION OF THE UNIVERSITY OF HAWAIʻI AT MĀNOA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

IN

NURSING

May 2018

By

Sarah J. Murray

Dissertation Committee:

Maureen Shannon, Chairperson

Deborah Mattheus

Megan A. Conway

Leopoldo C. Cancio

Denise Hopkins-Chadwick

Keywords: community reintegration, burns, veteran

Acknowledgements

I would like to acknowledge the people and the organizations that helped me accomplish this degree. First, thank you to the faculty at the University of Hawai'i, Mānoa, to include my committee chairs—Dr. Debra Mark, who began this journey with me and then passed the baton to Dr. Maureen Shannon, who saw me through to the end—and to my committee: Dr. Megan Conway, Dr. Deb Mattheus and Dr. Estelle Codier. Thank you to the committee members from the military medical community: Dr. Denise Hopkins-Chadwick and Dr. Leopoldo C. Cancio, who provided expert-level feedback on the military and combat elements. A special thanks to the USAISR, which provided me with mentorship in Dr. Elizabeth Mann-Salinas, regulatory support in Chaya Galin and Nicole Caldwell. Thank you to Maria Serio-Melvin, who was always happy to read and reread my work, and to Dr. Jeremy Pamplin, for giving me words of encouragement when I needed it the most.

I would like to thank my battle buddy, Heather Greaves, who has been my champion through the whole process. Thank you for believing in this research and me. I must also thank my family. To my children, Eliza and Jake: I cannot wait to spend more time with you now that this is over. To my parents: you raised me to work hard and do good things—a mindset without which I could not do this work. To my husband of 24 years, Billy: my very best friend who sacrificed and treaded water so I could finish this work. I love you and am indebted to you always.

Lastly, I dedicate this in memory of my grandma, who passed before I could complete my degree. I thought of you many times, especially when listening to the words of the wounded and wished things had been better for grandpa.

Abstract

Introduction: Combat missions in the Middle East have resulted in many United States' (U.S.) casualties. Approximately 52,000 have been wounded in action, 5,851 have been killed in action, and—after evacuation—1000 more have died. Improvised explosive devices have caused the majority of injuries affecting multiple body systems—10% of which included burn injuries. Over 90% of the wounded have survived, resulting in large numbers of disabled veterans unable to return to military service. Instead, these veterans return to a civilian community that may not be prepared to meet their needs or help them reach the long-term final goal of community reintegration.

Methods: Using a mixed-methods approach, we asked veterans with combat burns the question, "What was your experience reintegrating into the civilian community?" In addition, the Community Reintegration of Injured Service Members tool was administered to measure the current level of reintegration. Qualitative and quantitative analyses were performed to determine saturation and confirm results.

Results: Six veterans with combat burns identified two major themes concerning reintegration: supportive communities and future-oriented thinking. Supportive communities are veteran specific; provide long-term burn/injury care; are financially beneficial; and support hobbies, education, and work opportunities. Future-oriented thinking involves the experience of a turning point in recovery, desire to serve others, new meaning in life, and posttraumatic growth. The Community Reintegration of Injured Service Members tool was highly reliable (151 items; alpha = 0.97).

Conclusions: Community reintegration is both a process and an outcome that can be measured with both extrinsic and intrinsic factors. Despite limitations, veterans with burn injuries identified high levels of satisfaction with their level of reintegration according to the survey tool.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

CRIS	Community Reintegration of Injured Service Members
DoD	Department of Defense
EOD	Explosive Ordnance Division (bomb squad)
EP	Extent of Participation
GCS	Glasgow Coma Scale
HO	Heterotopic Ossification
ICD-10	International Classification of Disease, Vol 10
INF	Infantry
JTTR	Joint Theater Trauma Registry
MED	Combat Medic
MOS	Military Occupational Specialty
MP	Military Police WHO World Health Organization
VA	Veterans Administration
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn
PL	Perceived Limitations
PTSD	Posttraumatic Stress disorder
S	Satisfaction
SCT	Scout
TBSA	Total Body Surface Area
TBI	Traumatic Brain Injury
USAISR	United States Army Institute of Surgical

Chapter 1: Introduction

Chapter 1 provides an overview of this study. It provides a background of the problem, current veterans' characteristics and health status, the concept of reintegration, the International Classification of Functioning (ICF) as a framework for reintegration, the study's purpose and problem statement, methods used, results, and an interpretation of findings.

Background

According to the Veterans Health Administration (VA), combat operations in the Middle East, including Operations Enduring Freedom (OEF), Operation Iraqi Freedom (OIF) and Operation New Dawn (OND), have resulted in the deployment of over 2.6 million United States (U.S.) troops (VA, 2013). The VA (2013) reports that, of these troops, we have suffered a substantial number of casualties, with 5,851 killed in action, approximately another thousand dying from wounds after evacuation, and over 52,000 wounded in action. According to Goldberg (2010), despite the lethality of the wounding patterns, over 90% survived their injuries. With the combination of a high survival rate and the presence of complex injuries, tens of thousands of veterans are unable to remain in military service and must be returned to a society without appropriate roles for them to fill.

Polytrauma

The most common cause of injury is a blast, which results in complex injury patterns in multiple systems, including traumatic brain injury (TBI), burns, fractures, hearing, vision, and nerve loss or damage (VA Polytrauma, 2014). The VA defines polytrauma as:

> Two or more injuries, one of which may be life threatening, sustained in the same incident that affect multiple body parts or organ systems and result in physical, cognitive, psychological, or psychosocial impairments and functional disabilities. Traumatic brain injury frequently occurs in polytrauma in combination with other disabling conditions, such as traumatic amputations, open wounds, musculoskeletal injuries, burns, pain, auditory and visual impairments, posttraumatic stress disorder (PTSD), and other mental health problems. (VA Handbook 1172.01, Polytrauma System of Care, 2013, p.1).

The term polytrauma captures the complex and wide constellation of symptoms and describes the health needs of the modern combat-wounded veteran with wounds and disability across multiple systems. The most common—or "signature"—injuries of the current Middle East wars are TBI and amputation, both primarily caused by a blast injury (Lehman, 2008). Halfway through the OIF conflict, Okie (2005) reported that 22% of the casualties evacuated to Landstuhl Regional Medical Center in

Germany had injuries to the head, face, and neck, implying the associated TBI rate was equivalent. The Department of Defense (DoD) reported the prevalence of TBI in over 300,000 troops since 2000 (both combat and non-combat causes), with the majority (over 247,000) diagnosed as "mild" ("DoD Worldwide TBI Numbers," 2014). Of the total, approximately 20% (60,000) of TBI occurred in combat ("DoD Worldwide TBI Numbers,"2014).

The improvements in armor, both body and vehicle, that provided the military with enough protection to survive a large blast resulted in the polytrauma injury patterns (Valerio, Sabino, Mundinger, & Kumar, 2014). These injury patterns depend on the proximity to the explosive device and the amount of armor material that separates the individual from the explosion. Without these improvements in armor, military personnel exposed to the most prevalent weapon of war, the explosive device, would experience higher mortality rates.

Veteran Characteristics and Health Status

The VA hospitals are available to provide health care services for those injured in the current wars, currently retired or separated from their active component, or injured while called to active duty (U.S. Department of Veterans Affairs - Office of Public Intergovernmental Affairs, 2013). Of the 2.6 million personnel who served in combat, nearly 1.8 million were eligible for VA health coverage, with 59% having obtained care for service-connected health care needs by 2013 (VA, 2013). The majority of these veterans were male (87.9%), were enlisted (91%), were born between 1970 and 1989 (73%), and had served in the Army (VA, 2013). The two most frequent reasons for VA health care services were musculoskeletal ailments (joint and back disorders) and mental health disorders including posttraumatic stress disorder (PTSD) and depression (VA, 2013). There were over 970,000 veterans with disability ratings, some with crippling psychological issues that resulted in suicide rates over three times higher than their civilian counterparts (38/100,000 compared to 11.5/100,000) and over 1500 veterans with major limb amputations by 2014 (Watson Instititute, 2014). The diagnosis of PTSD had been made in over 324,000 military personnel and depression in over 259,000 (VA, 2013).

Long-term outcomes cannot be predicted by diagnosis or presence of a disease, and a medical classification alone does not provide enough information for health program design and management (World Health Organization [WHO], 2002). The WHO implemented the first ICF in 2001 to complement

the International Statistical Classification of Diseases and Related Health Problems (ICD-10). The ICD-10 contains the codes for diseases, conditions, and signs and symptoms while the ICF shifts focus to the impact of the disease or condition on the person, equalizing all conditions and creating a common language and metric for measurement (WHO, 2002). The ICD-10 classifies population cause of death, and the ICF classifies population health (WHO, 2002). Furthermore it is a recommendation that the ICF classification system be used in research to provide a framework so that results are comparable across disciplines (WHO, 2002).

The ICF is organized into two parts: functioning and disability, such as body functions and body structures, and contextual factors, such as environmental and personal factors (WHO, 2002). Functioning and disability reflect the health condition of a person, and the interaction with the contextual factors impacts participation. Although a linear relationship does not exist between the two parts (i.e. structure does not indicate function), assessing each component can give researchers, policy developers, and analysts data on activity and participation levels in the context of facilitators and barriers.

International Classification of Functioning as Framework

Due to the staggering number of veterans expected to seek service-connected disability benefits, the VA Rehabilitation Research and Development (RR&D) service convened a state-of-the-art conference in 2010 to focus on rehabilitation-related studies. The focus was on helping veterans adjust to community life and participation in society (Resnik et al., 2012). Using the ICF as a theoretical framework, the workgroup defined community reintegration as:

> Engagement in diverse aspects of role functioning as an (1) independent, autonomous person; (2) family member; (3) friend; (4) spouse and/or intimate partner; (5) parent; (6) civic and community member; (7) student; and (8) member of the workforce. (Resnik et al., 2012, p. 89)

There are 11 dimensions that applied to the veteran. These categories and their definitions are:

- Social: engaging with friends and family members;
- Work: engaging in paid and unpaid employment;
- Education: engaging in learning activities;
- Parental: caring for and supervising the raising of children;
- Spouse/significant other: engaging in a long-term relationship;
- Spiritual/religious: engaging in activities that address spiritual needs;
- Leisure: engaging in preferred avocational activities;
- Domestic life: engaging in activities to maintain the home and live in a noninstitutional residence in the community;
- Civic: engaging in activities focused on the betterment of society and the responsibilities of citizens;

- Self-care: engaging in activities to maintain societal standards of grooming and to maintain health; and
- Economic life: engaging in simple and complex economic transactions and having command over economic resources. (Resnik et al., 2012, p. 89)

Problem Statement

Reintegration of the wounded veteran is a public health issue that has long-term financial and health consequences for the individual and the community at large. As of 2012, Jones (2013) reported that there were 663,000 partial or complete service-connected disabilities, representing 25% of the deployed troops at that time (2.3 million) and costing $57 billion in VA payouts. Consequences of failed community reintegration were most commonly reported in the mainstream media as incidents of extreme violence such as suicide and homicide. Community reintegration and post-deployment adjustment problems are positively correlated with mental health diagnoses such as PTSD (Sayer et al., 2010), suicide (Kline, Ciccone, Falca-Dodson, Black, & Losonczy, 2011), depression, and anxiety (Adler et al., 2011). These diagnoses impact work performance (Adler et al., 2011; Erbes, Kaler, Schult, Polusny, & Arbisi, 2011); impact school performance (Erbes et al., 2011); and are correlated with addiction, violence, criminality, and houselessness (Adler et al., 2011; Erbes et al., 2011; Sullivan & Elbogen, 2014; Westermeyer & Lee, 2013).

Purpose

The purpose of this study was to investigate the phenomenon of community reintegration for the veteran with polytrauma injury and associated burns, and to measure the veteran's current level of reintegration using a validated instrument.

Methods

This mixed methods study used a Phenomenological approach to investigate the experiences of severely wounded burn veterans as they recalled how they reintegrated into civilian society. Additionally, the Community Reintegration of Injured Service (CRIS) member tool was administered to measure their current reintegration level (over the previous two weeks) in three domains: extent of participation, perceived limitations, and satisfaction. Data were collected until saturation was met and were analyzed using qualitative and quantitative approaches.

Results

Six veterans with polytrauma and burn injury participated in this study (5 male, 1 female). All participants lived in the state of Texas and were treated for their combat burn wounds at the U.S. Army Burn Center. Participants endorsed two main themes: supportive community and future-oriented thinking. A supportive community is one that offered *veteran specific support*, *burn and injury care,* and *educational and work opportunities* and was also *financially beneficial* because of tax incentives and access to specialty services (amputee care and prosthetics) provided by veteran-targeted charity. Future-oriented thinking was comprised of *a turning point, desire to serve, new meaning in life,* and *posttraumatic growth*. Community reintegration was both a process and an outcome for these veterans.

Cronbach's alpha for the CRIS was .97, representing acceptable reliability for this sample. Scores ranged from 129 to 180 (M = 156.7), with higher scores indicating better reintegration. The scores in the satisfaction in participation level domain (range = 49–64, M = 55, SD = 7.8) were higher than the other two domains.

Discussion

The findings from this study reflect the literature on veterans returning from the current wars in the Middle East. Participants recounted difficulty reintegrating due to their mental health diagnoses and the need for continued support. This was similar to the studies included in the literature review focusing on post-deployment adjustment problems and the relationship with mental health diagnoses. In addition, there were new findings that indicate a need for wounded veterans to receive support from their peers while they recover from their injuries and reintegrate into the civilian community. Furthermore, there were data to support a mutual benefit of giving and receiving peer support for this group of veterans.

This study was limited by the sample size and that all participants resided in the state of Texas. Additionally, the database from which the participants were recruited from included only those with burn injury, and did not contain current contact information for a large number; therefore, recruiting and enrolling potential participants was difficult.

Summary

Blast injuries were responsible for afflicting large numbers of wounded military with complex injury patterns (polytrauma), resulting in the inability of the injured to return to military service due to disability.

The result of these injuries was a population of veterans who may return to a community that does not know how to support their reintegration into the civilian community. Community reintegration was identified as the endpoint to rehabilitation for the severely wounded veteran and the process by which the veteran attains membership into the civilian community. This study aimed to identify the phenomenon of community reintegration for the severely wounded veteran, those with polytrauma and burn injury, and measure the current level of reintegration for the participants using the CRIS tool.

Participants identified two main themes that positively impacted their ability to reintegrate: a supportive community and having future-oriented thinking. These themes represent extrinsic and intrinsic factors that can be operationalized to improve community reintegration for this population.

Chapter 2: Literature Review

Chapter 2 provides the literature review for this study, search strategies, selection of studies for review, synthesis, critique, conceptual framework, gaps in the literature, purpose statement for the study, and summary.

"All models are wrong, some are useful" (Box, 1979, p. 208).

Literature Review

Polytrauma Literature

Mortality rates for wounded veterans in the two most recent conflicts in Iraq and Afghanistan between 2003 to 2008 were extremely low, with over 90% of the wounded surviving their injuries (Goldberg, 2010). The survival rates are even more impressive due to the extreme lethality of the wound patterns from powerful explosives known as improvised explosive devices (IEDs), which are buried deep in the ground or propelled through the air (Fabrizio & Keltner, 2010). There were over 52,000 wounded warriors from these two conflicts, with another 663,000 veterans reporting partial or complete service-connected disabilities (Jones, 2013; VA, 2013). This represented an estimated $57 billion in disability payouts by the VA for fiscal year 2013 (Jones, 2013).

Blast injury accounted for the most common injuries, creating complex injury patterns in multiple systems, including the brain such as, TBI, hearing, vision; skin such as burns; extremities such as fractures and amputations; and the nervous system such as nerve loss or damage (VA Polytrauma, 2014). The term polytrauma captures the complex and wide constellation of symptoms and describes the health needs of the modern combat wounded veteran who has wounds and disability across multiple systems. Okie (2005) reported that 22% of the casualties evacuated to Landstuhl Regional Medical Center in Germany had injuries to the head, face, and neck, suggesting the associated TBI rate to be equivalent, and concluding that the "signature injury" experienced in the combat theatre, at that time, was TBI. Later, Lehman (2008) added amputation as another signature injury as the rates of amputations increased over time**.**

Brain and Central Nervous System. Blast weaponry has a significant effect on the central nervous system, particularly impacting the brain and causing TBI. In a retrospective review of the patients at Walter Reed Army Medical Center that received a neurosurgery consult between April 2003 and April

2008, 408 patients were described (Bell et al., 2009). Of the 408 patients, 401 (98%) were male and seven (2%) were female (mean ages of 27 +/- 7.5). There were 222 (54%) patients with penetrating injuries, 139 (34%) with closed head injuries, and 41 (10%) with an injury not specified. Overall, 229 (56%) of the 408 patients had health problems due to blasts (2009).

Blast injuries are classified in four ways: (1) type I, the overpressure blast wave exceeding atmospheric pressure, causing tissue damage; (2) type II, projectiles that strike people; (3) type III, people projected through the air and striking other objects; and (4) type IV, all other injuries caused by blast (Pennardt, 2014). Notably, the patients either experienced a type I blast injury, a type III blast injury, or a combination of these two mechanisms (Bell, 2009). Patients who survived their initial surgical treatment and transport out of the combat theater had a mortality rate of 4.4%, which is similar to the reported rates during the Vietnam conflict of 4.5% (Bell et al., 2009; Hagan, 1971). In a study of long-term outcomes by Bell et al. (2009), lower-measured Glasgow Coma Scales (GCS) indicated increased severity of illness. Those patients with lower scores on presentation were associated with lower scores on discharge, and higher scores on admission resulted in higher discharge scores. Those with very low initial GCS (3 to 5) did not make significant gains at six months to one to two years after hospital discharge, and 10 of the initial 42 patients with low scores did not survive to two years. Other comorbid conditions in this population were infection, pulmonary embolism, meningitis, and spinal column injuries. Additionally, more than 60% of the patients had polytrauma injuries (2009).

Other health-related outcomes from blast TBI were related to impairments in speech; language; swallowing; cognitive abilities; communication; airway and breathing, requiring tracheostomy and/or mechanical ventilation; and hearing (Lehman, 2008). TBI caused by blast injury seemed to be different than non-blast head injuries that presented with comorbid injury patterns of skull fracture, seizures, and lower extremity amputations (2008). In addition, rates of PTSD were higher in patients with blast-related injuries versus other types of combat injury (2008).

Extremity Injury. A query of the Joint Theater Trauma Registry (JTTR) by Owens et al. (2008) reviewed approximately 27% of the total number of combat injuries recorded between October 2001 through January 2005 (*n* = 11,352) and found that the extremity injury patterns from OIF/OEF represented a total of 3,575 extremity wounds (from 1,281 individuals), with 53% noted to be penetrating

soft-tissue wounds and 26% noted to be fractures. The fractures (*n* = 915) were evenly distributed between the upper and lower extremities, with the most common occurring in the hand (36%) and tibia/fibula (48%). The majority of these wounds (75%) were caused by blast mechanisms. The infection and complication rates in the patients were found to be as high as 60% (Owens et al., 2008).

Belmont, Schoenfeld, and Goodman (2010) reported on the results of a JTTR query of musculoskeletal injuries from 2005 to 2009. They found that, of the 17,177 wounds experienced by 6,092 casualties, the incidence of musculoskeletal injury in combat was 3.06 per 1000 deployed personnel per year, with amputations representing 6% of all the combat wounds. In another query of the JTTR that focused on a cohort of injured, evacuated combat service members between Oct 2001 and Jan 2005, 54% experienced extremity injuries (Cross, Ficke, Hsu, Masini, & Wenke, 2011). These same authors examined the prevalence of disabilities in the cohort and found degenerative arthritis was the most common disabling condition. Those in the cohort with upper limb amputation resulted in the greatest percent of disability. Finally, lower extremity amputation was the most disabling injury for those in this cohort. Most of the disabilities were related to orthopedic conditions from combat musculoskeletal injury due to an IED blast. Posttraumatic osteoarthritis was present in 28% (n = 136 out of 450) of combat wounded soldiers being medically evaluated for separation in one study (Rivera, Wenke, Buckwalter, Ficke, & Johnson, 2012). Long-term recovery and return-to-work rates are most influenced by the presence of extremity injury, with extremity injury requiring 64% of the resource utilization (Cross et al., 2011). Other problems associated with musculoskeletal injury due to an IED blast are heterotopic ossification (HO) and infection from ragged-edged wounds contaminated with environmental debris from the explosion and battlefield (Burns et al., 2012). In addition, open fractures of the tibia were prone to infection, with rates of 27% for deep infection and 22% that required amputation (2012).

Burns. Burn injury accounted for 5% of all injuries sustained in OIF/OEF (Cancio et al., 2005; Kauvar, Cancio, Wolf, Wade, & Holcomb, 2006; Renz et al., 2008; Roeder & Schulman, 2010). Combat-related burns due to IEDs accounted for 52% of the total burn injuries and most were associated with comorbid orthopedic injuries (Roeder & Schulman, 2010). Burns to the hands and face, though smaller in surface area, were most common and associated with negative, long-term outcomes including pain, ocular involvement impairing sight, facial disfigurement, depression, and anxiety (Roeder & Schulman,

2010). Burn mortality during OIF/OEF was low at 4% despite higher injury severity scores related to the size of the burn (Roeder & Schulman, 2010). Mortality was attributed to infections, representing the majority of burn-related deaths (61%). Infections were associated with burn size, with a mean total body surface area (TBSA) of 63% (range: 41 to 85%) being statistically significant (Roeder & Schulman, 2010). The majority (77%) of patients discharged after burn injury had no associated global disability, and most (91%) did not require additional hospital care (Roeder & Schulman, 2010). However, those who did survive had long inpatient treatments with the mean hospital length of stay at the Army Burn Center of 24 +/- 31 days with a median of 13 days and a range of 0–242 days (Kauvar et al., 2006). The long inpatient treatments were noted to include intensive care admissions and mechanical ventilation (one third of admitted patients), painful wound care and procedures, functional loss of extremities and amputations, and burn scarring (Roeder & Schulman, 2010). Long-term outcomes from burns include scar contractures requiring frequent surgical reconstruction and life-long rehabilitation (Roeder & Schulman, 2010). Also, the treatment for psychological issues (e.g., PTSD), present in 25% of combat burn patients, may persist for a lifetime (Roeder & Schulman, 2010). However, the incidence for burns in the current Middle East wars was documented to be low; most burn sizes had 20% or less TBSA affected, and more than 90% of combat-injured veterans with a burn survived (Roeder & Schulman, 2010).

Mental Health Issues. There have been over 118,000 cases of PTSD diagnosed in combat-deployed troops since 2002 (Fischer, 2010). These numbers represent all diagnosed cases and are not broken down by the presence or absence of other comorbid injuries or exposure to blasts. The current rate of PTSD is estimated at 14% of the total deployed forces, with reported rates between 4.2% and 50% of those seeking care at the VA for combat-related injuries (Ramchand et al., 2010). In one study, 25% of the combat casualties admitted to the U.S. Army Institute of Surgical Research (USAISR) Burn Center between March 2003 and February 2007 (n = 540) screened positive for PTSD (Gaylord, Holcomb, & Zolezzi, 2009; Roeder & Schulman, 2010). It has been documented that IED-blast-wounded burn patients with TBI have a higher prevalence of PTSD at 45% compared to combat burned patients without TBI symptoms (Mora et al., 2009). In addition, the reported rates of PTSD in those with different combat injuries varied from 30% to 79% (Wall, 2012). These data suggest that PTSD is associated with injured combat troops at a higher rate than non-injured combat troops.

Veteran Characteristics and Health Status

The VA is the main provider of health care services for combat veterans that are currently retired from active or reserve duty for all injuries sustained while on active duty (*VA*, 2013). Of the 2.6 million who have served in combat in the two most current Middle East wars, OIF and OEF, nearly 1.8 million are eligible for VA healthcare, and 59% have received care for service-connected health care needs (*VA*, 2013). Currently, there are nearly one million veterans from OIF/OEF wars identified with having a disability (*VA*, 2013). The majority of this population is male (87.9%), enlisted (91%), born between 1970 and 1989 (73%), and in the service branch of the Army (*VA*, 2013). Musculoskeletal ailments, such as joint and back disorders, and mental health disorders (e.g., PTSD, depression) are the two most frequent reasons for VA healthcare utilization (*VA*, 2013). PTSD has been diagnosed in over 324,000 military personnel and depression in over 259,000 (*VA*, 2013). These major psychological issues sometimes result in suicide, with rates that are over three times higher in military personnel than those documented in civilian counterparts (*VA*, 2013).

It is important to note the current statistics described in this literature review are compiled from VA sources; therefore, these represent only those veterans who are recipients of VA healthcare. Not all veterans seek healthcare immediately after leaving active service, or at any point in their lives, through the VA health care system despite their eligibility for such services. As a result, complete statistics for the healthcare needs of the OIF and OEF veteran population can only be estimated from the sample that seeks care from the VA or from other sources that may be capturing data on this population. Currently, there are no published sources outside of the VA reporting on healthcare utilization for the veteran population.

Concept Analysis: Reintegration

Veterans with severe injuries, including polytrauma with burns, were surviving their hospital stays but not returning to active or reserve duty status. Instead, they were returning to the community at large. As a result, the focus of polytrauma research shifted from survival to combat trauma to long-term functionality as an outcome. Therefore, the literature review was performed to discover the central concept for severely wounded veterans as they return to their communities.

To reflect the shift from survival to long-term outcomes, the literature was searched for the terms military, quality of life, polytrauma, and TBI in PUBMED, OVID (MEDLINE), and Google Scholar between 2003 and 2017. Between 2003 and 2017 there were 57 studies that met the search criteria. There were few qualitative studies published between 1965 and 2017; therefore, all qualitative studies found using the search terms were included in the review. This was done to capture both quantitative and qualitative evidence in the literature. The total number of studies included in this review was 79. There were nine systematic reviews, 36 qualitative studies, and 34 quantitative studies.

Although quality of life was frequently mentioned in this body of literature within the context of returning to work, coping, addressing vulnerabilities, and physiologic and social changes, a larger and more encompassing concept emerged called reintegration. Of note, the VA convened a workgroup comprised of subject matter experts to address OIF and OEF war veterans' needs and determined that community reintegration was vitally important to the health and wellbeing of these returning veterans (Resnik et al., 2012). The workgroup identified the issue of reintegration as particularly problematic due to the lack of evidence-based tools that measure the construct of reintegration in the veteran population. The workgroup then explored the use of the ICF model, created by the WHO, to develop a tool to measure this construct since the ICF combines health condition and one's ability to participate based upon environmental and personal factors (see Figure 1 below).

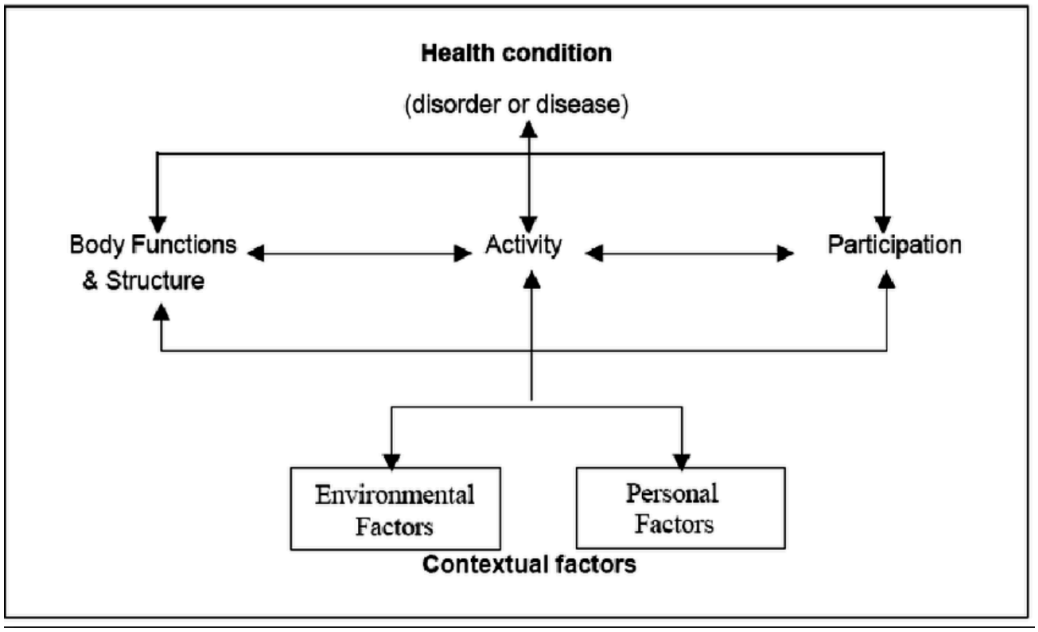


Figure 1. International Classification of Functioning (ICF) Model

The workgroup adopted the ICF as a framework to define the contextual factors that impact functioning, which resulted in the research that produced the Community Reintegration of Injured Service Members (CRIS) tool (Resnik et al., 2012). This research represents the only study directly measuring the concept of reintegration with the severely wounded veteran populations that was identified in the literature review.

It is important to note that the VA identified 11 domains that define community reintegration for this population, which included spirituality as an important factor. The VA workgroup described its process in identifying the domains to measure in this population and its decision to use the ICF in Resnik et al. (2012). However, despite the presence of spirituality in the both the VA's definition and the ICF classification system, the CRIS did not measure that domain. This may be explained by the methodology used to create the CRIS. The CRIS was developed using formative qualitative research on a sample of veterans and their family members, and data were coded using the ICF framework, which explains the absence of spirituality as a measurable domain as it was not identified in the data (Resnik & Allen, 2007).

Other differences exist when comparing the ICF framework, the VA workgroup definition, and the CRIS tool, most likely because of the methodology mentioned above. For example, domains of mobility; communication; and—under the broad chapter of General Tasks and Demands—dealing with tasks, daily

routines, and stress are areas that are present in both the ICF and the CRIS but were not originally identified by the VA.

Therefore, the purpose of this literature review was to compare all 11 domains identified by the VA in addition to the ICF domains represented in the CRIS tool. (Refer to Table 1 for a side-by-side comparison of the domains addressed by the ICF, VA workgroup, and the CRIS tool.)

Table 1
Side-by-Side Comparison of the International Classification of Functioning, the Veterans Affairs Workgroup Domains, and the community reintegration of injured service members tool

ICF: Activities and Participation Chapters	VA Workgroup Definition Domains	CRIS Tool
Chapter 1: Learning and Applying Knowledge Subchapters: d110–199	Education	Chapter 1: Learning and Applying Knowledge d160–d179 Applying Knowledge
Chapter 2: General Tasks and Demands Subchapters: d210–299	[a]	Chapter 2: General Tasks and Demands d220 Undertaking Multiple Tasks d230 Carrying Out Daily Routine d240 Handling Stress and Other Psychological Demands
Chapter 3: Communication Subchapters: d310–399	[a]	Chapter 3: Communication d330–d349 Communication Producing d350–d369 Conversation and Using Communication Devices and Techniques
Chapter 4: Mobility Subchapters: d410–499	[a]	Chapter 4: Mobility d460 Moving Around in Different Locations d470–dd489 Moving Around Using Transportation
Chapter 5: Self-Care Subchapters: d510–599	Self-Care	Chapter 5: Self-Care d500 General Self-Care d570 Looking After One's Health
Chapter 6: Domestic Life Subchapters: d610–699	Domestic Life	Chapter 6: Domestic Life d630–d649 Household Tasks d650–d669 Caring for Household Objects and Assisting Others
Chapter 7: Interpersonal Interactions and Relationships Subchapters: d710–799	Parental Spouse/significant other	Chapter 7: Interpersonal Interactions and Relationships d710 Basic Interpersonal Interactions d720 Complex Interpersonal Interactions d730–d779 Particular Interpersonal Relationships
Chapter 8: Major Life Areas Subchapters: d810–899	Economic Life Work Spiritual[b]	Chapter 8: Major Life Areas d840–d859 Work and Employment d860–d869 Economic Life
Chapter 9: Community, Social and Civil Life* Subchapters: d910–999	Civic Leisure Social	Chapter 9: Community, Social and Civil Life* d910 Community Life d920 Recreation and Leisure d950 Political Life and Citizenship

Note. ICF = International Classification of Functioning; VA = Veterans Administration; CRIS = Community Reintegration of Injured Service Members tool
[a] Indicates a domain not present in VA definition; [b] Items not measured in CRIS tool.

Once identified as the central concept, reintegration was explored in the mainstream media, military, and government literature to best understand how the term is used in society. As a result of the literature analysis and using the Walker and Avant (2011) modification of the Wilson approach to concept analysis, a working definition of reintegration was constructed: a return to unity, participating and engaging in societal roles, and satisfaction with one's level of participation in life outside the home.

Polytrauma and Reintegration

A separate literature review, focusing on peer-reviewed research between 2001 to 2017 on injured veterans with polytrauma and reintegration, found 60 articles to analyze. In this body of work, there were 29 studies that used 31 different tools to address at least one of the 11 domains of reintegration identified by the VA. This review focused on the tools used to measure the different constructs addressed in the reintegration literature. Articles in the review from 2014 through 2017 represent findings that occurred while this research study was being conducted.

Studies from 2001 through 2017

Community reintegration and post-deployment adjustment problems were positively correlated with mental health diagnoses that include PTSD (Sayer et al., 2010), suicide (Kline et al., 2011), and depression, and anxiety (Adler et al., 2011). These diagnoses impact work performance (Adler et al., 2011; Erbes et al., 2011) and school performance (Erbes et al., 2011); and are correlated with addiction, violence, criminality, and houselessness (Adler et al., 2011; Sullivan & Elbogen, 2014; Westermeyer & Lee, 2013).

Veterans with high resilience measured on the Connor-Davidson Resilience Scale (CD-RISC) had lower perceived limitations and higher perceived reintegration participation rates (Graham et al., 2013). Moreover, their perceived self-efficacy and control over life as measured on the Quality of Life Index were positively correlated with greater psychological resilience measurement on the CD-RISC and lower rates of violence (Elbogen et al., 2014). In addition, self-efficacy measured by items on the Motivated Strategies for Learning Questionnaire was found to be the strongest predictor of success in the educational setting for veterans with TBI and PTSD in one study (Ness & Vroman, 2014). Posttraumatic growth was significantly associated with younger age; increased perceptions of unit member support; and personal efforts, even in the presence of greater PTSD symptoms (Pietrzak et al., 2010). Posttraumatic

growth is the phenomenon that, despite highly distressful traumatic experiences and suffering, some individuals will have positive changes after the life crises ("What is PTG?" 2013). These studies show that some factors exist (resilience and self-efficacy) that help mitigate the negative effects of trauma and that, despite trauma, there may be some positive outcomes associated with surviving trauma for the combat veteran.

Complex health issues, including pain, are part of the veteran experience, but many veterans are able to overcome barriers by connecting to others (Brickell, Lange, & French, 2014; Wands, 2013). In fact, veterans are more likely to disclose positive than negative emotions with those who share similar experiences (Hoyt & Renshaw, 2014). Improving unit members' support may help veterans adjust to community life (Pietrzak et al., 2010). Additionally, the military cultural effect on veterans, particularly the emphasis on conforming to masculine norms, is associated with lower levels of wellbeing in male veterans (Alfred, Hammer, & Good, 2014).

An overwhelming number (96%) of combat veterans receiving health care at the VA reported interest in readjustment services (Sayer et al., 2010). However, the lack of objective measures and the inter-rater reliability problems associated with some methods of screening may impact accurate assessment of participation in reintegration activities, with veterans reporting greater participation restrictions than their clinicians (McCulloch et al., 2015). Families and caregivers report that their educational needs are most important and are often met while emotional and instrumental needs are least important and most likely unmet in the VA (Wilder Schaaf et al., 2013). Emotional and instrumental needs include activities that occur outside of the hospital, such as housework, spending time with friends, getting sleep, or being able to discuss feelings about the experience with others who have had the same experience (2013).

Studies included in this review from 2014 through 2017

Community reintegration was measured in veterans with pain and TBI (Wu & Graham, 2016). In a cross-sectional study of 198 OIF/OEF veterans, pain levels were measured using the Brief Pain Inventory and compared to the CRIS scores; "pain interference (p = .042) and pain severity (p = .015) were associated with community participation, but not perceived limitations or satisfaction as measured by the CRIS tool" (Wu & Graham, 2016, p. E1). Furthermore, Wu and Graham (2016) found that chronic pain

had a negative impact on community reintegration, and depression had a higher association with impairments than presence of TBI. Wu and Graham (2016) measured these constructs simultaneously, so no causal or temporal factors could be determined from these data.

Dillahunt-Aspillaga et al. (2017) examined the length of time it took for veterans with TBI to return to work. They found in a sample of 293 veterans with severe TBI, only 21% were employed one year post injury (Dillahunt-Aspillaga et al., 2017). In this prospective observational cohort study, veterans who were younger at the time of injury (p = .031) and not identifying as being a minority (p = .041) had a higher probability of returning to work. In addition, those with severe injuries were 50% less likely to be employed at one year than those with less severe TBI (p = .003). Dillahunt-Aspillaga et al. (2017) investigated those veterans with and without combat TBI, and of the 79 (27%) with blast-caused TBI, only 11 (4%) were employed at one year post injury. Dillahunt-Aspillaga et al. (2017) did not investigate other causal factors that may contribute to work status such as pre-injury status, comorbid injuries or conditions, or service connection compensation.

There were three systematic reviews conducted between 2012 and 2017. Sherman, Larsen, and Borden (2015) performed a systematic review on post-deployment functioning of veterans from Iraq and Afghanistan. Sherman et al. (2015) found that “service members demonstrate resilience in the face of war-related stressors”; however, there were six different post-deployment impairments revealed: mental health, social and role functioning, relationship functioning and family life, spirituality, physical health, and financial wellbeing (p. 355). In a systematic review of military service members and veteran reintegration, there were 186 published studies between 2001 and 2015 with very little evidence in these studies evaluating interventions for health conditions, rehabilitation, and employment (Elnitsky, Blevins, Fisher & McGruder, 2017). The recommendations from this review were the utilization of an ecological model to address practice through research to support outcomes across four levels: individual, interpersonal, organizational, and societal (Elnitsky et al., 2017). Greer, Sayer, Koeller, Velasquez, and Wilt (2017) also performed a systematic review that reviewed literature on clinical and functional outcomes after blast- and non-blast-related TBI. Of the 31 studies, none focused on community reintegration.

Discussion

Measuring community reintegration proves to be a challenge in wounded veterans due to the complex nature of polytrauma, individual attributes, the environment, and the interaction between all three. Finding any one tool that encompasses all these factors appears literally impossible; therefore, researchers relied on tools that best measured the domains they happened to be investigating. End users of research must evaluate the studies that best address their issues and use the evidence that best supports the veterans they serve. Larger program developers or designers of comprehensive systems of care, however, may be at a loss when evaluating the evidence due to the vast array of tools available that have a narrow focus.

Most of the tools reviewed in this search (*n* = 22, 56%) were developed and tested on multiple populations and have supporting literature outside of the original manuscripts that describe their development or use. Several researchers created their own compilation of questions based upon previously validated tools (Sayer et al., 2010) or tools not tested on the veteran population at all (Kline et al., 2011; Larson E. & Norman B., 2014; Pietrzak et al., 2010; Westermeyer & Lee, 2013). The DoD demographic and screening tools used in redeployment assessment lack evidence in the literature that supports (i.e., validates) a structured face-to-face interview questionnaire session as a measure of post-deployment veterans' health needs. Furthermore, Sayer et al. (2010) used a combination of several well-validated and reliable tools to measure community integration and disability; however, there is no literature to support the reliability of these questions when used in isolation. Although it is understandable that researchers utilized portions of tools, rather entire tools, to reduce the survey burden on their participants, using research findings based on tools that may not be completely reliable or valid deserves some degree of critique. There is no way to know if the amalgamation of questions accurately measures the constructs targeted in these research studies.

Most of the tools reviewed consisted of self-report or interview formats attempting to quantify a subjective construct (*n* = 25, 64%). This type of questioning is naturally vulnerable to bias because participants are not actively observed; instead, they are asked to recall. Even with proxy interviews, there exists a potential for bias because no proxy could be omniscient. In addition, veterans with TBI or those using medications that alter the mind may have trouble accurately recalling events. Several tools were

developed specifically for the TBI population: Glasgow Outcome Scale (GOS), Community Integration Questionnaire, Community Integration Measure, and the Rancho Los Amigos tool. But many of the tools in this review were not supported by literature for use with the TBI population.

The tools in this review had a number of items that ranged from 1 (dichotomous; yes or no) to 200 in formats to include multiple choice, dichotomous, or a combination of questions. The authors of the Addiction Severity Index, a tool with 200 questions, caution its use in populations with severe mental illness (McLellan, 1980; McLellan, Carise, Coyne, & Jackson, n.d.). The CRIS has 152 items. Although more items increase reliability, more items may also increase the mental burden of those diagnosed with TBI. Despite the increased reliability of a longer test, instruments that have many items for individuals to respond to can result in psychometric testing fatigue or boredom. There is a potential for fatigue or boredom to negatively impact test reliability, making results less accurate. One tool, the GOS, is meant for clinical use as a screening assessment to predict long-term outcomes after TBI (Wright, 2000).

Lastly, evaluating the tools by ICF Activities and Participation domains revealed that few measure the same constructs, and only one tool, the CRIS, evaluated all domains. The ICF system was developed by the WHO to complement the worldwide system of classifying disease, the ICD-10. The Activities and Participation domains are the focus of rehabilitation, reentry, and reintegration program development and planning. The VA recognized the need for a universal language to describe disability and used this framework to develop the CRIS, as noted previously. Using the ICF as a guide to evaluate the commonalities and differences of the tools included in this review revealed that most tools focus on a few of the 9 different chapters with the following breakdown: Interpersonal Relationships (*n* = 19), Major Life Areas (*n* = 18), General Tasks (*n* = 14), Domestic Life (*n* = 12), Self-Care (*n* = 11), Learning and Applying Knowledge (*n* = 10), Community Social Civic Life (*n* = 10), Mobility (*n* = 6) and Communication (*n* = 1). Only the CRIS tool addresses communication, a common issue for people with TBI.

Conclusion

The purpose and the overall aim of the VA in their work on veteran reintegration was to focus on individual activity and participation in the different ICF domains identified through qualitative interviews with veterans and their family members (Resnik et al., 2012). Although the instruments used in this body of work do not measure the same constructs exactly, there is considerable crossover between the tools.

Using the ICF as a framework to guide research questions, create instruments and questionnaires, and assess outcomes would provide a more efficient and systematic method of reviewing the data.

Summary

Modern combat casualties are returning to their home communities with high rates of disabilities. Their disabilities are related to the complex wounding patterns sustained in war that affect multiple systems, such as the brain and central nervous system, extremities, and skin (burns), in addition to affecting their overall mental health. Consequently, research and health care focus has shifted to long-term functional outcomes related to community reintegration. Using the ICF model to guide research will provide investigators with a consistent language to explore these issues. Importantly, the ICF model includes the environment, thereby acknowledging the importance of community on the overall functionality for human beings. Current research lacks data on the impact of the community environment for the severely wounded veteran. Therefore, the following research questions are posed: 1) what is the lived experience of community reintegration for the severely wounded veteran; and 2) are there any associations between CRIS scores and recalled reintegration experiences of severely wounded veterans?

Chapter 3: Methodology

This chapter will present an overview of the study; discuss the research questions, aims, and objectives; and describe the methodology. The description will include the rationale for the study design, as well as the details of the methodology.

Overview of the Study

The wars in Iraq and Afghanistan have resulted in hundreds of thousands of wounded veterans who are unable to return to military service. Many of these veterans were injured by blast and represent the most *severely wounded* or those with polytrauma, which are injuries that may include any combination of TBI, amputation, or burns. The highest injury severity scores were those that had polytrauma with associated burn injury (Roeder & Schulman, 2010). Due to the complex nature of their injuries resulting in disability, many of these veterans are unable to return to military service and must reintegrate into the civilian community. In many instances, the civilian community does not understand the unique needs of veterans dealing with polytrauma with combat burn injury. The potential consequence of this misunderstanding is *failed reintegration*, which can result in poorer health and quality of life for veterans due to higher rates of mental health conditions and suicide (Kline et al., 2011; Sayer et al., 2010), poor work performance (Adler et al., 2011; Erbes et al., 2011), addiction, violence, criminality, and houselessness (Adler et al., 2011; Sullivan & Elbogen, 2014; Westermeyer & Lee, 2013). Therefore, understanding the experience of reintegration from the severely wounded veteran's perspective is paramount to preventing failed reintegration, thereby promoting health and wellness.

According to the Pew Report on the military-civilian gap, the current level of military service in the US post 9/11 was approximately 0.05% of the total US population (Taylor et al., 2011). The report also stated that nearly half of the 1.3 million active duty military personnel lived on or around bases in the states of California, Virginia, Texas, and North Carolina (Taylor et al., 2011). Military bases are exclusive to active duty (or Reservists/National Guard members with a current ID card), veterans, and their dependents, and provide the same services that exist in the civilian community; however, they are, for the most part, off-limits to civilian use. This limits the interaction between most civilians and military personnel. Taylor et al. (2011) also noted that this divide has become so wide that most civilians do not follow wartime or military media coverage unless they personally know someone who is serving. This

leaves much of the civilian knowledge about war and the military coming from television (Taylor et al., 2011). The consequence of limited interaction between civilian and military results in these severely wounded veterans returning to civilian communities that likely have little knowledge and understanding about military life or veteran combat injuries.

Currently, there is little research that explores the phenomenon of reintegration for these veterans, especially investigations that explore the lived experience of severely injured veterans transitioning from a military to a civilian community. Reintegration has been studied in other populations, such as those transitioning from prison to the community, but these studies are not generalizable to veterans due to the unique cultural and health needs of this group. For clinicians, policy makers, and communities to help veterans reintegrate, understanding their experiences is paramount. Research must look beyond participation to capture the essence of the experience in its entirety to expose factors that are important to veterans as they pursue full reintegration. Not doing so represents a potential problem of *failed community reintegration*, evidenced by suicide, criminality, and poor quality of life. This is a major public health problem for this population and society. Policy makers and clinicians must understand the experience of reintegration and why veterans participate in their life roles outside the home so key elements that contribute to success can be identified and supported.

The Research Questions

The main research question asked what is the lived experience of community reintegration for the severely wounded veteran is. A second question asked whether there are any associations between CRIS scores and recalled reintegration experiences.

Aims and Objectives

This study sought to understand the lived experience, or *phenomenon,* of reintegration for the severely wounded veteran and to explore factors that are associated with CRIS scores. Reintegration, as described by the VA, is a quantifiable construct that can be assessed using the CRIS tool, which has been validated in this population. However, this tool alone does not provide a complete understanding of reintegration because many of the factors that may contribute to the phenomenon are not measured by the questionnaire. Likewise, relying solely on qualitative interviews from a limited number of veterans to describe their experiences with reintegration does not provide a complete explanation for the

phenomenon either (Creswell, 2015). Therefore, a mixed-methods approach was used to first understand the phenomenon of reintegration by deeply exploring the perspectives of a sample of severely wounded veterans with burn injury. Subsequently, the level of reintegration of veterans was measured using the CRIS tool.

The CRIS tool was developed from qualitative interviews with severely wounded veterans to measure the level of participation in their life domains as the key attribute to reintegration. However, simply measuring the level of veteran participation does not provide data that explains why veterans are able to participate or not. The CRIS score does not explain how the severity of their injuries, comorbid psychological diagnoses, or factors in the community outside their control impact their level of participation. Qualitative exploration was used to explore these factors in veteran experiences that were unanswered by the CRIS quantitative measure. Furthermore, the CRIS tool only measures the level of reintegration for the past two weeks of the participant's life. There are factors that may impact one's ability to participate in their life domains that are irrelevant to their disability, providing a false assessment of one's true reintegration level.

It has been well described in the literature that wounded veterans returning from war have high rates of depression, PTSD, and TBI (Kline et al., 2011; Sayer et al., 2010). Therefore, this study sought to explore the relationship among these factors and CRIS scores. This information may provide clinicians with additional insight into the long-term problems veteran patients may face in reintegrating into civilian communities and especially help inform those developing treatment plans, to include mental health services for wounded veterans.

Finally, this research sought to uncover key factors in a community that contribute to the successful reintegration of veterans. From qualitative interviews, community attributes were discovered that facilitate or contribute to successful reintegration or represent barriers to this process. Reintegration scores based on level of participation were compared to these attributes.

Design: Mixed-Methods Approach

This study used both qualitative and quantitative features to gather and analyze data in a convergent parallel design. The process described by Creswell (2015) was modified, beginning with a qualitative phase followed by a quantitative phase, then the data from both sets were analyzed together

(triangulation). The result was an interpretation of how the qualitative data explained the quantitative data. Below is a graphical representation of the design, timeline, and a table of the procedures (see Figure 2 and Table 2).

Table 2

Procedures and Timeline

Phase 1		Phase 2	Phase 3
QUAL + QUAN Data Collection & Analysis		Merge results for comparison	Interpretation
QUAL			
Data Collection:			
Procedures	Participants: Former USAISR patient, 2003–2014, around San Antonio, TX *N* = 5–25 In-depth interviews		
Products	Text database transcribed for coding		
Data Analysis:			
Procedures	Transcribing data Coding Themes		
Products	Description of reintegration Identified community attributes		
QUAN			
Data Collection			
Procedures	Participants: Former USAISR patient, 2003–2014, around San Antonio, TX *N* = 5–25 CRIS tool		
Products	Database with variables/scales		
Data Analysis:			
Procedures	Clean database Input into software Descriptive results I		
Products	Statistical results in tables		

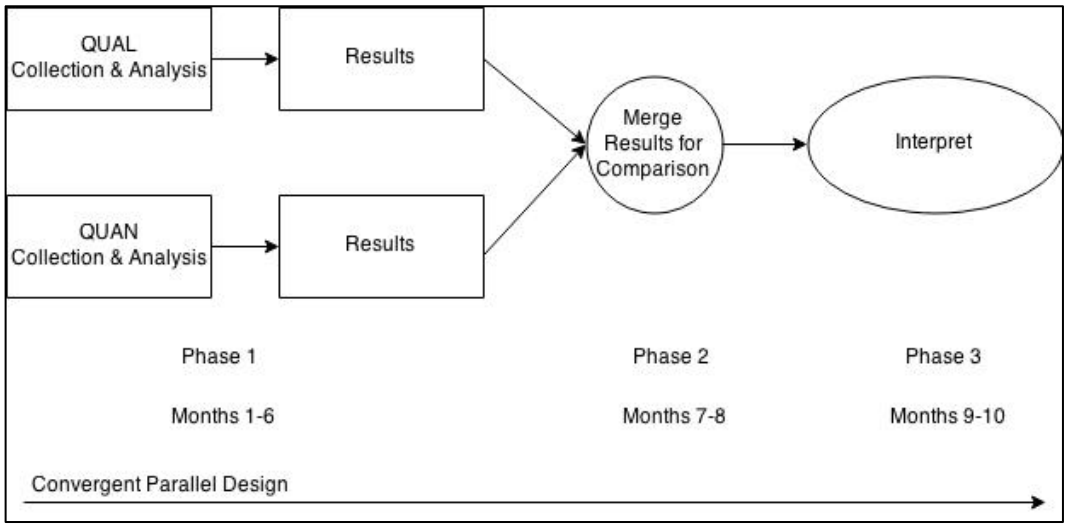


Figure 2. Design

Qualitative Study

According to Creswell (2013), the researcher should choose the methodology based on the intended outcome. In other words, the research question should drive the methodology. For this study, the main question investigated the lived experience or the phenomenon of reintegration for the severely wounded veteran. The literature lacks sufficient evidence that explains this experience, the key attributes of the community, and the effect of these attributes on the process. Therefore, obtaining first-hand knowledge from those sharing this common experience is the intended research outcome. This type of problem is best addressed by research focused on understanding these common experiences, or phenomena (Creswell, 2013).

Philosophical underpinnings of phenomenology. Phenomenology is both a philosophy and a method of qualitative inquiry that focuses on the lived experience. It is the scientific study of phenomena, where the data concern the human experience. It is a field of inquiry that aims to understand the meaning and structure of experiences, free from empirical preconception and speculation. This method recognizes the consciousness, or subjective thought processes, as having meaning, thereby rejecting empiricism and the reliance on concrete forms of data alone (Detmer, 2013).

Phenomenology is the foundational method of scientific exploration and the initial search for wisdom (Creswell, 2013). German mathematician Edmund Husserl (1859–1939) described phenomenology as a method that embraces subjectivity and returns scientific exploration to a more philosophical position, rejecting the overrepresentation of empirical science that limited exploration of human experiences at the end of the 19th century (Creswell, 2013). The primary source of knowledge in phenomenology is perception, which focuses on finding meaning from appearances and descriptions of experiences over explanations (Moustakas, 1994). Furthermore, the methodology describes the researcher as being deeply connected in the process, and the subject and object are integrated so the object, perception, and the experience are interrelated (Moustakas, 1994).

Phenomenology is based upon the concept of *intentionality*, or the act of being conscious of the internal experience of being conscious (Moustakas, 1994). This recognizes that the self and the object are intertwined and inseparable components of knowing. Intentionality has two components: *noema* and *noesis*. The perception, or the phenomenon of the experience, is the noesis, and it is the content of a thought. Noema is the meaning one attaches to the noesis, or the perception of the mind regarding the perception of an experience. According to Husserl, these two concepts are integrated into the meaning of experiences (Moustakas, 1994).

Husserl also held *intuition* as a key concept of phenomenology; as described by Lauer, it is the "presence to consciousness of an essence" (Moustakas, 1994, location 779). It is the "beginning place in deriving knowledge of human experience" and recognizes the human being as one "who doubts, understands, affirms, denies, wishes for or against, senses, imagines" (Moustakas, 1994, location 759). Intuition, as Husserl described, is key to one's ability to describe a reality as it appears in the individual's consciousness; it is the understanding of one's own ideas (Moustakas, 1994).

The methodology of phenomenology relies on three core processes of knowledge development: Epoche, Transcendental-Phenomenological Reduction, and Imaginative Variation. Epoche is a Greek word meaning the suspension of judgment. The suspension of judgment is the first step in understanding the outside world. The researcher brackets the focus of the research so everything else is set aside (Moustakas, 1994). Determining what is part of the research (in the brackets) helps maintain focus and eliminate the influence of the things outside of that experience.

Epoche is a process of setting aside biases and all previous knowledge so the experience can be appreciated as naively as possible. This, however, does not suspend all reality, only that of scientific knowledge of understanding the world from facts and an external base (Moustakas, 1994). This step prepares the researcher for accepting the knowledge as new and just as it is presented. To be receptive to the full range of possibilities, all internal ways of understanding the situation must be suspended.

Transcendental-Phenomenological Reduction is the next step, requiring every experience to be "considered in its singularity, in and for itself" (Moustakas, 1994, location 796). In this way, each phenomenon is described so its essence comes from the "vantage point of an open self" where:

> . . . the content of the experience is dependent on myself as subject; experience presents to me its claim to validity: I must certify this claim…I, as subject, [am] … not only the source of validity of experience, but also of its significance (Moustakas, 1994, location 796).

Transcendental-Phenomenological Reduction exposes the ego and the influence it has over how meaning is made, reduces all experiences into phenomena, and reduces the experience to the frame of reference of the self. The method is a deliberate way of listening and seeing that opens the researcher to the phenomenon as a unique experience, making the observation meaningful and ever-present without influence of the internal experience of the ego. The endpoint is the essential feature of the essence as it is processed through the medium of the researcher (Moustakas, 1994).

The final process in phenomenology is Imaginative Variation, the reduction of an object to the structural description, leaving only the elements necessary, or pure essence. The structural description is then integrated with the Transcendental-Phenomenological Reduction, producing a "textural-structural synthesis of meanings and essences of the phenomenon or experience" (Moustakas, 1994, location 850). Using one's imagination, all possible explanations and meanings are applied to the experience, shifting approaches and perspectives to arrive at a structure of what represents the phenomenon. It is important to note that "all possible explanations" does not exclude any object or events, real or imagined, literally making anything possible. This structure represents the factors and conditions that must exist for the phenomenon to appear (Moustakas, 1994). The steps include:

1. systematic varying of the possible structural meanings that underlie the textural meanings;
2. recognizing the underlying themes or contexts that account for the emergence of the phenomenon;
3. considering the universal structures that precipitate feelings and thoughts with reference to the phenomenon, such as the structure of time, space, bodily concerns, materiality, causality, relation to self, or relation to others; and

4. searching for exemplifications that vividly illustrate the invariant structural themes and facilitate the development of a structural description of the phenomenon (Moustakas, 1994, location 2001).

Husserl recognized that all knowledge of the Other was created through the lens of one's own lived experience, or through the concept of intersubjectivity. Empathy is the mechanism through which the experience of the Other can be understood, *pairing* the self and the Other. First, one must understand his or her intentional consciousness through these described transcendental processes before perceiving the experience of the Other. This is explained and clarified by Schutz (1967) in Moustakas (1994): Everything one knows about another's conscious life is based upon the knowledge of his or her own lived experience.

Phenomenological exploration is a reflective process that produces a rich, layered meaning that has been refined and shaped. In this process of exploration, the phenomenon and the perception of the phenomenon are intertwined. The meaning of the experience is shaped by the perception of the experience and the meaning attached to it.

There is a temporal aspect to phenomenological exploration, understanding that experience of an act is fleeting, and what is left behind is the subject's perception of the experience. The perception of an experience may change overtime, with some enduring qualities that carry over to the next moment (Moustakas, 1994). This refers to the experience of an object, noting that the object never changes—no matter how many times one experiences it—maintaining some permanent features over time. After many reiterations, a unitary, identical phenomenon appears.

Quantitative Part of Study

The research also sought to measure the current level of reintegration using the CRIS instrument. The CRIS instrument measures community reintegration across three one-dimensional scales: extent of participation, perceived limitation in participation, and participation satisfaction (Resnik, Plow, & Jette, 2009). The ICF is comprised of 9 chapters that represent the domains of the model. Each domain is assessed with all three scales (see Table 1 for comparison between CRIS tool and ICF). For example, in Chapter 1 (learning and knowledge domain), the CRIS tool measured reintegration based on extent of participation, perceived limitations, and satisfaction.

The CRIS is a self-administered questionnaire that took approximately 15 to 30 minutes to complete for this study. In development, the CRIS was piloted twice on two different samples of wounded veterans (Resnik, Plow, & Jette, 2009). They recruited 50 participants for the first pilot and 76 for the second. Alpha coefficients for extent of participation (.91), perceived limitation in participation (.93), and participation satisfaction (.97) were excellent, demonstrating internal consistency (Resnik, Plow, & Jette, 2009). Compared to other validated instruments, the CRIS correlated well with the Short Form 36 (SF-36; $p < .01$) for the constructs of physical function, role physical, role emotional, and social function (Resnik, Plow, & Jette, 2009). In addition, the validity was established by face validity, item fit, and Rasch residual factor analysis with greater than 50% of the variance explained by the Rasch model (Resnik, Plow, & Jette, 2009). The CRIS was chosen for the study because it was specifically designed to measure reintegration for wounded veterans. The tool had a limited number of items compared to other instruments and was easy to administer, inexpensive, valid, and reliable for the study population (see Appendix A for CRIS tool and Appendix B for author permission).

Philosophical underpinnings of the quantitative approach to the study. According to Groves (2011, p. 864), organized survey research began in the 1940s, arguing that surveys were a "key tool for hearing the voice of the people." Initially, surveys were face-to-face encounters and were used to keep the government politicians informed about the wishes of the people. Now, surveys are distributed over the phone, through the mail, or the computer, and they are used collect data about the consumer. However, in health science research, the questionnaire remains a pragmatic method to gather data and determine population needs. Survey research methodology is strongly rooted in improving society by giving voice to the populace and is, therefore, useful in science to make inferences about large populations based upon a representative sample of participants.

Procedures

Phenomenology is the study of the lived experience from a first-person perspective. It respects the evidence present in the experience that cannot be empirically measured or quantified. This is the basis of all knowledge, the understanding of the thing itself without prejudice and bias. It has scientific rigor because of the systematic and orderly way of conducting human studies research.

Phenomenological research begins with a question. The question for this study stemmed from a deep personal curiosity about a topic with both social and personal significance. The focus was on qualitative factors that sought to understand a phenomenon, not to predict or determine causality. Careful comprehensive examination and descriptions by the researcher provided a vivid and accurate description from an emic perspective instead of a measurement or score, which is founded in etic approaches. The researcher ceased data collection when saturation was met and no new data were collected (redundancy).

This study asked, “What is the lived experience of community reintegration for the severely wounded veteran?” The major components of this question were lived experience, community reintegration, and severely wounded veteran with the intent to seek comprehensive stories related to this experience. The subjective or qualitative experience took precedence over measurable factors related to this question, such as employment status, income level, or hobby participation.

Participants

This study recruited from a pool of polytrauma patients with associated burn injury. There were 990 veterans treated through the USAISR Burn Center between 2003 and 2013. Of those veterans, 819 were still living at the time of a study published on post-discharge cause of death in combat burn casualties (Escolas et al., 2014). Qualitative researchers recommend a sample size of 5 to 25 (Creswell, 2013). The study participants were recruited from the San Antonio, Texas area or within a one-day drive, for convenience. The participants for both qualitative and quantitative portions were the same.

Inclusion/Exclusion Criteria

The inclusion criteria were veterans who were injured while deployed (combat or non-combat) in support of OIF or OEF and received burn care and follow up through the United States Army Institute of Surgical Research (USAISR) Burn Center. Burn injuries not sustained while on deployment were excluded. The Burn Repository collects data on all burn injuries treated at the USAISR, which was used to identify potential participants.

Setting

The qualitative interviews took place in the homes of participants. The quantitative questionnaire was administered at the same location as the interview.

Study Definitions

The study definitions are presented in Table 3.

Table 3

Study Definitions

Cluster of meaning	The grouping of significant statements into themes[a]
Depression	Depressed mood or loss of interest in or pleasure in daily activities for more than two weeks[b]
Epoche	Setting aside, bracketing, personal experiences[a]
Essence	The property of something without which it would not be[c]
Family member	A family member of a veteran
Failed community reintegration	Description of the veteran that is marginalized, i.e., not reintegrated into the community, evidenced by criminality, violence (suicide, murder, etc.), and houselessness
Horizonalization	Part of data analysis that extracts significant statements[a]
Imaginative Variation	Structural description of an experience[a]
Intentionality	The mind's awareness is always directed toward an object[a]
Intersubjectivity	The way one understands another's experience, through comparison of one's own experiences[d]
Noema	The meaning that one has about a perception of an object[d]
Noesis	The act of perceiving an object[d]
Phenomenology	"Knowledge as it appears to consciousness; the science of describing what one perceives, senses, and knows in one's immediate awareness and experience"[d]
Polytrauma	Injuries to multiple body parts; may include traumatic brain injury, amputation, and burns[e]
Posttraumatic Stress Disorder (PTSD)	A trauma or stress-related disorder that has a cluster of four symptoms: intrusion, avoidance, negative alterations in cognitions and mood, and alterations in arousal reactivity[b]
Reintegration, community	Participation in life roles outside the home.
Severely injured/wounded	Synonymous with polytrauma, used to describe the veteran with multiple injuries and disabilities related to the complex nature of their injuries across multiple systems.
Textural description	The description of what the participant experienced[a]
Total burn surface area (TBSA)	Refers to the calculation of burn size by percent of body surface area[e]
Transcendental Phenomenological Reduction	A process outlined by Moustakas (1994), that includes identifying a phenomenon, bracketing, collecting data and analyzing the data by developing textural and structural descriptions of the experience to develop the final essence of the experience[a]
Traumatic Brain Injury (TBI)	An injury to the brain caused by a blow to the head or an object penetrating the brain[f]
Triangulation	Method of confirming findings using three independent measures[g]
Veteran, military	For purposes of establishing eligibility for benefits, a person who has served in the active military and discharged under general or honorable conditions. This includes activated National Guard and Reserve members. An example is a Reservist who deploys to combat or is activated for training[h]

Note. [a] = (Creswell, 2013), [b] = (Jouria, 2014), [c] = (Dictionary.com, 2015), [d] = (Moustakas, 1994)

[e] = (polytrauma.va.gov, 2016), [f] = ameriburn.org, 2015), [g] = (Miles, Huberman, & Saldaña, 2014), [h] = (Moulta, 2015)

Data Collection

Interviews were audio recorded and transcribed by a transcription service (Transciption Panda). In addition, the researcher took notes during the individual interviews. Transcribed data were coded and entered into a table for analysis. The quantitative survey questionnaire was provided to participants in paper format, and the data from these questionnaires were entered into an excel spreadsheet for scoring and analysis.

Chronology/Timeline

The study was a convergent parallel design where qualitative and quantitative data are collected during the same visit with the participant but in a sequential manner (see Figure 2 and Table 2). In phase 1, months 1 through 6, qualitative interviews occurred with 6 participants. In conjunction with interviews, quantitative survey data were collected. In phase 2, months 7 through 8, results from the interviews and surveys were merged. In phase 3, months 9 through 10, the merged data were interpreted.

Instruments

According to Creswell (2013), in qualitative inquiry, the researcher is the key instrument. In this study, the researcher examined documents, used open-ended questioning and observations, and interviewed participants to gather data. In this way, the researcher only relied on the self to gather data from multiple sources.

For the quantitative part of the study, the CRIS instrument measured community reintegration across 9 domains of the ICF: learning and applying knowledge, general tasks and demands, communication, mobility, self-care, domestic life, interpersonal relationships, major life areas, and community social and civic life (Resnik et al., 2009). The CRIS has 152 items divided among three sections: extent of participation (47), perceived limitations (53), and participation satisfaction (47). Reliability and validity were established on wounded veterans, including those with burn injuries.

The study variables consisted of demographic and descriptive data and reintegration scores. Variables related to military service and general demographics were chosen to describe the sample of veterans who participated in the study. The interview data represent the currently unknown variables that

were discovered during the qualitative part of this study. The study variables and the data locations are presented in Table 4.

Table 4

Study Variables and Location of Data

Study Variables	Location of Data
Demographic/Descriptive Variables	
Age	Survey
Gender/Sexual Identification	Survey
Branch of Service	Survey
MOS	Survey
Rank	Survey
Number of Deployments	Survey
Years of service	Survey
Year of service entry (pre-9/11 post-9/11)	Survey
Reintegration Measurement Variable	
CRIS Score	Survey

Note. MOS = Military Occupational Specialty; CRIS = community reintegration of injured service members tool

Data Management & Analysis

Qualitative Data Analysis Process

The Moustakas (1994) approach to phenomenological data analysis process, as described by Creswell (2013), is as follows:

1. Go through the data and highlight sections of quotes or statements that represent the experiences of the phenomenon (horizonalization).
2. Develop clusters of meanings from these statements.
3. Write a textural description of the experiences.
4. Write about the context of the described experiences (imaginative variation or structural description).
5. Write a personal statement about how these factors have influenced the researcher's position.
6. Write a composite description that is the essence of the phenomenon that describes the underlying structure. Pages 81-82.

Quantitative Data Analysis Process

The survey was administered to the participants of the qualitative interviews according to the participant's preference: either immediately prior to or after the interview. Participants 1, 2, and 4 completed the survey prior to the interview. Demographic data (e.g., age, gender/sex, combat deployments) were analyzed with descriptive statistics. The CRIS instrument was evaluated using Cronbach's alpha.

Establishing Reliable Data

After each interview, the participant was asked if he or she could be contacted in the future to assist with *member checks*. The participants were provided with the preliminary analysis of the qualitative data (themes and sub-themes) and asked to comment on them. After reaching saturation, when no new data were added, Participants 1 and 2 were contacted for member checking. This was performed over the phone and was not recorded.

Establishing Trustworthiness

After both the qualitative data and the CRIS scores were computed, these data were compared to the findings in the literature search, including the ICF model. This process is called triangulation: using three different sources of information to help explain findings through comparison (Miles, Huberman, & Saldaña, 2014). In addition, the researcher followed the approach to phenomenological data analysis as described by Moustakas (1994) to ensure that the process of analysis was documented.

Human Subjects Considerations

Only sanitized de-identified data that were stored on a computer designated for this study were included in the analysis. All personally identifiable information (PII) listed on the contact sheet (e.g., names of participants, contact information) was stored in a locked file. Personal identifiers (e.g., zip code, birthdate) were masked by a unique code and kept separate from the contact sheet.

This research involved disabled veterans who may have had mental impairment due to their injury. Although the qualifying participants could have been classified as members of a vulnerable population for research purposes, the Institutional Review Board (IRB) deemed this study as exempt. To maintain a low risk to participants, the collected data that included PII and personal health information (PHI) were kept separate.

Potential Risks

The potential risks to the study participants included unintentional disclosure of PII and PHI, loss of time, and mental distress. This study took precautions to prevent any of these potential harms from occurring.

First, informed consent was obtained from all participants despite the exempt designation from the IRB (see Appendix B). Participants were provided a paper copy of the consent form, which gave them contact information for the study and served as a record of their participation.

To contact potential research subjects, the researcher needed names and contact information (last known phone number and address). A contact sheet was created from the data provided from the Burn Registry that contained the participant's name, contact information (last known phone number and address), birth year, and the first three numbers of their zip code. Once a participant consented to the research, a unique code comprised of their birth year and the zip code numbers was created; this code was the only piece of PII used to identify participants on transcribed interview data and notes (if more than one participant shared the same zip code and birth year, a letter was added). The contact sheet was kept separate from the code sheet. To provide an extra layer of protection, only the interviewing researcher had access to the contact sheet. Once the study was complete, all PII/PHI data (provided by the Burn Registry) were destroyed (i.e., files were deleted). In addition, audio recordings of the interviews were destroyed after the study was complete.

This research specifically addressed PTSD, depression, and TBI. Therefore, during the qualitative interviews, there was a possibility that participants could become uncomfortable and have psychological or emotional reactions recalling traumatic experiences related to their injuries or recovery. As an advanced practice nurse with clinical training in adult mental health diagnosis and treatment, the researcher had completed training in trauma first aid that included recognizing psychological distress and using strategies to mitigate it. Strategies were focused on stabilizing the emotional response to trauma. There were no emotional reactions to the interview content from participants. Family members or significant others were nearby during interviews for three participants, and their presence may have prevented possible emotional reactions. Two spouses came home at the end of the interviews while those participants completed the survey. One participant's spouse was in another room of the home during the interview process. None of these participants displayed any signs of distress during the interviews. In addition, all participants were veterans eligible for care within the VA health care system for a service-connected disability. Therefore, the researcher was prepared to provide participants with contact information for the local VA mental health care clinic that they could use as well as all community partners that were available to them. Family member participants may not be eligible for VA mental health services, so civilian source options and contact information were also prepared to provide to them. None of the participants or their family members required this information.

In addition to mental distress, there was a chance that, due to comorbid injuries (TBI, in particular), participants could have become disinterested, bored, or fatigued during the study visit. Qualitative interviews lasted as long as the participant tolerated, with 15-minute breaks scheduled every 45 minutes for interviews lasting over an hour; however, participants could take a break at any time during the interview. None of the participants required or requested a break. In addition, all participants and proxies had the right to withdraw from the study at any time; none of them requested to withdraw. The CRIS tool (152 items) was completed in 45 minutes or less for all participants.

To provide an additional measure of comfort, interviews were conducted at locations determined by the participants; all took place in the participants' homes.

Since this research involved participants who may have had cognitive impairment or who lacked the capacity to provide informed consent, this study followed special considerations for participant protection. The veterans targeted for this research were those with severe injuries that included TBI, the "signature injury" of OIF/OEF (Okie, 2005). Participants with TBI were likely to have had trauma experiences that impacted reintegration; therefore, excluding participants with TBI was not an option.

Although this was an IRB-exempt study and consent was not required due to the low risk to subjects, subjects were still screened for capacity to consent to the study. Participants were asked to answer the following questions during the initial recruitment phone call: Do I have to participate in this study, or is it okay to say no? What are the main things that will happen in this study? What is the purpose of the study? All participants were able to answer correctly; therefore, capacity was assumed.

If a participant was unable to answer correctly but still wished to participate, the researcher was prepared. According to Texas law (a state in which the study was conducted), individuals may participate in a study if they have a legally authorized representative (LAR). Therefore, for study participants living in Texas, Texas state law that describes who can serve as a LAR and the corresponding rules were applied. This research did not include treatment and was not a clinical trial, so medical evaluation was not necessary prior to enrollment (see Appendix D; Perry, 2008).

Potential Benefits

There were no real benefits to study participants other than the potential for participants to have their feelings heard or acknowledged and/or believe their participation may improve the lives of others.

Study Limitations

A major limitation of this study was bias because of recruitment from convenience samples at the U.S. Army Burn Clinic and the San Antonio burn survivor support group. The convenience sample included only those with polytrauma and associated burn injury. Participants who lived in San Antonio, Texas, represented a small portion of the total population of injured military veterans. An effort was made to include all veterans who wished to participate in the study as the study budget allowed. Therefore, two participants who lived a day's drive from San Antonio—the researcher's home base—were included in this study.

Participants who belong to support groups may have different experiences than those who do not belong such groups. To minimize potential bias, an effort was made to recruit participants who represented both situations.

There were limitations directly related to methodology of the study; however, integrating both quantitative and qualitative data helped mitigate the limitations of each method by addressing the weaknesses inherent in each. The qualitative methods of the study, or interviews, limited the generalizability, were inherently subjective, and relied on the participants as experts. Only veterans with polytrauma and associated burn injury living in Texas were recruited. The small number of participants (n = 6) limited the ability to generalize the findings to the larger population of veterans. Furthermore, the interviews were subjective and relied on the participants' versions of truth.

The questionnaires, though quantitative in nature, limited the type of data that could be collected to the bounds of the survey questions. Not only are surveys dry and impersonal, but the CRIS tool is a lengthy instrument that contains 152 questions. Resnik et al. (2009) noted that the length of the survey may impact user satisfaction and overall completion rates, limiting its clinical utility. The instrument also had limitations related to reliability; if some questions were skipped, the total score could be influenced. None of the study participants for this study skipped questions. However, in the study sample used to create the CRIS, respondents in that sample who were not working or parenting answered fewer questions. Since the total scores were a summation of the core items, the tools were revised to eliminate those items, followed by sensitivity testing of the instrument. Resnik et al. (2009) found no large effect from the excluded items, and the significance and magnitude between both the original and revised

versions remained unchanged. However, it was noted that the tool might not be generalizable to other samples, representing a limitation when using this tool for use in samples taken from other populations.

In addition to survey burden issues, the sample size of 5 to 25 (n = 6) participants represented a potential limitation. Although the size was adequate for phenomenology, it may represent a limitation for the quantitative data by limiting generalizability. The survey data was used to correlate the variables for the participants and had limited representativeness for the population.

Summary

The literature regarding how best to assist returning injured veterans reintegrate into the community, address their disabilities, and find their place in civilian society was narrow and did not reflect the first-person experience in most instances. Resnik et al. (2009) studied the concept of reintegration from a first-person perspective and developed a valid tool to measure reintegration, which was largely based on the subjects' level of participation in key aspects of living. However, close examination of the methodology revealed significant bias as the interview data was coded using a definition of reintegration formed by the VA and adapted from the ICF framework to measure disability. Although pragmatic, the tool created to measure reintegration did not include other factors impacting participation. In other words, the tool did not explain why veterans are able to participate or not participate in the process of reintegration. Therefore, this research took a different approach to augment the findings from previous work by specifically exploring areas not measured by the existing tools.

This study aimed to gain a deeper understanding of community reintegration, uncover community attributes that impacted that process, and identify factors that impacted reintegration scores. A mixed-method approach enabled an expanded understanding of the phenomenon of reintegration from a deep and personal level while simultaneously gathering quantitative data. The final phase in this approach, triangulation, compared the qualitative and quantitative data to the current literature in order to provide an explanation for the findings.

Chapter 4: Results

Chapter 4 presents the findings of this study that explored the community reintegration of the severely wounded veteran. Included are a description of the sample, the qualitative and quantitative results in table and narrative formats, and a summary.

Description of the Sample

Research participants were recruited from a list of veterans meeting the inclusion criteria. The researcher conducted interviews with 6 veterans (male: 5, female: 1; age range 30–55 years) with severe combat burn wounds. All had burn care provided at the USAISR on Joint Base San Antonio, Texas (see Table 5 for demographics).

Table 5

Participant Demographics

	Age	Sex	% TBSA Burn	Branch	MOS	Number of Deployments (total months)	Years of Military Service	Level ED	Marital Status
P1	43	M	20–39	Army	MP	2 (12)	5	AD	S
P2	55	F	20–39	Army	MEDIC	1 (4)	17	HS	S
P3	50	M	20–39	Army	INF	4 (40)	28	AD	M
P4	42	M	20–39	Army	SCT	2 (18)	8	SC	C
P5	36	M	40–59	Navy	EOD	4 (30)	9.5	BD	M
P6	30	M	20–39	Marine	SPO	4 (27)	8	HS	C

Note. P = Participant; M = Male; F = Female; MOS = Military Occupational Specialty; MP = Military Police; INF = Infantry; SCT = Scout; EOD = Explosive Ordnance Division; SPO = Special Operator; ED = Education; AD = Two-year Degree; HS = High School; SC = Some College; BD = Bachelor's degree; S = Single; M = Married; C = Committed Relationship

Quantitative Results: CRIS Scores

All 6 participants completed the 152-question CRIS tool over 15 to 30 minutes. Higher CRIS scores indicate better reintegration, with the maximum possible score being 210 for the entire tool. The mean for the group was 157, with total scores that ranged from 142 to 180. The CRIS subscales (all with a max score of 70 each) were broken down as follows: Extent of Participation (EP) scores ranged from 43 to 56 (M = 50, SD = 5.7), Perceived Limitations (PL) scores ranged from 42 to 63 (M = 52, SD = 7.8), and the Satisfaction (S) scores ranged from 49 to 64 (M = 55, SD = 7.8). See Table 6 for participant raw scores.

A reliability analysis was performed on the CRIS scale comprising 151 items. Test question e1.2 was removed because it had zero variance. Cronbach's alpha showed the CRIS to have acceptable

reliability (alpha > .70) with an alpha = .97 (SPSS, v 19.0, 2017). Item analysis revealed that all were worthy of retention; however, alpha levels greater than .90 may indicate too much redundancy in test items, not necessarily more reliability. In addition, alpha levels greater than .90 do not ensure unidimensional test items. The subscales EP, PL, and S all had high reliability as stand-alone tests; specifically, the EP alpha = .84 (*n* = 49), the PL alpha = .96 (*n* = 53), and the S alpha = .89 (*n* = 48). Due to the small sample size (*n* = 6), other exploratory analyses or statistical tests for significance could not be performed.

Table 6

Participant Community Reintegration Injured Service Member Raw Scores

	Extent of Participation	Perceived Limitations	Satisfaction	Total
P1	47	46	49	142
P2	55	49	64	168
P3	43	42	44	129
P4	45	52	54	151
P5	56	63	61	180
P6	54	58	58	170

Note. P = participant

Qualitative Results: Transcendental Phenomenological Reduction

All 6 participants gave 30- to 60-minute interviews that answered the question, *Can you tell me about your experience reintegrating into the civilian community?* Interviews were recorded and transcribed verbatim, then entered into NVivo qualitative software for analysis and subsequently entered into a spreadsheet for organizational purposes. Statements that represented the experience of community reintegration were highlighted (horizonalization), and clusters of meanings were created from these statements. To ensure all codes were considered for analysis, the researcher reviewed participant interviews that had been previously coded and clustered using an iterative approach. Textural descriptions of the experiences were written to include the context of the experiences. Memos were written by the researcher to explain how the content of the interview impacted the researcher's interpretation and to provide a pathway about the data analysis and interpretation (i.e., auditability). A composite description was written by the researcher that was the essence of the phenomenon of each veteran's community reintegration, including the underlying structure of the process. Member checking

took place with Participants 1 and 2; both confirmed the initial interpretation. Finally, saturation was reached after the completion of the interview and analysis of Participant 6 because no new codes or clusters were found in the content of the interview.

Exhaustive Description of the Results of the Analysis of the Data

The exhaustive description of the phenomenon of reintegration for the severely wounded veteran is a collection of sub themes, themes, theme clusters, and theme categories derived from the interview collected from the 6 study participants. The analyses resulted in two theme categories, eight theme clusters, and 73 themes and sub-themes. See Table 7 for the content and analysis for theme 1.

Table 7

Theme 1: Supportive Community

Theme Cluster	Themes	Sub Themes
Veteran-Specific Support (All)	Military life is different Have to filter ourselves Whole different ball game None of their business	Civilians do not understand Not concerned about rank or prior service Something missing Civilians have a lack of respect
Burn Care/Burn Injury (All)	Non-visible scars and disability	Persistent health issues TBI
	Visible scars and disability	Continued need for scar revision Wound failure Self-image problems Need for mobility assistance
	Medication side effects	Sexual dysfunction
	Persistent psychological issues	Anger, PTSD, anxiety
	Remembers in and out patient care	Satisfied with care Delirium
Peer Relationships (All)	Providing support Receiving support Proximity to military community Prefers military-like community	Need to give back Other military “get it” Many opportunities to give and receive peer support Seeks out these experiences
Education, Work, Hobbies (P2, P4, P5, P6)	Education	GI Bill See if brain works Duty to further education
	Work, paid and unpaid	Can be overwhelming Prefer meaningful work
	Hobbies/recreation	Prefer military like (guns, hunting) Opportunities with wounded warrior groups
Financial Benefits (P2, P4, P5)	Charity	Charity home built for them Did not want charity
	Tax Relief	Tax relief Free recreational opportunities Free medical care

Note. P = participant

Theme Category 1: Supportive Community

Theme Cluster 1: Veteran-Specific Support. A supportive community is one that provides veteran-specific support for the following components: burn care, peer relationships, finances, work, hobbies, and education. A supportive community facilitates the reintegration process.

All participants noted differences between the civilian and military communities that impacted their ability to reintegrate and their choice to retire in their current city and state.

Despite noting that his long time spent as a civilian was helpful in his transition, Participant 1 noted that

> the military doesn't teach you that s!@#. They teach you their way. They don't teach you how to freaking...how to deal with civilians in a way. It's a whole different freaking ballgame. The military is going to tell you when to eat, when to s!@#, when to get up, when to eat, where you gotta be at. You become a civilian that changes the whole. No one's telling you that kind of stuff.

Participant 1's experience with the wounded warriors at a volunteer center was that the veterans wanted their "hands held." The experience shared by Participant 5 indicated this when he stated, "So, uh, coming out … it was a shock. I think sometimes the lack of, um, uh, ownership of certain things, like, 'Oh, somebody else will take care of it.'"

Participant 5, stated that, to him, even in his present civilian career, "there's something missing," and he noted that "we have to filter ourselves from other people who have never been in the military." Participant 6 provided further evidence about this when he explained that he was not prepared to be in the civilian environment:

> You get out of that heavily influenced environment and you are forced to like see the world without…without that lens. If you're product of your environment and your environment like creates this thing and like says this is okay and this is your new norm psychologically, then that becomes who you are. And like, so, like I've got some really good impulse control. Let me tell [you]. I have a clean record so I have some really good impulse control. But, like this very fact that I have to deal with that is a product of the Marine Corp. Now is that a necessary thing?

This perspective was also noted by Participant 2 when he stated, "We live in a visceral [sic visual] society, and people put everything online. I don't tell my [civilian] neighbors about my injury. They probably wonder how I have cars, a home, living like this without working. It's none of their business." Participant 5 recalled a similar experience when he was still in a wheelchair, visibly injured, and scarred after his release from the hospital. It was very difficult for him to look at himself, and when he tried to "forget about it," he noticed other people staring at him, and that bothered him. He also remembered that, in classes, some students would ask him about his injuries, and one professor snapped at one student for

asking. Participant 5 spoke up, stating, “For us it’s okay,” and told his class how he was injured. He noted, “I won’t tell them everything, but enough to satisfy them … because I know there has to be a filter for them.”

Participant 1 stated that veterans want recognition for their rank and what they did in the military, and he added his perspective about the civilian community’s appreciation of the military, which was that the civilian community does not actually care about what the veterans have done. Although civilians may “thank you for your service,” they are not concerned with the rank structure that exists in the military and what this indicates. Participant 6 recalled being an inpatient at the VA hospital and his treatment by one civilian; he specifically recalled the lack of respect he perceived with this encounter:

> I like come out of my room one day and this guy is ‘like good morning.’ I said ‘hi.’ And he said, ‘hey excuse me. I believe I told you good morning.’ Like are you … are you f!@#in kidding me. But like, you know, and that was just one experience that kind of stuck out but like. You know, you would think that that's not a very big deal but when you're at the weakest point of your entire f!@#ing life and people are acting like that when they're job is supposed to be trying to help you and people are f!@#in assholes and treat you like you're some brain damaged freakin child that you gotta bring around on a leash.

Participant 3 noted that his current home is “one of the most pro, supportive military places I’ve ever been,” further commenting on the abundance of programs to “help wounded soldiers get reintegrated.” Another veteran, Participant 2, stated she chose to live in San Antonio rather than return to her home of record (the state where she entered military service) because she felt safer in San Antonio; returning to her family would expose her, and her family would take advantage of her military benefits.

Theme Cluster 2: Burn Care and Burn Injury. All participants noted elements of their burn injuries, including physical and psychological injuries, and the care that they received for these. All participants received free medical care and additional military benefits through the VA.

Participant 1 discussed how his burn scars were not visible, and many do not know he is a burn patient. He noted that the burn injury “affects my life now, too. It affects me going into the sun. It affects hot water, hot weather … the thermostat’s all jacked up in the body.”

Participant 2 recalled her time spent as a patient and that she had a hole in her leg the “size of a grapefruit” that had to be repaired. She felt that they put her back together and helped her get well. She continues to return to the VA for scar revisions and laser treatment, and she plans to return for HO issues she has that cause her pain.

Participant 3 noted that it took him a little over four years to medically retire while he had multiple surgeries to repair areas of wound failure. He has chronic health issues from his injuries, including foot drop on his right foot due to nerve damage from his knee to his toes. He also has TBI, likely from the blast but also from anoxic injury that occurred during his resuscitation. He recalled it was noted in his medical record report that he had to have his heart started twice, stating it "took them 8 minutes to get me started … So, I went without oxygen for a long time, and I have some traumatic brain injury. Sometimes I talk and the words don't come out right." He believes his memory issues are related to his TBI, which has impacted his reintegration. He loses track of what he is saying in conversations, forgets what he is watching on TV, and has trouble with mathematical calculations. He tries to improve his concentration with memory games and staying oriented with his gun collection. He studies his guns and tries to remember specific characteristics, such as cartridge sizes. He has some issues with self-image; he noted that he "used to be real vain" about his hands, which he considered his best feature; however, while he is bothered by his scars, he feels being bothered by the scars is "silly." His mobility issues impact him daily. He stated that he can "hobble" around inside his house, but he usually uses forearm crutches to assist with ambulation. If he overdoes it, he must use a wheelchair. He was also given a left foot accelerator for his truck through the CFI. At the end of the interview, he stated that he does not have sex with his wife. He stated that he has a lack of desire, which may be due to the medication he takes.

Participant 4 was injured 10 years ago and stated that it has taken him this long to reintegrate and "find my place again." He was injured by a 700-pound IED that burned roughly one third of his body, mostly his upper torso, face, head, and arms. He has visible burn scars on his face, and his nose and ears are missing. He has magnetic prosthetic ears. In addition to physical challenges, he noted he had struggled with PTSD, anger, and anxiety. He also has sexual issues that contributed to the demise of his marriage. His sexual appetite was more than his spouse's, which he attributed to his PTSD. He did not take medication for psychological issues and felt his PTSD manifested in the need to have sex "every one or two days"; otherwise, his PTSD was unmanageable. He sought care through holistic methods and advocated an herbal supplement that he felt managed his PTSD. He also noted he only felt suicidal while taking medications for PTSD. He stated, "I'm happier and healthier than I think I've ever been."

All 6 participants discussed elements of their burn care. Participant 1 stated, “you can’t beat the medical care [at the USAISR].” Participant 2 stated, “I had more concern and love while I was [at the burn center].” Participant 3 stated it was “awesome” to have care during his 7 months as an inpatient before transferring to outpatient care at the CFI for three months. Participant 4 stated, “I would not be where I am at if it hadn’t been for OT and PT” at the burn center. Participant 5 discussed the bond he had with his therapists at the burn center. Finally, Participate 6 mentioned he preferred the care he received while at the burn center over the care that followed at his VA hospital.

The care elements that were remembered were not all positive: some care elements related to delirium, mental health challenges during recovery, and symptoms of PTSD. Participant 6 still remembers the delirium he experienced, which included frightening hallucinations:

> My father walked into my room. I got f!@#in … I was pissed. I was like “what are you doing?” And he said, “well I’m visiting you,” and I said, “where’s your body armor?” because like, I was looking at him and we were in a GP [general purpose] tent.”

Patient 5 recalled the persistence of the therapists and that “they didn’t let me pity myself,” and they told his wife “tough love’s good.”

Participants 1, 3, and 6 remembered anger issues during their recovery and reintegration. Participant 1 had trouble interacting with a man in public who appeared of Middle Eastern descent; he would not allow the man and his family to get on the elevator with him and his family. He recalled angrily telling the man, “You’re not getting on this f!@#ing elevator.” Participant 3 stated he had anger issues for a long time: “Everybody was wrong and I was right, and I was mistreated, and this wasn’t how it was supposed to be.” Participant 6 noted severe anger problems with activities that could have resulted in his being arrested: “I got escorted out of like places fairly regularly by police. I was mean.”

In addition, there were participants who shared experiences that indicated their mental health was severely affected. Two participants noted having to take antidepressants during their recovery and reintegration process. Participant 4 acknowledged symptoms of PTSD: “When I was inactive, my mind played tricks on me and made me think, you know, the boogeyman was out to get me. I was having panic attacks every time my phone would go off. It was just … it was terrible.”

Theme Cluster 3: Peer Relationships. All participants noted the importance of professional and nonprofessional peer support and relationships.

Participant 1 said he continues to support other wounded veterans, which helps him fulfill his need to serve and give back. He stated, “I needed them more than they needed me.” He participates almost daily in events to help other wounded veterans learn how to navigate the civilian world.

Participant 2 stays connected to other veterans and goes on a yearly trip to Houston to play golf and meet “a lot of important people.” She also enjoys being outdoors and loves the area that she lives in because of the parks that she can enjoy.

Participant 3, despite his health and mobility difficulties, enjoys hunting. Through the Wounded Warrior programs and Texas Trophy Hunters Association, he has been able to participate in hunting. He feels the support of these programs has improved his reintegration process. He also likes living outside the “largest military base in the world” because it keeps him close to the military community.

Participant 4 chose to return to the San Antonio area, stating that the veteran support in the community is unmatched. He noted that San Antonio is “military city, USA” and that there are hundreds of veterans in his immediate community. He hosts dinners at his home and invites many veterans that are neighbors. They have been in the “same boat,” so they understand each other, and that is what he thinks veterans need when they get out of military service.

Participant 5 prefers military-like communities and has volunteered to work with military dogs so he can stay connected to the community. He has also participated in outreach activities held by his local police department because “they are like the military.”

Participant 6 noted his lingering bitterness from his first deployment to Iraq caused a heavy psychological burden that was finally treated at the CFI by a veteran behavioral health physician. Participant 6 indicated he felt supported by the physician: “So [I] started going to, the psych there at the CFI. And he's a cool guy like I can relate to him. He's former military so he … he gets it, you know.”

Theme Cluster 4: Education, Work, and Hobbies**.** Some participants noted using their military benefit, the GI Bill, for higher education or learning opportunities to further a civilian career. Participant 2 took some classes after her discharge using her GI bill. Participant 4 took some classes to learn how to become a motivational speaker. Participant 5 stated that, after he was diagnosed with TBI, he decided to pursue higher education and use his GI Bill to see if his “brain still worked.” He started taking business

degree courses while continuing with his physical rehabilitation. Participant 6 is currently in school, pursuing an economics degree.

All participants noted their work or volunteer activity. Three participants currently work—two with wounded warrior foundations, and one in the civilian sector. Two participants are fully retired—one of whom is unable to work due to his physical disability. Two participants volunteer with formal programs that serve veterans. Two other participants noted volunteering in an informal capacity with their local community, with one being part of a neighborhood watch and the other offering peer support to other wounded veterans. Participant 4 recalled his difficulties handling the stress of a job when he stated,

> it just became completely overwhelming. I couldn't keep up with paperwork, I was just—I felt like I was doing good things, I felt like I was meeting the organizational needs and demands on me, but at the same time, I still felt like I was falling short. You know, because I couldn't keep up with, you know, the … the … the logistical side of it. And, uh, or the administration side of it. So, you know, I found it very challenging, and I ended up having to leave.

Theme Cluster 5: Financially Beneficial. Some mentioned financial benefits for veterans in Texas. Two veterans received homes from charity organizations, and Participant 4 noted that "[receiving a home] was a tremendous blessing"; however, he also noted that the donated home came with a cost: property taxes. Three participants were cared for at the CFI, two of which received prosthetic lower extremities. The other veteran received a left-foot accelerator adaptor for his vehicle so he could drive using his non-injured leg to stop and accelerate. In addition, the CFI offered free recreational assistance. Participant 5 went cross-country skiing using a special prosthesis provided by the CFI.

Participant 2 noted the tax incentives for wounded veterans in San Antonio were a factor in her choice to relocate. However, she also choose to not move to her state of record because her extended family would take advantage of her veteran benefits. Another participant (P2) stated that "if he didn't earn it, he didn't want it," which was his reason for rejecting charity from civilian sources.

Theme Category 2: Future-Oriented Thinking

Participants noted they had to focus on their future, and those elements were comprised of a turning point, desire to continue service, discovering a new purpose in life, and posttraumatic growth. See Table 8 for Theme 2.

Table 8

Theme 2: Future-Oriented Thinking

Theme Clusters	Themes	Sub Themes
Turning point (All)	No longer able to do military job	Decided to move on Acceptance
	"Aha" moment	Could have been worse Finding a different purpose If he can do it, I can
Desire to serve (All)	Boredom Volunteer work	Tired of just doing stuff Need to help peers Need to help others Duty of Veterans to make way forward
New meaning in life (All)	Roles Staying active in community New focus	Parent Being busy helping others Pursuing education
Posttraumatic growth (P2, P3, P4, P6)	Being better than before	Happier and healthier now More humble now
	Second chance Overcoming guilt	Better parent Forgiveness for military actions Different person now

Note. P = Participant

Theme Cluster 6: Turning Point. All participants noted a turning point in their reintegration where they realized that they had to move on with their lives.

Participant 1 stated he always had a "game plan" for his life, but it changed abruptly with his injury. He realized he would no longer be able to stay in the military, and he did not have a college education. He knew he had to concentrate on his future and develop a new plan. He decided to medically retire after being offered a "desk job" (a job that does not require combat duties). He knew he would not be allowed to return to his previous job as a combat military policeman, and he was not interested in becoming a "desk sergeant." He remembered feeling badly about his injuries while an inpatient and not being able to do anything except take pain medication. Then he met another burn survivor at the rehabilitation center's gymnasium who had about 80% TBSA burned. The survivor called out and told him to "look at me," and Participant 1 realized his injuries could have been worse. Because of this realization, he became empowered to move on with his life.

Participant 2 stated succinctly that she “decided to move on” after her 62-day hospital stay to recover from her injuries. As a result, she built a house near the medical facility and joined a church in her community.

Participant 3 had a difficult time leaving the service because he wanted to continue to serve and do his job as an Airborne Infantryman. He “seriously struggled” with the realization that he would be out of the Army. He stated, “it was very discouraging to me when I felt like the Army didn’t want me anymore.” It took him two years to get over the feelings of disappointment, but he woke up one morning and told himself “be a man, quit whining, everything good comes to an end. You can either whine and cry about it until you die or live the life that you have left.” He noted that when he finally accepted he could no longer be in the Army, it was easier for him.

Participant 4 shared how quickly an experience can help one begin to move on:

> And then, all of a sudden, you meet somebody, you see a speaker on stage, you volunteer and something happens. It’s a—it’s that life-changing moment, that ‘aha’ moment, or that moment you find your purpose, is when people start living their life again and start climbing back up. And it’s that gradual climb if they can stay on that path.

Participant 5 remembered his experience meeting another amputee, which changed his perspective: “There was a guy that’s double above-the-knee amputee, and he was walking [in spite of that] and so, I couldn’t complain. And so, uh, if I was going to fall, I was going to suck it up, because if he can do it, I can do it.”

Participant 6 was out of the military for a short period of time and moved back to east Texas where he was raised. About a year after his discharge, he realized he was tired of spending his days “just doing stuff” he enjoyed without a purpose. He decided he wanted to go to school to study marketing.

Theme Cluster 7: Desire to Serve. All participants noted their desire to continue serving in some capacity after reintegration into the civilian community.

Participant 1 chose to stay in San Antonio to be near his daughter and to continue working at the local center that supports wounded warriors. He started volunteering at the center and decided to retire from the military. He stated, “This is why I stayed here in this place, is to give back.” Participant 2 continues to serve by working with a local church charity. Participant 3 considers himself fully retired but participates in an informal neighborhood watch; he feels his military skills translate to the civilian world because his job in the infantry was largely a security job. Participant 4 works for a well-known charity that

supports wounded warriors “to fulfill some kind of camaraderie and [give] back to the community.” In addition to his professional role, he offers peer support: “I do a lot of peer counseling; I talk to a lot of veterans.” Participant 5 found meaning in fostering military working dogs, and it helped him with his own rehabilitation. He stated, “I needed to get these dogs ready to help other people.” Participant 6 shared his perspective about service when he stated, “It’s the duty of the people who have these experiences. Of people who understand and empathize and understand the humanity of others to really make the way forward.”

Theme Cluster 8. New Meaning in Life. All participants discussed a new meaning in their lives once reintegrated in the civilian community.

Participant 1 had a new daughter soon after his injury and went through a custody battle to be a co-parent. He proudly showed his daughter’s picture, stating, “That’s my world.” Participant 2 stated, “I never give up. I keep moving forward. I enjoy life and I get out. I don’t live like a hermit.” She participates in her local church and finds meaning by helping others. Participant 3 also had a new child soon after his injury, so he feels he has a new purpose as a father—a second chance to do things better than he did for the daughter he had with his first wife. His daughter from his first marriage was 17 when he was injured, and he was not able to be around much while she was growing up because he was either deployed or in training to deploy. Now, he states, “I’m able to enjoy just about every day with [my new son].”

Participant 4 stated, “My purpose is leaving a legacy for my children. Because the only thing I have to give this world now, besides myself, is my children. When I leave, it’s my children, and then their children’s children.” Participant 5 stated his purpose was

> refocusing and knowing that I have to find new meaning, because before, it was EOD [explosive ordnance division], I’m going to protect my guys, and, uh, that was my job. And now I can’t do that, that was very … um, it hurt. And so, when I went to the four-year university, they had electrical engineering. I also worked as an electrician prior to EOD, and so I thought it would be really good having the business background and an engineering degree. And so, um, I started going and doing that, and, uh, I really enjoyed learning, and, uh, ended up, uh, double-majoring with physics and electrical engineering. I started getting a new focus of what I wanted to do.

Participant 6 noted that

> the crazy old f!@#s are dying and the new assholes are taking over, but, umm, you know … I feel the necessity to be one of those new crazy assholes that takes over, you know. So I don’t know exactly where I'm going in the future but I'm looking, you know, I'm looking at educating myself.

Theme Cluster 9: Posttraumatic Growth. Four participants acknowledged the impact of their combat injuries on their development—i.e., "posttraumatic growth" experiences.

Participant 2 stated she "became humble; [I] took life for granted till I got in the hot sauce, in the vinegar." Participant 3 stated he is now a better parent to his son [born after his injury] than he was to his daughter [born prior to his injury]. Participant 4 stated, "I'm happier and healthier than I think I've ever been" despite a 10-year process of reintegration.

Participant 6 stated, "So this is another thing I've kind of dealt with is the idea of being real strong versus fake strong. So, I feel, honestly, real strong now." Participant 6 also discussed how he had been able to forgive himself for mistakes in his past, which has contributed to a change in how he sees himself. Participant 6 stated,

> That's when I started to understand like you know I feel like you do more damage to yourself because you think of yourself as this great powerful thing and that you're important and you're all this bullshit. So there's no room to forgive yourself for mistakes. There's no room to understand reality when your brain is … When your mind is already made up, you know. So I started to understand like well I'm nothing special. I'm just, you know, I'm just some dumbass kid with a f!@#in bad early childhood and a poor … poor childhood through teenage year and poorly educated and shoved into a f!@#in meat grinder and like dumb as hell and like I'm nothing special. I'm nothing special. But in that you find forgiveness. You can say, well if I'm nothing special, like if I was just dumbass kid … Like dumbass kids do dumbass s!@#. You know, like I'm not the same person I was then. I'm not the same person I was a day ago and I can't control that either, you know."

Individual Textural Descriptions of Reintegration for the Severely Wounded Veteran

According to Moustakas (1994), the final process in phenomenology is *Imaginative Variation*: the reduction of an object to the structural description, leaving only the elements necessary, or pure essence. The structural description is then integrated with the Transcendental-Phenomenological Reduction, producing a "textural-structural synthesis of meanings and essences of the phenomenon or experience" (Moustakas, 1994, location 850). First individual textural descriptions of the phenomenon are created, then they are combined for a composite textural description.

Participant 1. The experience of reintegration was "easy" for Participant 1. He noted he had only served two years on active duty before his combat injury. He credits the ease of transition to the job he took at a wounded warrior center, located on the same campus as the military hospital where he was treated for his burn injury. He provides support to other wounded veterans, which helps him fulfill his need

to serve and give back, stating, “I needed them more than they needed me” to navigate in the civilian world.

The reintegration process was not without some difficulty. His wife left him during the process, and he “almost lost” his family. He had a new daughter and fought to be a co-parent. He chose to stay in San Antonio to be near his daughter and to continue working at the wounded warrior center.

Participant 2. Participant 2 stated she “decided to move on,” and after her 62-day hospital stay, she built a house near the hospital. She noted that the tax incentives for wounded veterans in San Antonio were a factor in her choice to re-locate to the area.

She is a very private person and does not want others outside of her inner circle to know about her injuries or her financial compensation. She noted that she is not comfortable exposing her physical scars; “that’s nobody’s business.” When the researcher conducted a member-checking phone call with Participant 2, Participant 2 noted that she keeps moving forward, gets out often, and does not “live like a hermit.” She further noted she “became humble” after her injury, and she feels like she took her life for granted prior to her injuries. She noted that she prays often for strength.

Participant 3. Participant 3 had a hard time getting out of the service because he wanted to continue to serve and do his job as an Airborne Infantryman. He “seriously struggled”; he did not want out of the Army. He stated, “it was very discouraging to me when I felt like the Army didn’t want me anymore.” Part of the reason it was difficult for him to reintegrate was because he made the Sergeants Major’s list (as in, he had met all criteria to be promoted to Sergeant Major) a year after he was wounded. He stated, “Every enlisted soldier wants to make it all the way to the list.” Because he was still in intense recovery and learning how to walk, Participant 3 was offered a position as “the poster child for the Wounded Warrior Program.” The job would be to encourage other wounded warriors during rehabilitation. Instead, he chose to get out of the military. He stated, “If I couldn’t chase bad guys or lead soldiers chasing bad guys, I wasn’t gonna do anything else.”

Participant 4. Participant 4 was injured 10 years ago and stated it has taken him this long to reintegrate and “find my place again.” Despite taking reintegration courses prior to leaving military service, he said he did not retain any of that information. He was medically discharged three years following his injury, after “50-something surgeries.” He stated, “I just couldn’t do it anymore.” He wanted to

stay in, but his wife and his family did not support him. According to Participant 4, his family said, “Hell no, we don’t want you in the military.”

He recalled he had a lot of job offers that did not pan out; when he went to apply, he felt the offers were not meant for him to take seriously. After getting out of the military, he felt he needed some kind of job to “fulfill” his life, to “give back to the community.” He decided to volunteer and donate his time as a public speaker, but he found being on the road was challenging because he was often separated from his family. He could not be home where he was needed and financially support his family. He spent a great deal of his own money to tell his story. In addition to the motivational speaking, he had a home inspection business that he could not make successful. He stated, “nobody would hire me.” Finally, he said he “turned it over to the Lord.” He realized using the money from the speaking to pay for his failing business at home could not continue; however, he could not get his wife to agree. She “would not get on board.” It ended up costing him his marriage because the alternative was suicide. He noted he had contemplated suicide once or twice prior to the decision to discontinue his home inspection business. Now he spends half the year at speaking engagements away from his children and feels some conflict over this. He asked, “Am I gonna have to do this all my life?” He wants to “leave a legacy” for his children, which is his stated purpose right now. He seeks care through holistic methods and advocates an herbal supplement that he feels manages his PTSD. He also noted that the only times he was ever suicidal was when he was medications for his PTSD. He stated, “I’m happier and healthier than I think I’ve ever been”

Participant 5. Participant 5 recalled he was still in a wheelchair, visibly injured, and scarred when he was released from the hospital. He said it was very difficult for him to look at himself, and when he tried to “forget about it,” he noticed other people staring at him, which bothered him. He was acutely aware of his propensity for self-pity, which he thought would cause him to become a “recluse.” He also believed his self-pity would cause him to rely on others to do things for him. He stated, “I was aware of it … I’d have to pull back … and say, ‘wait, I can do this for myself.” He further noted, “I don’t have full function of my hands. But instead of saying, ‘I can’t do it,’…it was, ‘how can I do it?” He started changing his thinking process after reading the business book *Rich Man, Poor Man*. He uses this technique to plan out activities he finds mentally challenging. For example, he noted he must sit and think through how he will do something prior to engaging in that activity.

He did not want to leave military service. He planned to stay in, become an officer, and eventually retire. After his injury, he was offered the opportunity to return to EOD (the military unit that removes and dismantles bombs on the ground and underwater) and stay in the military, but he knew he would be unable to fulfill the functions of the job. He felt he would be "in the way" and would be taking away a position from someone who could wear the "bomb suit, still go diving." He did not want to take up a position, and he did not want to move his family, either.

Participant 6. Participant 6 is currently in school, pursuing an economics degree. He did not want to leave the military but stated, "the injury … it took the career from me." He spoke of the amount of meaning he derived from his military job as a "purpose to his existence." He stated, "a lot of people, including myself, are really in there for the experience." He further noted, "you can't do the job you worked so hard for and that you loved," and he mentioned he could not stay in for other reasons: "I never believed in the cause."

He expressed guilt over being part of something and liking his job in infantry while not truly believing in the politics underlying the war. Even though his team was young when they deployed to Afghanistan, he noted, "we're not … kids … we're killers," pointing to a photograph of his team. Some of his bitterness was from his first deployment to Iraq, where his 19-year-old roommate burned to death. He wondered why that had to happen. Once he got out of the military, he noted he was forced to see the world "without that lens"—the lens of the military. As a result, he developed some self-hate. He felt his self-hate was from enjoying the role of being a Marine, which included killing the enemy; not agreeing with the underlying politics of the war; and not being able to reconcile the two. He enjoyed the job of war and being in the military, but he did not agree with the reasons for fighting the war.

He had considerable anger issues and struggled with frequent outbursts in the community, resulting in his being escorted off properties by the police. He wanted to avoid military justice or facing civilian courts, so he sought care at the CFI for his psychological issues. During his therapy, he was able to relate to the therapist because the therapist was also a veteran. He also began to accept that he was not the same person now as he was during his deployment. The positive effect of this moment "snowballed" for him and led him on a path of self-enlightenment. He stated, "I'm much more of a person than I ever was before. And I couldn't have had that without these experiences."

Composite Textural Descriptions of Reintegration for the Severely Wounded Veteran

The veterans who participated in this study described reintegration as a process they went through and an outcome of where they are today. They described this phenomenon as a process that can be facilitated or impeded by internal and external factors. The outcome was largely determined by processing internal thoughts and a change in attitude toward their respective places in society.

None of the participants wanted to leave military service; however, their injuries prevented them from continuing in their military service and careers. Some expressed that their injuries took their military careers from them and that they would not be satisfied continuing in military service in a capacity other than what their combat roles entailed. The abruptness of the injuries impacted their ability to adjust to the consequences of leaving military service. Some mourned the loss of their military service, requiring years to process the reality of the loss of their ability to serve as they once did, but they finally accepted that they were no longer able to continue their service.

The reintegration process negatively and positively impacted their family lives. Some lost spouses who could not cope with the effects of the injuries or the participant's loss of an active duty military career. Others gained a second chance at being a better parent to children born after their injuries as well as children born prior to their injuries. Some participants noted their children were now their primary focus in life. In addition, some moved to be near military communities, feeling a sense of closeness that was not present with their extended families.

Reintegration into the civilian community was more difficult because the veterans were not prepared for it, and they felt the civilian community did not understand them. They mitigated this by reaching out to peers and receiving and giving support. To some of the veterans, the "norm" in the military community regarding positional authority, culture, and respect, did not exist in the civilian community. Adjusting to this was made easier by staying connected to military or military-like communities for work, recreation, and hobbies.

Seeking new roles lead them to pursue new jobs, volunteer work, and education where they could use the skills they obtained in the military to better serve the military and civilian communities. Some understood their unique position as a war veteran and found personal strength in recovering from war wounds and in the contribution they could make to the civilian community. Some sought out new

degrees or careers that would allow them to have a purpose in their lives. However, they shared that finding an occupation in the civilian community was not easy; it required more education and training, which took time.

The financial benefits of being a wounded veteran included steady income, tax relief, and free medical care and recreational opportunities. Some of the participants received civilian charity that provided adapted homes for wounded veterans. However, these homes, while free, increased their tax burden. The net effect for some was to reject charity from civilian resources in order to maintain a sense of dignity and not incur other burdens. Free recreational support was noted as key to reintegration when it came from military veteran support groups or through the VA because it created a safe space for those with severe wounds to interact with other veterans in the same situation.

Free medical care and physical and occupational therapy support throughout the reintegration process enabled participants to address the long-term effects of their burn injuries. They reported both visible and non-visible injuries that were both physical and psychological. Care provided to them by military or veteran groups improved the trust between themselves and their providers. However, care and recovery required time, reflecting the long-term and chronicity of combat injuries such as burns that may continue to persist throughout a wounded veteran's lifetime.

Some participants felt they were better people now than they were prior to their injuries. Overcoming the loss of their careers, abilities, and the wholeness of their person as well as learning to live their lives in new roles resulted in a change in their self-perceptions. In addition, they reported movement toward a new idea. Some participants fully recognized ideals, and others were still unsure about what the result would be from this process of integration. These transformations reflect the duality of reintegration as both a process and an outcome, with veterans describing key elements that helped them get to where they were at the time of the interview; however, participants acknowledged an overarching goal to be a part of their civilian communities.

Summary

Chapter 4 presented the quantitative survey results and qualitative results of interviews from 6 veterans with severe polytrauma with associated burn injuries. Six veterans (male: 5, female: 1; age range 30 to 55 years) with severe combat burn wounds participated in this study. Burn injuries were

reported by participants as a percent TBSA burned, with most veterans having a TBSA burned between 20 and 39% (*n* = 5), and one veteran with a TBSA burned between 40 and 59% (*n* = 1). Participants served in different branches of the military, including the Army (4), Navy (1), and Marine Corps (1). The number of years each served on active duty was between 5 to 28 years of service (*M* = 5 years), with the number of deployments per veteran ranging from 1 to 4 deployments (time deployed range: 4 to 40 months; *M* = 7). All participants had military operation specialties (MOS) in combat arms, and all had been discharged from military service between three and nine years prior to participating in the study. Two participants were married, two were in committed relationships, and two were single. Three participants had been divorced, with two having a divorce occur post injury. One participant had a high school diploma, two had some college education, two had associate's degrees, and one had a bachelor's degree as the highest level of education attained.

All participants completed the 152-question CRIS tool with a mean score for the group of 157 (range: 142 to 180). The CRIS subscales (all with a max score of 70 each) were broken down as follows: EP scores ranged from 43 to 56 (*M* = 50, *SD* = 5.7), PL scores ranged from 42 to 63 (*M* = 52, *SD* = 7.8), and the S scores ranged from 49 to 64 (*M* = 55, *SD* = 7.8).

Cronbach's alpha showed the CRIS to have acceptable reliability (alpha > .70) with an alpha = .97 (SPSS v 19.0, 2017). Item analysis revealed that all items were worthy of retention for analysis. However, it should be noted that alpha levels greater than .90 may indicate too much redundancy in test items, not necessarily more reliability. In addition, alpha levels greater than .90 do not ensure unidimensional test items. The subscales EP, PL, and S all had high reliability as stand-alone tests: EP: alpha = 0.84, *n* = 49; PL: alpha = 0.96, *n* = 53; and S: alpha = 0.89, *n* = 48.

The participant interviews produced 2 theme categories, 8 theme clusters, and 73 themes and sub-themes, supported by direct quotes from all participants. The theme categories were supportive community and future-oriented thinking.

A supportive community is one that provides veteran-specific support in the following critical areas: *burn care, peer relationships, finances, work, hobbies, and education*. A supportive community facilitates the reintegration process. Supporting themes for *veteran-specific support* were (a) military life is different, (b) civilians do not understand, and (c) civilians have a lack of respect. Supporting themes for

burn care were (a) nonvisible scars and disability, (b) visible scars and disability, (c) medication side effects, (d) persistent psychological issues, and (e) remembering in and outpatient care. Supporting themes for *peer relationships* were (a) providing support, (b) receiving support, (c) proximity to military community, and (d) prefers military-like community. Supporting themes for *education, work, and hobbies* were (a) education, (b) work (paid and unpaid), and (c) hobbies/recreation. Supporting themes for *financial benefits* were (a) charity, (b) tax relief, and (c) care.

Participants noted they had to focus on their future, which was evident in the theme category of future-oriented thinking, which was comprised of the following clusters: *a turning point, desire to continue some kind of service, discovering a new purpose in life, and posttraumatic growth*. Supporting themes for *a turning point* were (a) "aha" moment, (b) no longer able to do military job, and (c) boredom. The supporting theme for *a desire to serve* was volunteer work. The supporting themes for *a new meaning in life* were (a) roles, (b) staying active in community, and (c) new focus. The supporting themes for *posttraumatic growth* were (a) being better than before, (b) a second chance, and (c) overcoming guilt.

Individual and composite textural descriptions were presented to describe the essential features of community reintegration for the severely wounded veteran. All participants described community reintegration as both a process and an outcome with key internal and external factors that contributed to the success of their reintegration process.

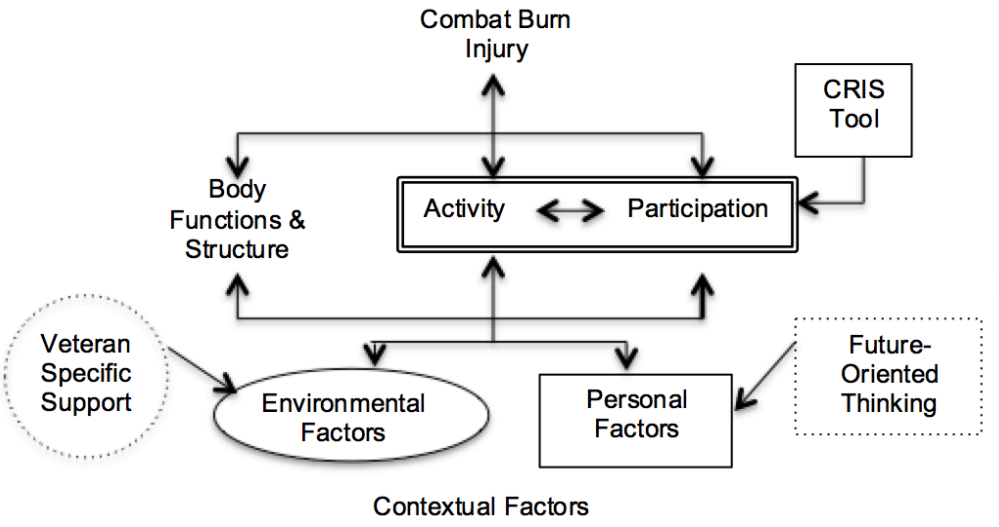
Chapter 5: Summary, Implications, and Outcomes

Results Compared to the Conceptual Framework

The final chapter of this dissertation discusses the relationship of the results of this study as compared to the conceptual framework and the literature review. It also includes the limitations of the study, implications for nursing, and recommendations for further research.

Results Compared to the Conceptual Framework

The CRIS instrument measures community reintegration across 9 domains of the ICF (learning and applying knowledge, general tasks and demands, communication, mobility, self-care, domestic life, interpersonal relationships, major life areas, and community social and civic life) are represented in the ICF model's "Activity and Participation" portion in Figure 3 (Resnik et al., 2009). The results of the qualitative portion of this study fall into two categories: veteran-specific support and future-oriented thinking. Both fit into the model below, noted by the dotted lines in Figure 3.



Legend: Double lined rectangle: Activity and Participation, measured by CRIS
Oval: Environmental factors
Dotted Oval: Veteran-Specific Support
Rectangle: Personal Factors
Dotted Rectangle: Future-Oriented Thinking
Figure 3: International Classification of Functioning with Veteran-Specific Support and Future Oriented-Thinking

Figure 3. Intentional classification model with community reintegration elements

Results Consistent with Review of the Literature

Freytes et al. (2013) studied reintegration in Puerto Rican veterans and their family members, finding two theme categories: a) challenges with reintegration and b) positive aftermath of war on the family. The challenges were comprised of five themes: (1) changes in the person who was deployed, (2) shifts in relationships, (3) the veteran's difficulty transitioning to civilian life, (4) lack of shared experiences between veteran and their family members, and (5) lack of recognition of veterans and their family members' hard work and sacrifices. The second category, the positive aftermath of war on the family, included two themes: (1) strengthened family relationships and (2) renewed family appreciation. The themes from this study and the Freytes et al. (2013) study are compared in Table 9.

Table 9

Theme Comparison

Themes: This Study	Themes: Freytes et al. (2013) Study
Veteran-specific support	Lack of shared experiences between veteran and family members Lack of recognition of veterans and family members hard work and sacrifices
New meaning in life	Shifts in relationships Renewed family appreciation
Posttraumatic growth	Strengthened family relationships

Similar to this study, Freytes et al. (2013) identified themes focused on the challenges with reintegration and positive growth after war. Freytes et al. (2013) also noted the lack of shared experiences and recognition from family members as problematic for returning veterans, which were similar to findings in this study, except the veterans in this study mentioned the need for veteran-specific support from the community, not necessarily from their family. Therefore, these findings partially correlate with the findings from Freytes et al. (2013). Shifts in relationships, renewed family appreciation, and strengthened family relationships all correlate with the findings of *new meaning in life* and *posttraumatic growth* from this study.

There were two key differences between the finding of this study and the those of the Freytes et al. study, which are that Freytes et al. (2013) did not focus on wounded veterans, and their study only focused on one cultural group: Puerto Rican veterans. It is likely that veterans with burn injuries would

share similar thoughts on reintegration as this cultural group but may vary in their needs from the community due to the nature of burn injuries.

Peer Relationships were identified as a key component to a supportive community; participants needed to give and receive peer support to effectively reintegrate. Matthias et al. (2016) reviewed a peer support program that helps veterans self-manage pain and identified that having a shared veteran identity was one of the key facilitators for both the peer coaches and the patients because the "peer coach who shares similarities with patients may be better suited to deliver self-management information and support than a health care professional" (p. 539). Chang et al. (2016) found that peer mental health providers hired by the VA had high job satisfaction, supporting the findings that veterans desire the reciprocal nature of peer support. Weir, Cunningham, Abraham, and Allanson-Oddy (2017) conducted a qualitative study in the United Kingdom (UK) to gain insight on the role of peer support for veterans with mental health issues. Weir et al. (2017) found that peer support enhanced the engagement of the veterans seeking treatment. Hinojosa (2011) found that military friendships were important to postdeployment reintegration and could be used as a clinical resource to help veterans with community reintegration.

Burn Care was another component of a supportive community. The participants all received burn care at the USAISR Burn Center. The U.S. Army manages this facility, and many of the clinicians are currently active duty military personnel or veterans themselves.

Hawkes (2016) reported on the formal Iraq Inquiry conducted in the UK, and one of the major negative findings involved the satisfaction of combat wounded troops; specifically, veterans felt that being treated alongside civilians in a civilian hospital was a threat to their wellbeing. The UK soldiers reported that they wanted to be treated by military nurses and be at a facility alongside their fellow wounded warriors—to "be treated like soldiers" (Hawkes, 2016, p. 1). Unlike the United States, the UK has universal healthcare provided by the government. Returning U.S. troops are cared for by the various stateside military medical centers, typically close to the wounded warrior's home unit. The UK, in response to the Iraq Inquiry, hosted their wounded military personnel in a civilian hospital on one ward to create a "military bubble." There is no literature to support the benefit of treating U.S. wounded warriors at the military medical centers; however, since peer support was identified as beneficial in Hawkes' (2016) study, it can be generalized to support treating military wounded by their peers.

In addition to Hawkes' findings, there is literature to support multidisciplinary burn-specific outpatient care. A Dutch study conducted by Van Loey, Faber, and Taal (2001) found that burn patients who were provided care by medical providers only wished they had been able to be seen at a multidisciplinary burn-specific clinic. Since the care of burn injuries can take several years and often has both physical and psychological components, it is likely the care provided to the participants of the Dutch study may have been perceived as inadequate, especially if the care was provided by medical providers only. While medical providers may be specialized in burn treatment and can address physical symptoms, a multidisciplinary team could address other rehabilitation issues related to burns, including PTSD, functional impairments, and psychosocial support.

All participants of this study were treated at a burn-specific clinic that is part of the USAISR Burn Center. This clinic provided not only veteran-specific support, as mentioned above, but also burn-specific care through a multidisciplinary team. Currently, the USAISR Burn Center can provide life-long burn care to veterans with burn injuries if they are able to commute to the center. Having access to the specialized, multidisciplinary care at the USAISR Burn Center was noted to be of importance to the participants in this study. All study participants chose to retire in the state of Texas, with four of the participants specifically noting that the proximity to care at the Burn Center was part of the reason they chose to stay in the San Antonio. Tele-health is a new provision that the USAISR Burn Center will launch in 2018. This program may provide veterans with burn injuries who choose to move out of the region or state where comprehensive burn injury care is available to continue to receive burn care through the USAISR assessments and consultations.

The literature review supports the findings of the study, that the long-term effect of burn injuries impact community reintegration for veterans. The non-visible scars and disability the participants in this study noted were related to persistent health issues, including TBI. The visible injuries included scars, wound healing problems (wound failure), self-image problems, and the need for mobility assistance. In addition, there were several medication side effects, including sexual dysfunction, noted by the participants. Lastly, persistent psychological issues were identified that impacted the veterans' reintegration, which included anger, PTSD, and anxiety. The findings of this study are consistent with those of Sayer et al. (2104), who found a positive correlation between mental health diagnoses, such as

PTSD, and post-deployment adjustment problems. Other mental health issues have been found to positively correlate with reintegration problems, including suicide (Kline et al., 2011), depression, and anxiety (Adler et al., 2011).

Veterans in this study noted that *education, work, and hobbies* were important factors in community reintegration. These themes are supported by evidence in the literature. Mental health diagnoses impact work performance (Adler et al., 2011; Erbes et al., 2011) and school performance (Erbes et al., 2011), and these diagnoses correlate with addiction, violence, criminality, and houselessness (Adler et al., 2011; Sullivan & Elbogen, 2014; Westermeyer & Lee, 2013).

Veterans with high resilience had lower perceived limitations and higher perceived participation in the reintegration process (Graham et al., 2013). However, participants in this study were not surveyed on resilience or self-efficacy. The CRIS tool only measures the construct of reintegration. However, resilience (2017)—one's ability to "weather periods of stress and change successfully throughout life" —and self-efficacy—the "belief that one is capable of accomplishing a behavior"—were demonstrated by many participants in this study ("Resilience," n.d.; "Self-efficacy," n.d.). The CRIS scores for perceived limitations were higher than the extent of participation for this study. On the CRIS tool, the higher the score, the better the participant reintegrated. The results, therefore, show that these participants had better mean perceived limitation scores (52; *SD* = 7.8) than they did mean participation scores (50; *SD* = 5.7). Although the sample size is too small to find statistical significance, and no normative values exist for the CRIS, the scores follow the same pattern as the study done by Graham et al. (2013).

Interestingly, four participants had attended school after leaving military service, and two participants (Participants 5 and 6) were actively pursuing higher education at the time of this study. Participant 6 noted his struggle with anger, that he had avoided actual violence due to his "self-control," and that it was not until after seeking and being treated for his PTSD and anger that was he able to move on with his life and return to school. Elbogen et al. (2014) found that veterans who had higher self-efficacy and perceived control over their lives had lower rates of violence. Ness and Vroman (2014) found that those with TBI and PTSD had more success in the educational setting if their reported self-efficacy was high. In addition, self-efficacy was the strongest predictor of grade point average over TBI or PTSD.

All participants noted their work or volunteer activity as important, with three who were working and two who were actively volunteering. However, some participants encountered challenges being successful in such activities. For example, Participant 4 noted having severe difficulty with civilian job demands. He noted issues with his business (nobody would hire him), difficulty getting jobs even after being offered a job (they were not real offers), not being able to adjust to the demands of a job due to PTSD, and eventually having to quit pursuing certain civilian jobs. Erbes et al. (2011) found that mental health diagnoses were common and associated with reduced role functioning in work and school for National Guard veterans (*n* = 262) one year after returning from a 16-month deployment in support of OIF. This finding correlates Participant 4's reported difficulty with occupational functioning as he was diagnosed with PTSD, anxiety, and depression/suicidality. Adler et al. (2011) also found that the ability to maintain gainful employment was severely impacted by mental health diagnoses in a sample of OEF/OIF veterans (*n* = 797) compared to civilians with no mental health issues. PTSD, depression, and anxiety negatively impacted multiple dimensions of job performance in veterans. In addition, productivity losses were four times greater in veterans with these diagnoses than non-veterans with no diagnoses.

Theme category 2, future-oriented thinking, included a turning point, a desire to continue to engage in some kind of service, discovering a new purpose in life, and experiencing posttraumatic growth. These themes are partially supported by the literature and, therefore, represent new findings. At some point in the recovery process, the participants noted there came a moment where they made the conscious choice to move on from their role as an active duty military member to become a civilian community member. This was coded as *a turning point* as it marked a point in the process of reintegration where the veteran accepted his/her new status and had the self-efficacy to become something new. These statements were noted while describing a shift in the veteran's mindset, or a *turning point* in his/her recovery. Self-efficacy, mentioned previously, was reflected in the statements made when participants compared their injuries to others ("If he can do it, so can I"). Moi and Gjengedal (2008) found a similar theme in a phenomenological study of civilian burn patients living in Norway. In their study, all participants (*n* = 14) indicated perceptions that led the researchers to note the theme of self-efficacy as part of a larger theme of *accepting the unchangeable.*

Like the veterans in this study, Moi and Gjengedal (2008) found that the burn injury survivors desired to help others like themselves. The survivors described a "new social awareness" as a result of their burn injuries. This is similar to the *desire to continue some kind of service* that the participants of this study endorsed. However, the participants of the Moi and Gjengedal (2008) study were non-military, and only four were injured at work. There were no data that described the type of work the Moi and Gjengedal (2008) study participants performed prior to their injury; therefore, it is impossible to know if their desire to serve others was a new desire or a shift from their previous job-related service. The veterans of this study acknowledged a desire to *continue* their service, which may reflect a personality trait that preexisted their burn injuries in combat and may be a trait that influenced their decision to work as active duty military.

Posttraumatic growth is a positive outcome after trauma. This theme is closely linked to *discovering a new purpose in life*. As mentioned above, Freytes et al. (2013) discovered that there was positive growth after war in a sample of Puerto Rican veterans who served in OIF/OEF. These veterans reported that their relationships with their families grew stronger after war (Freytes et al., 2013). This finding was similar for the participants of this study, who noted positive life changes because of their traumatic injury experiences. Participants noted being humbler than prior to their injury, being a better parent (second chance at parenting) and focusing on the role of parent, pursing higher education, and being a different person post injury (e.g., healthier, forgiving oneself). Piertrzak (2010) examined posttraumatic growth in a sample of veterans from Connecticut who served in OIF/OEF (n = 272) and found that younger age, higher PTSD symptoms, and higher measures of unit member support were positively correlated with posttraumatic growth scores. Piertrzak (2010) suggests there is a dose-related effect between PTSD and posttraumatic growth; there must be enough distress experienced to have a positive change in the person.

New Findings

There is one new finding from this study: Veterans with severe burn injuries require services that view and understand them as veterans to successfully reintegrate them into their civilian communities. The first theme category, a supportive community, includes theme cluster 1, *veteran-specific support,* which encompasses all the other attributes of the supportive community (e.g., burn care, peer relationships, education/hobbies/work, and financial benefits). The participants of this study identified that

having veteran-specific support was crucial to their ability to reintegrate into the civilian world, which was noted by some to be due to a lack of trust in the civilian community. Veterans trust one another because they believe only those who have “been there” can truly understand them and be able to help them. Admiral Mullen echoed these sentiments concerning civilians in his 2011 West Point commencement address: “But I fear they do not know us. I fear they do not comprehend the full weight of the price we pay when we return from battle” (Bosch, 2011). Veterans in this study noted that a civilian community that specifically supported them as veterans was key to reintegration. Part of the issue, though, may be that military and civilian communities exist in parallel form in our modern society. Prior to modern war, reintegration was not an issue because the civilian and military community were living as one.

Garcia (2017) describes an evolutionary purpose for veteran mistrust in the civilian community as a phylogenic mismatch because of how modern wars are fought. For most of human history, wars were fought close to home, resulting in a civilian community that was aware of the personal costs of war and mutually invested in the outcomes. Warriors willingly fought alongside their kinsmen against threats from other groups. These men trusted their tribes because they were genetically related to them, increasing the likelihood that one would lay down their life for another (genetic propagation), and membership in the group came at some cost. Being part of the tribe meant one was not only willing to fight and die for others in the tribe, but such devotion was essential to the tribe’s survival. Therefore, non-warrior members of the tribe were keenly aware of the importance of the warriors; they relied on them for survival. While modern warriors are likely unrelated to their platoon mates, membership still comes at a cost. The combination of a willingness to die for another and the cost of joining the group (rigorous military training) created warrior and civilian groups that are unlike any from our evolutionary past. The civilian does not feel the same kind of kinship to the warrior, and vice versa, because the cause the modern warrior is fighting is not tied to the survival of their civilian counterparts. This mismatch creates a trust deficit.

The warrior community relies on mutual trust for survival, and this is not a key component of civilian society. Unlike our evolutionary past, neighbors living in a modern civilian community do not need each other to commit their life for their survival. It should be noted that all branches of the military require some kind of initial training (basic training), where baseline combat skills are obtained regardless of military occupational specialty. Therefore, at baseline training, all military members are warriors. This

ethos creates a bond that is not present in the civilian society. Warriors must be willing to lay down their lives for each other, but civilians cannot say the same.

Garcia (2017) also explains that the military culture is highly masculinized and is grounded in evolutionary biology that values dominance and hardiness. Alfred, Hamme, and Good (2014) found that the military cultural effect on veterans--particularly the emphasis on conforming to masculine norms, especially hardiness—is associated with lower levels of wellbeing in male student veterans. The ability to endure difficult situations is the definition of hardiness. One way to show hardiness is to suppress emotions. Expressing or displaying fear in the face of enemy confrontation may not only expose the warrior, making these displays of emotion dangerous, they also signal to the others in the group one's weakness. This makes the ability to suppress emotions in the face of the enemy a valuable trait for military members but may hamper reintegration if the civilian is seen as the enemy. Veterans who are unable to fully express their emotions because of their lack of trust in their civilian counterparts may have difficulty reintegrating. In addition, identifying oneself as hardy or strong may impact one's ability to address fears if unable to acknowledge one has felt them.

Limitations

One of the limitations of this study is that it took place in the state of Texas due to financial constraints and convenience. In addition, the military only has one burn center—located in San Antonio, Texas—where all military burn patients are treated. The study was also limited by the recruitment of only veterans with polytrauma and associated burns and the process to obtain accurate contact information. Although 990 veterans with burn injuries and recorded contact information are treated in the USAISR Burn Center, the contact information was not current, limiting the ability to recruit potential participants for this study. Participants were recruited from a list of 113 names with contact information from the USAISR Burn Center. Of these, 30 candidates were eliminated because they were not wounded in combat, 27 had inaccurate phone numbers, five were out of state, and one was not a veteran. Forty recruitment flyers were returned due to inaccurate addresses. Only one participant responded to the recruitment flyer. One participant was recruited at the waiting room of the Burn Clinic, and four were recruited through telephone calls. Four of the five who lived outside the state of Texas requested to be part of the study, if needed.

Since directly calling participants was the best recruitment technique, it may be beneficial for contact lists to be updated yearly through calls to veterans.

Implications for Nursing Practice and Nursing Research

There are several implications for this study. The first implication focuses on the veteran and veteran health care community. Since polytrauma with burn injury is a common type of war wound pattern, it is imperative that nurses understand the unique needs for this population. The veterans with burn injuries in this study recounted their burn care experiences and reintegration after the initial trauma, remembering what it was like to face the community with scars, amputations, pain, and mental health issues. In addition, they noted that having veteran-specific support was crucial to their physical and mental recovery; specifically, they needed their peers' support because their peers understood them the best. Therefore, military nurses may play an even more important role for wounded veterans because their own veteran experiences (e.g., military, combat) and status allow them to connect on a level that the civilian nurses cannot.

Since most nurses are civilians, this researcher would like to create a veteran-specific care model based on the unique needs of wounded veterans to better meet their needs. This model would incorporate reaching out to veterans with complex injuries that have successfully reintegrated into their communities to serve as mentors for newly wounded military personnel. This practice was described by several of the participants of this study as being helpful in changing their mindset, helping them develop plans for their future, and fostering posttraumatic growth. Not only does this model serve the newly wounded, but it may also address the peer support and the services need for wounded veterans.

The CRIS tool is easy to administer and—according to psychometric testing conducted by this and previous research—is a valid tool to use in this population to measure participants' reintegration level during the previous two weeks. Future studies should consider a longitudinal epidemiological study focusing on veterans with combat burn injuries using the CRIS as well as other quality of life measures. The measure of reintegration over time may reveal what to expect and at what time points for this population. Burn injury may require life-long follow-up care. Veterans with burn injuries may have different levels of reintegration immediately after hospital discharge, while being treated in outpatient care, after rehabilitation is complete, when able to work again, and when in retirement. Measuring reintegration

during those time points or at other intervals (every few years) may reveal reintegration changes over time or even a leveling off at some point. Individuals whose CRIS scores indicate either a greater likelihood of success at reintegration or a delay in this process (i.e., scores that lag behind or are far ahead of their peers) may warrant further investigation by clinicians. This would inform research into what impedes or improves reintegration for this population.

Second, the results of this study, while perhaps not generalizable to populations other than the six veterans who participated, may have implications that could impact the civilian community particularly those with burn trauma, and those who experience PTSD. The veterans in this study all were treated in a American Burn Associated verified burn center that included care by a multidisciplinary team specialized in burn care both in patient and outpatient. Furthermore, veterans with polytrauma and associated burn and mental health injuries are eligible for life-long care through the VA for their service-connected injuries and burn care through the US Army burn center. This type of model does not always exist for civilian burn patients, therefore, investigating the components of this study in the civilian community may improve care and long-term outcomes.

Civilian burn patients face similar reintegration issues as evidenced by one study on quality of life in adults with severe burns (25% TBSA or more) from one burn center in Egypt (n = 100) where no differences in Burn Specific Health Scale-Brief (BSHS-B) were found between scores at one month post discharge and 5 years post discharge (Elsherbiny, Salem, El-Sabbagh, Elhadidy, & Eldeen, 2011). A phenomenology by Moi and Gjengedal (2008) focused on the concept of life after burn injury in a sample (n = 14) of adults with burn injury from Norway. They interviewed participants at an average of 14 months (range 5 to 35) post injury and found two similar themes as this study; accepting the unchangeable and changing what is changeable. Rosenbach and Renneberg (2008), measured posttraumatic growth in a sample (n = 149) of German burn patients with a mean time since burn injury of 4 years (range 3 months to 29 years). Their study found that posttraumatic growth was associated with active coping and social support, similar themes to this study. Anzarut, Chen, Shankowsky, and Tredget (2004) performed a prospective study on burn survivors (TBSA burns 50% or greater) injured between 1980 and 2001 (*n* = 47) treated at a Canadian burn center measuring quality of life (Short Form-36 [SF-36]) and the

abbreviated BSHS. These studies reflect the interest of long-term outcome research in countries outside the US.

There has also been considerable interest in the lives of burn trauma survivors in the US. In 1993 a Burn Model System (BMS) was established by the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR) with the sole intent of improving the lives of the burn survivor by studying their long-term outcomes (Goverman et al., 2017). The BMS has a multicenter (*n* = 8) longitudinal database that describes long-term outcomes including reintegration, measured by 17 different validated instruments, and supports queries from the public for research (Goverman et al., 2017). So far, 197 research studies have been published, with four directly addressing reintegration (Goverman et al., 2017). The time points for follow-up start at 6 months, with collections out to 5, 10, 15, etc. years post injury (Goverman et al., 2017). There were no published studies from this dataset with follow-up after 3 years (National Data & Statistical Center for the Burn Model System, 2018). Future research needs to investigate long-term outcomes beyond 3 years for civilian burn trauma patients, and focus on what environmental and personal factors impact successful community reintegration.

The final implication for this study addresses the impact that trauma has on those that survive trauma, either through their job or through chance. Veterans in this study reported associated mental health issues related to their military jobs. In addition, they reported difficulty connecting to civilians who they did not trust because they did not share the same experiences. It is likely that civilians with jobs that are similar, such as first responders, police, and fire fighters, who must be willing risk their own lives for their civilian counterparts, or those who witness traumatic events, may also have difficulty in community reintegration. Although not part of this study, the impact of PTSD and other mental health challenges that are caused by the duties of one's job (police, first responders), or by chance (surviving natural disasters) may impact one's ability to connect with others who were not part of the group (co-worker) or event (natural disaster) and have an impact on how they reintegrate into the civilian world. Future qualitative research is needed on the components of successful reintegration after trauma in the civilian population. These factors may be similar to the findings of this study adding strength to meaningful interventions for this population.

Summary

The final chapter of this dissertation presented the results of this study in relation to the conceptual framework and the literature review. The results were supported by the ICF model's contextual components: environmental factors (supportive community) and personal factors (future-oriented thinking). In addition, the results mirror some of the findings from Freytes et al.'s (2013) study of Puerto Rican veterans. Burn injury care for veteran—particularly, care provided by peers—was also supported in the literature. Long-term effects of burn injuries also impact reintegration. Education, work, hobbies, and recreation were also important factors in veteran reintegration and supported by the literature. Finding new meaning in life and experiencing posttraumatic growth were components of successful reintegration that were also found in the literature.

The finding of veteran-specific support was a key component to successful community reintegration. The veterans in this study identified that having veteran-specific support was crucial to their ability to reintegrate into the civilian world, which was noted by some participants to be due to a lack of trust in the civilian community. The lack of trust may stem from low numbers of U.S. citizens who currently serve in the armed forces. The veteran population tends to live in areas around certain military communities in the states of Texas, California, North Carolina, and Virginia, which leaves much of the country with lower concentrations of veterans for civilians to interact with daily. The participants of this study stated that they chose to stay in Texas because of the amount of support they received from other veterans that lived in the area or the amount of support they received from military or veteran treatment facilities, which are abundant in Texas. The lack of trust in civilians by wounded veterans may be reinforced when veterans seek out support from only those that have had similar combat experiences.

The chapter also included the limitations of the study, implications for nursing, and recommendations for further research. The main limitation to this study was that participants were recruited from the state of Texas. It is possible that veterans with burn injuries who returned to areas far from the Burn Center may have different outcomes (CRIS scores) and may have different qualitative elements to report on their experience. In addition, the other main limitation was the quality of the contact database, making recruitment difficult. The recommendations included using these data to inform nursing care, improve long-term outcomes by collecting and using data more frequently during time points in the

recovery process, and seeking to understand this population better by using the CRIS tool. In addition, there are recommendations to improve civilian care by collecting long-term outcome data beyond 3 years in order to identify the environmental and personal factors that impact community reintegration, and to investigate the impact of surviving trauma on community reintegration.

References

Adler, D. A., Possemato, K., Mavandadi, S., Lerner, D., Chang, H., Klaus, J., … & Oslin, D. W. (2011). Psychiatric status and work performance of Veterans of Operations Enduring Freedom and Iraqi Freedom. *Psychiatric Services (Washington, D.C.)*, *62*(1), 39–46. http://doi.org/10.1176/appi.ps.62.1.39

Alfred, G. C., Hammer, J. H., & Good, G. E. (2014). Male student veterans: Hardiness, psychological well-being, and masculine norms. *Psychology of Men & Masculinity*, *15*(1), 95–99. http://doi.org/10.1037/a0031450

Anzarut, A., Chen, M., Shankowsky, H., & Tredget, E.E. (2004). Quality-of-life and outcome predictors following massive burn injury. Plastic and Reconstructive Surgery, 116(3), 791-797. http// DOI: 10.1097/01.prs.0000176257.22583.4b

Bell, R. S., Vo, A. H., Neal, C. J., Tigno, J., Roberts, R., Mossop, C., … & Armonda, R. A. (2009). Military traumatic brain and spinal column injury: A 5-year study of the impact blast and other military grade weaponry on the central nervous system. *The Journal of Trauma*, *66*(4 Suppl), S104–S111. http://doi.org/10.1097/TA.0b013e31819d88c8

Belmont, P. J., Schoenfeld, A. J., & Goodman, G. (2010). Epidemiology of combat wounds in Operation Iraqi Freedom and Operation Enduring Freedom: Orthopaedic burden of disease. *Journal of Surgical Orthopaedic Advances*, *19*(1), 2–7.

Bosch, A. (2011). Admiral Mullen fears civilians don't comprehend soldiers' burden, retrieved from www.recordonline.com/article/20110521/News/110529975

Box, G. E. P. (1979). Robustness in the strategy of scientific model buliding. In R. L. Launer & G. N. Wilkinson, *Robustness in Statistics*, Academic Press, p. 201–236.

Brickell, T. A., Lange, R. T., & French, L. M. (2014). Health-related quality of life within the first 5 years following military-related concurrent mild traumatic brain injury and polytrauma. *Military Medicine*, *179*(8), 827–838. http://doi.org/10.7205/MILMED-D-13-00506

Burns, T. C., Stinner, D. J., Mack, A. W., Potter, B. K., Beer, R., Eckel, T. T., … & Hsu, J. R. (2012). Microbiology and injury characteristics in severe open tibia fractures from combat. *The Journal of Trauma and Acute Care Surgery*, *72*(4), 1062–7. http://doi.org/10.1097/TA.0b013e318241f534

Cancio, L. C., Horvath, E. E., Barillo, D. J., Kopchinski, B. J., Charter, K. R., Montalvo, A. E., … & Holcomb, J. B. (2005). Burn support for Operation Iraqi Freedom and related operations, 2003 to 2004. *The Journal of Burn Care & Rehabilitation*, *26*(2), 151–161. http://doi.org/10.1097/01.BCR.0000155540.31879.FB

Chang, B. H., Mueller, L., Resnick, S. G., Osatuke, K., & Eisen, S. V. (2016). Job satisfaction of department of veterans affairs peer mental health providers. *Psychiatric Rehabilitation Journal*, 39(1), 47–54.

Creswell, J. W. (2013). *Qualitative inquiry & research design* (3rd ed.). Los Angeles: SAGE.

Creswell, J. W. (2015). *A concise introduction to mixed methods research* (Kindle). Los Angeles: SAGE.

Cross, J. D., Ficke, J. R., Hsu, J. R., Masini, B. D., & Wenke, J. C. (2011). Battlefield orthopaedic injuries cause the majority of long-term disabilities. *The Journal of the American Academy of Orthopaedic Surgeons*, *19 Suppl 1*, S1–S7. http://doi.org/19/suppl_1/S1 [pii]

Detmer, D. (2013). *Phenomenology explained* (Kindle) Chicago: Open Court.

Dillahunt-Aspillaga, C., Nakase-Richardson, R., Hart, T., Powell-Cope, G., Dreer, L.E., Eapen, B.C., … & Silva, M.A. (2017). Predictors of employment outcomes in veterans with traumatic brain injury: A VA traumatic brain injury model systems study. *Journal of Head Trauma Rehabilitation*, 32(4), 271–282. doi:10.1097/HTR.0000000000000275

DoD Worldwide TBI Numbers. (2014). Retrieved May 1, 2015, from http://dvbic.dcoe.mil/sites/default/files/DoD-TBI-Worldwide-Totals-2014-Q1-Q4-Feb23-2015.pdf

Elbogen, E., Johnson, S., Newton, V., Timko, C., Vasterling, J., Van Male, L., … & Beckham, J. (2014). Protective mechanisms and prevention of violence and aggression in veterans. *Psychological Services, 11*(2), 220–228. http://doi.org/10.1037/a0035088

Elnitsky, C. A., Blevins, C. L., Fisher, M. P., & Magruder, K. (2017). Military service member and veteran reintegration: A critical review and adapted ecological model. *American Journal of Orthopsychiatry*, 87(2), 114–128. http://dx.doi.org?10.1037/orth0000244

Elsherbiny, O.E.E., Salem, M.A., El-Sabbagh, A.H., Elhadidy, M.R. & Eldeen, S.M.A., (2011). Quality of life of adult patients with severe burns. Burns 37(2011), 776-789.

Erbes, C. R., Kaler, M. E., Schult, T., Polusny, M. A., & Arbisi, P. A. (2011). Mental health diagnosis and occupational functioning in national guard/reserve veterans returning from Iraq. *The Journal of Rehabilitation Research and Development*, *48*(10), 1159. http://doi.org/10.1682/JRRD.2010.11.0212

Escolas, S. M., Walker, S. L., Tyrell, K. M., Chung, K. K., Escolas, B. A., Hatem, V. D., … & Renz, E. M. (2014). Post-discharge cause-of-death in combat burn casualties. *Poster Presentation American Burn Association Conference*.

Fabrizio, K. S., & Keltner, N. L. (2010). Traumatic brain injury in Operation Enduring Freedom/Operation Iraqi Freedom: A primer. *Nursing Clinics of North America*, *45*(4), 569–580. http://doi.org/10.1016/j.cnur.2010.06.003

Fischer, H. (2010). U. S. military casualty statistics : Operation New Dawn, Operation Iraqi Freedom, and Operation Enduring Freedom. *Congressional Research Service*, 1–3. http://doi.org/RS22452

Freytes, I. M., Hannold, E. M., Resende, R., Wing, K., & Uphold, C.R. (2013). The impact of war on Puerto Rican families: Challenges and strengthened family relationships. *Community Mental Health Journal*, *49*, 466–476.

Garcia, H. A. (2017). If you've never been there you wouldn't understand: The evolutionary reasons for Veteran mistrust. *Evolutionary Behavioral Sciences, 11*(1), 53-62.

Gaylord, K. M., Holcomb, J. B., & Zolezzi, M. E. (2009). A comparison of posttraumatic stress disorder between combat casualties and civilians treated at a military burn center. *The Journal of Trauma*, *66*(4 Suppl), S191–S195. http://doi.org/10.1097/TA.0b013e31819d9c21

Goldberg, M. S. (2010). Death and injury rates of U.S. military personnel in Iraq. *Military Medicine*, *175*(4), 220–226. http://doi.org/10.7205/MILMED-D-09-00130

Goverman, J. Mathews, K., Holavananhalli, R., Vardanian, Herndon, D.N., Meyer, W.J., Kowalske, K., Fauerbach, J., Gibran, N., Carrougher, G.J., Amtmann, D., Scheneider, J.C., & Ryan, C.M. (2017). The National institute on disability, independent living, and rehabilitation research burn model system: Twenty years of contributions to clinical service and research. *J Burn Care Res*, 38(1), e240-e253. http:// doi: 10.1097/BCR.0000000000000361

Graham, D. P., Helmer, D. A., Harding, M. J., Kosten, T. R., Petersen, N. J., & Nielsen, D. A. (2013). Serotonin transporter genotype and mild traumatic brain injury independently influence resilience

and perception of limitations in Veterans. *Journal of Psychiatric Research*, *47*(6), 835–842. http://doi.org/10.1016/j.jpsychires.2013.02.006

Greer, N., Sayer, N., Koeller, E., Velasquez, T., & Wilt, T. J. (2017). Outcomes associated with blast versus nonblast-related traumatic brain injury in US military service members and veterans: A systematic review. *Journal of Head Trauma Rehabilitation*, 1–14. doi:10.1097/HTR.0000000000000304

Groves, R. M. (2011). Three eras of survey research. *Public Opinion Quarterly*, *75*(5), 861–871. http://doi.org/10.1093/poq/nfr057

Hagan, R. E. (1971). Early complications following penetrating wounds of the skull. *Journal of Neurosurgery*, *34*, 132–141.

Hawkes, N. (2016). Soldiers injured in Iraq War were let down by lack of dedicated health facilities, Chilcot report finds. *British Medical Journal*, 7 July 2016, 1.

Hinojosa, R. & Hinojosa, M. S. (2011). Using military friendships to optimize postdeployment reintegraton for male Operation Iraqi Freedom/Operation Enduring Freedom veterans. *Journal of Rehablitiation Research & Development*, *48*(10), 1145–1158.

Hoyt, T., & Renshaw, K. D. (2014). Emotional disclosure and posttraumatic stress symptoms: Veteran and spouse reports. *International Journal of Stress Management*, *21*(2), 186–206. http://doi.org/10.1037/a0035162

Jouria, J. M. (2014). *DSM-5: A comprehensive overview* [Kindle]. Retrieved from Ce4Less.com.

Jones, A. (2013). *They were soldiers: How the wounded return from America's wars--The untold story*. Chicago, IL: Haymarket.

Kauvar, D. S., Cancio, L. C., Wolf, S. E., Wade, C. E., & Holcomb, J. B. (2006). Comparison of combat and non-combat burns from ongoing U.S. military operations. *The Journal of Surgical Research*, *132*(2), 195–200. http://doi.org/10.1016/j.jss.2006.02.043

Kline, A., Ciccone, D. S., Falca-Dodson, M., Black, C. M., & Losonczy, M. (2011). Suicidal Iideation among national guard troops deployed to Iraq. *The Journal of Nervous and Mental Disease*, *199*(12), 914–920. http://doi.org/10.1097/NMD.0b013e3182392917

Larson E. G., & Norman B., S. (2014). Prospective prediction of functional difficulties among recently separated veterans. *Journal of Rehabilitation Research & Development*, *51*(3), 415–427. http://doi.org/10.1682/JRRD.2013.06.0135

Lehman, C. (2008). Mechanisms of injury in wartime. *Rehabilitation Nursing*, *33*(5), 192–198.

Matthias, M. S., Kukla, M., McGure, A. B., Damush, T. M., Gill, N., & Bair, M. J. (2016). Facilitators and barriers to participation in a peer support intervention for veterans with chronic pain. *Clinical Journal of Pain*, *32*(6), 534–540.

McCulloch, K., Pastorek, N. J., Miller, B. I., Romesser, J., Linck, J., Sim, A. H., … & Maestas, K. L. (2015). Clinician versus veteran ratings on the Mayo-Portland participation index in veterans with a history of mild traumatic brain injury. *Journal of Head Trauma Rehabilitation*, *30*(1), 38–46. http://doi.org/10.1097/HTR.0000000000000041

McLellan, T. (1980). Addiction Severity Index, 245–247.

McLellan, T., Carise, D., Coyne, T. H., & Jackson, T. R. (n.d.). Addiction severity index - 5th edition Clinical / Training Version. Journal of Nervous & Mental Disease, 168(1), 26-33.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis.* (3rd ed.). Los Angeles: SAGE.

Moi, A. L., & Gjengedal, E. (2008). Life after burn injury: Striving for regained freedom. *Qualitative Health Research*, *18*(12), 1621-1630.

Mora, A. G., Ritenour, A. E., Wade, C. E., Holcomb, J. B., Blackbourne, L. H., & Gaylord, K. M. (2009). Posttraumatic stress disorder in combat casualties with burns sustaining primary blast and concussive injuries. *The Journal of Trauma*, *66*(4 Suppl), S178–S185. http://doi.org/10.1097/TA.0b013e31819ce2d6

Moulta-Ali, U. (2015). Who is a "Veteran"? Basic eligibility for veterans' benefits. *Congressional Research Service, CRS Report,* R42324. Retrieved from www.crs.gov

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks: SAGE Publications, Inc.

National Data & Statistical Center for the Burn Model System, (n.d.). *About the database*. Retrieved from http://burndata.washington.edu/about-database

Ness, B. M., & Vroman, K. (2014). Preliminary examination of the impact of traumatic brain injury and posttraumatic stress disorder on self-regulated learning and academic achievement among military service members enrolled in postsecondary education. *The Journal of Head Trauma Rehabilitation*, *29*(1), 33–43. http://doi.org/10.1097/HTR.0b013e3182a1cd4e

Okie, S. (2005). Traumatic brain injury in the war zone. *The New England Journal of Medicine*, *353*(6), 633–634. http://doi.org/10.1056/NEJM200508113530621

Owens, B. D., Kragh, J. F., Wenke, J. C., Macaitis, J., Wade, C. E., & Holcomb, J. B. (2008). Combat wounds in Operation Iraqi Freedom and Operation Enduring Freedom. *The Journal of Trauma*, *64*(2), 295–299. http://doi.org/10.1097/TA.0b013e318163b875

Pennardt, A. (2014). Blast injuries. Retrieved May 20, 2015, from http://emedicine.medscape.com/article/822587-overview

Perry, K. M. (2008). *Legally authorized representatives under federal and Texas law*. Retrieved from http://research.uthscsa.edu/irb/sop.shtml

Pietrzak, R. H., Goldstein, M. B., Malley, J. C., Rivers, A. J., Johnson, D. C., Morgan, C. a., & Southwick, S. M. (2010). Posttraumatic growth in veterans of Operations Enduring Freedom and Iraqi Freedom. *Journal of Affective Disorders*, *126*(1–2), 230–235. http://doi.org/10.1016/j.jad.2010.03.021

Posttraumatic Growth Research Group (2013). *What is PTG?* Retrieved from https://ptgi.uncc.edu/what-is-ptg/

Ramchand, R., Schell, T. L., Karney, B. R., Osilla, K. C., Burns, R. M., & Caldarone, L. B. (2010). Disparate prevalence estimates of PTSD among service members who served in Iraq and Afghanistan: Possible explanations. *Journal of Traumatic Stress*, *23*(1), 59–68. http://doi.org/10.1002/jts.20486

Renz, E. M., Cancio, L. C., Barillo, D. J., White, C. E., Albrecht, M. C., Thompson, C. K., … & Holcomb, J. B. (2008). Long range transport of war-related burn casualties. *The Journal of Trauma*, *64*(2 Suppl), S136–S144; discussion S144–S145. http://doi.org/10.1097/TA.0b013e31816086c9

Resilience (n.d.) *The Free Dictionary*. Retrieved from https://medical-dictionary.thefreedictionary.com/resilience

Resnik, L., & Allen, S. M. (2007). Using international classification of functioning, disability and health to understand challenges in community reintegration of injured veterans. *Journal of Rehabilitation Research and Development*, *44*(7), 991–1006. http://doi.org/10.1682/JRRD.2007.05.0071

Resnik, L., Bradford, D. W., Glynn, S. M., Jette, A. M., Hernandez, C. J., & Wills, S. (2012). Issues in defining and measuring veteran community reintegration: Proceedings of the working group on community reintegration, VA rehabilitation outcomes conference, Miami, Florida. *The Journal of Rehabilitation Research and Development*, *49*(1), 87. http://doi.org/10.1682/JRRD.2010.06.0107

Resnik, L., Plow, M., & Jette, A. (2009). Development of CRIS: measure of community reintegration of injured service members. *Journal of Rehabilitation Research and Development*, *46*(4), 469–480. http://doi.org/10.1682/JRRD.2008.07.0082

Rivera, J. C., Wenke, J. C., Buckwalter, J. A., Ficke, J. R., & Johnson, A. E. (2012). Posttraumatic osteoarthritis caused by battlefield injuries: The primary source of disability in warriors. *Journal of the American Academy of Orthopaedic Surgeons*, *20*(suppl), S64–S69. http://doi.org/10.5435/JAAOS-20-08-S64

Roeder, R. A., & Schulman, C. I. (2010). An overview of war-related thermal injuries. *The Journal of Craniofacial Surgery*, *21*(4), 971–975. http://doi.org/10.1097/SCS.0b013e3181e1e802

Rosenbach, C., & Renneberg, B. (2008). Positive change after severe burn injuries. *J Burn Care Res* 29(4), 638-634. http//doi: 10.1097/BCR.0b013e31817de275

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

Self-efficacy (n.d.) *The Free Dictionary*. Retrieved from https://medical-dictionary.thefreedictionary.com/self-efficacy

Sherman, M. D., Larsen, J., & Borden, L. M. (2015). Broadening the focus in supporting reintgrating Iraq and Afghanistan veterans: Six key domains of functioning. *Professional Psychology: Research and Practice*, 46(5), 355–365. http://doi.org/10.1037/pro0000043

Sullivan, C. P., & Elbogen, E. B. (2014). PTSD symptoms and family versus stranger violence in Iraq and Afghanistan Veterans. *Law and Human Behavior*, *38*(1), 1–9. http://doi.org/10.1037/lhb0000035

Taylor, P., Morin, R., Parker, K., Cohn, D., Funk, C., & Mokrzycki, M. (2011). The military-civilian gap: War and sacrifice in the post-9/11 era, (202), 1–151. Retrieved from http://www.pewsocialtrends.org/files/2011/10/Veterans-report.pdf

U.S. Department of Veterans Affairs - Office of Public Intergovernmental Affairs. (2013). *Federal benefits for veterans, dependents, and survivors: Online edition*. Retrieved from http://www1.va.gov/opa/publications/benefits_book/2014_Federal_Benefits_for_Veterans_English.pdf

VA Polytrauma. (2014). *Polytrauma and blast-related injuries QUERI*. Retrieved from http://www.queri.research.va.gov/ptbri/docs/vha-tbi-screening-eval.pdf

Valerio, I. L., Sabino, J., Mundinger, G. S., & Kumar, A. (2014). From battleside to stateside. *Annals of Plastic Surgery*, *72*(May), S38–S45. http://doi.org/10.1097/SAP.0000000000000168

Veteran's Health Administration (VHA). (2013). Analysis of VA health care utilization among Operation Enduring Freedom (OEF), Operation Iraqi Freedom (OIF), and Operation New Dawn (OND) Veterans, (March), 1–13. Retrieved from http://www.publichealth.va.gov/epidemiology/reports/oefoifond/health-care-utilization/index.asp

Veteran's Health Administration (VA) Handbook 1172.01, Polytrauma system of care. (2013).

Walker, L. O., & Avant, K. C. (2011). *Strategies for theory construction in nursing* (5th ed.). Boston: Pearson.

Wall, P. L. (2012). Posttraumatic stress disorder and traumatic brain injury in current military populations: A critical analysis. *Journal of the American Psychiatric Nurses Association*, *18*(5), 278–298. http://doi.org/10.1177/1078390312460578

Wands, L. (2013). “No one gets through it ok.” *Advances in Nursing Science*, *36*(3), 186–199. http://doi.org/10.1097/ANS.0b013e31829edcbe

Watson Instititute. (2014). US military battlefield casualties and post-combat disability claims. Retrieved from http://costsofwar.org/article/us-and-allied-wounded

Westermeyer, J., & Lee, K. (2013). Residential placement for veterans with addiction. *The Journal of Nervous and Mental Disease*, *201*(7), 567–571. http://doi.org/10.1097/NMD.0b013e3182982d1a

Wilder Schaaf, K. P., Kreutzer, J. S., Danish, S. J., Pickett, T. C., Rybarczyk, B. D., & Nichols, M. G. (2013). Evaluating the needs of military and Veterans' families in a polytrauma setting. *Rehabilitation Psychology*, *58*(1), 106–10. http://doi.org/10.1037/a0031693

World Health Organization [WHO]. (2002). *Towards a common language for functioning, disability and health ICF*. *International Classification* (Vol. 1149). Retrieved from http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf

Wright, J. (2000). The Glasgow outcome scale. The Center for Outcome Measurement in Brain Injury,. Retrieved from http://www.tbims.org/combi/gos

Wu E., & Graham, D. P. (2016). Association of chronic pain and community integration of returning veterans with and without traumatic brain injury. *Journal of Head Trauma Rehabilitation*, *31*(1). E1-E12. doi:10.1097/HTR.0000000000000152

Appendix A

The CRIS:

Measure of Community Reintegration of Service Members

Instructions for Test Administrators

Prior to administering each test segment, read the instructions for that segment out loud to the respondent. Place the appropriate response scale for each segment in front of the respondent, so that they can refer to it as needed.

Please follow the skip patterns as appropriate and mark Not Applicable (N/A) when the question does not apply. For example, if the question is about working and the respondent is unemployed, mark "N/A."

Community Reintegration of Service Members (CRIS) Measure

Extent of Participation Scale 1 – Respondents Instructions

These questions are about how often you did or experienced certain things in the past two weeks. For this set of questions please use this scale (*place first scale in front of respondent*). On the left side is "more than once per day," meaning you did the activity more than once in a day. On the right side is "never," meaning you never did the activity. There is a range of answers in between.

If you don't know the answer to the question, or if you prefer not to answer, let me know. If the question is not applicable to you- for example, if I ask you a question about children and you don't have children- you can say Not Applicable. When you respond to these questions, focus on your activities in the past two weeks. If the past two weeks were really different from each other, you will need to give the average of how often you did the activity over the past two weeks.

There are no right or wrong answers to these questions, so there is nothing that you can say that will be wrong.

IN THE PAST TWO WEEKS, WAS IT?

More than once per day	Daily	5 to 6 times a week	3 to 4 times a week	1 to 2 times a week	Less than once a week	Never

CRIS EXTENT OF PARTICIPATION SCALE 1

	More than once per day	Daily	5 to 6 times a week	3 to 4 times a week	1 to 2 times a week	Less than once a week	Never	Don't know	Refused to Answer	Not Applicable
1 How often did you have a problem or limitation in driving?	1	2	3	4	5	6	7	77	88	99
2 How often did others avoid being a passenger in your car while you were driving?	1	2	3	4	5	6	7	77	88	99
3 How often did you avoid being a passenger in a car?	1	2	3	4	5	6	7	77	88	99
If working, ask: 4 How often have others at work complained about the way you did your job, for example, that you talk too much, or they didn't like the way you behave?	1	2	3	4	5	6	7	77	88	99
If working, ask: 5 How often did you have major conflict with your supervisor?	1	2	3	4	5	6	7	77	88	99
6 How often did you need to be reminded to eat?	1	2	3	4	5	6	7	77	88	99
7 How often did you engage in risky behavior?	1	2	3	4	5	6	7	77	88	99
8 How often did your drinking alcohol or using drugs cause you to have trouble at home?	1	2	3	4	5	6	7	77	88	99
9 How often did your drinking alcohol or using drugs cause you to have trouble with family or friends?	1	2	3	4	5	6	7	77	88	99
If married or in a relationship, ask: 10 How often did you have major conflict with your spouse or significant other?	1	2	3	4	5	6	7	77	88	99
11 How often did you get confused in a busy or noisy environment?	1	2	3	4	5	6	7	77	88	99
12 How often did you have difficulty handling day to day problems?	1	2	3	4	5	6	7	77	88	99
13 How often did you lack motivation and initiative to start new projects, or take care of day to day tasks or chores?	1	2	3	4	5	6	7	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Extent of Participation Scale 2 – Respondents Instructions

For the next set of questions please use this scale (*place scale in front of respondent*). On the left side of the scale is "never," meaning you never did or experienced the activity. On the right side of the scale is "more than once per day," meaning that you did this at least twice per day or more. As before, there is a range of answers in between.

IN THE PAST TWO WEEKS, WAS IT?

Never	Less than once a week	1 to 2 times a week	3 to 4 times a week	5 to 6 times a week	Daily	More than once per day

CRIS EXTENT OF PARTICIPATION SCALE 2

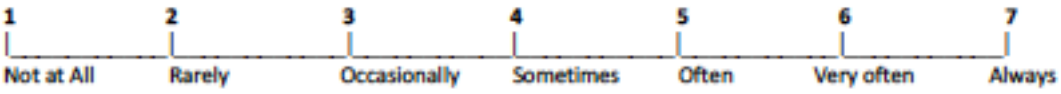
	Never	Less than once a week	1 to 2 times a week	3 to 4 times a week	5 to 6 times a week	Daily	More than once per day	Don't know	Refused to Answer	Not Applicable
1 On average, how often did you participate in recreational activities, not including watching TV?	1	2	3	4	5	6	7	77	88	99
2 How often did you engage in hobbies?	1	2	3	4	5	6	7	77	88	99
3 How often did you exercise or do light to moderate physical activity (such as walking) for at least 30 minutes?	1	2	3	4	5	6	7	77	88	99
4 How often were you able to do several things in a row such as following directions, or doing several tasks one after another?	1	2	3	4	5	6	7	77	88	99
If subject has children under 18, ask: 5 How often did you spend quality time with your children?	1	2	3	4	5	6	7	77	88	99
6 How often were you in contact with your family? When thinking of family please do not include spouse, significant other or children.	1	2	3	4	5	6	7	77	88	99
7 How often did you get together, in person, with friends who are non-veterans?	1	2	3	4	5	6	7	77	88	99
8 How often did you read or watch the local or world news?	1	2	3	4	5	6	7	77	88	99
9 How often did you follow current events?	1	2	3	4	5	6	7	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Extent of Participation Scale 3 – Respondents Instructions

The next set of questions will use this scale (*place scale in front of respondent*). On the left side of the scale is "not at all," meaning you never did or experienced the activity. On the right side of the scale is "always," meaning you always did this. There is a range of answers in between. As before, please answer the questions with an average of the past two weeks.

IN THE PAST TWO WEEKS, WAS IT?



CRIS EXTENT OF PARTICIPATION SCALE 3

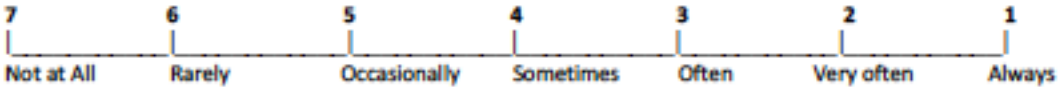
	Not at all	Rarely	Occasionally	Sometimes	Often	Very Often	Always	Don't know	Refused to Answer	Not Applicable
Skip this question if the subject has no spouse or significant other. 1 How often did you engage in sexual relations with your spouse or significant other?	1	2	3	4	5	6	7	77	88	99
2 How often did you get together with friends?	1	2	3	4	5	6	7	77	88	99
If working, ask: 3 How often did you fulfill all of the duties of your job?	1	2	3	4	5	6	7	77	88	99
4 How often did you understand things that you read?	1	2	3	4	5	6	7	77	88	99
5 How often did you understand complex reading materials, such as long forms, legal documents, or instruction manuals?	1	2	3	4	5	6	7	77	88	99
6 How often were you able to do two things at once, such as doing a chore and having a conversation?	1	2	3	4	5	6	7	77	88	99
7 How often did you go to crowded places?	1	2	3	4	5	6	7	77	88	99
8 How often did you help your friends, neighbors or relatives that did not live with you?	1	2	3	4	5	6	7	77	88	99
9 How often did you have a regular daily routine of eating?	1	2	3	4	5	6	7	77	88	99
10 How often did you follow the instructions or treatment recommendations of your health care provider?	1	2	3	4	5	6	7	77	88	99
11 How often did you take care of what you needed to do where you lived?	1	2	3	4	5	6	7	77	88	99
12 How often did you fulfill your financial responsibilities where you lived?	1	2	3	4	5	6	7	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Extent of Participation Scale 4 – Respondents Instructions

For the next set of questions, please use this scale (*place scale in front of respondent*). The only difference between this scale and the previous scale is that the numbers above the words are in reverse order.

IN THE PAST TWO WEEKS, WAS IT?



CRIS EXTENT OF PARTICIPATION SCALE 4

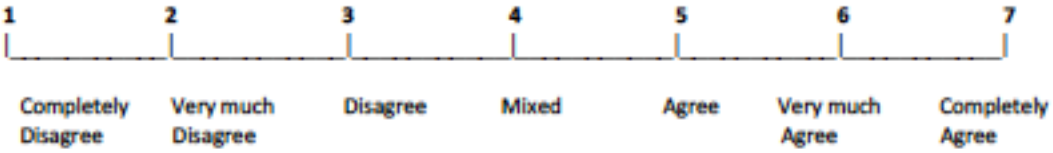
	Not at all	Rarely	Occasionally	Sometimes	Often	Very Often	Always	Don't know	Refused to Answer	Not Applicable
1 How often did you have a problem concentrating on what you were doing?	7	6	5	4	3	2	1	77	88	99
2 How often did you need to be reminded of important things you've already been told?	7	6	5	4	3	2	1	77	88	99
3 How often did you have difficulty handling unexpected problems?	7	6	5	4	3	2	1	77	88	99
4 How often did you need to be reminded to begin important tasks or activities?	7	6	5	4	3	2	1	77	88	99
5 How often did you need to be reminded to begin basic everyday tasks or activities?	7	6	5	4	3	2	1	77	88	99
6 How often did your feelings of anxiety and panic cause problems in your life?	7	6	5	4	3	2	1	77	88	99
7 How often did you feel that others misunderstood what you were getting at?	7	6	5	4	3	2	1	77	88	99
8 How often did you find yourself easily frustrated by things that other people said or did?	7	6	5	4	3	2	1	77	88	99
9 How often did you lose your temper with other people?	7	6	5	4	3	2	1	77	88	99
10 How often did conflict with others cause major problems in your life?	7	6	5	4	3	2	1	77	88	99
11 When speaking with others, how often did you interrupt them inappropriately?	7	6	5	4	3	2	1	77	88	99
12 How often did you avoid socializing with others?	7	6	5	4	3	2	1	77	88	99
13 How often did you have a problem in moving around or getting around indoors?	7	6	5	4	3	2	1	77	88	99
14 How often did you have a problem traveling to places?	7	6	5	4	3	2	1	77	88	99
15 How often did your lack of organization cause problems in your life, such as financial problems or missed appointments?	7	6	5	4	3	2	1	77	88	99
16 How often did you have difficulty managing your money such as paying your bills or keeping track of your expenses?	7	6	5	4	3	2	1	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Perceived Limitations Scale 1 – Respondents Instructions

These questions ask you how much you disagree or agree with statements. Please use this scale when responding (*place scale in front of respondent*). On the left side of the scale is "completely disagree." On the right side is "completely agree." In the center is mixed, meaning you neither agree nor disagree. There is a range of answers in between. You can agree or disagree for any reason. When you respond, focus on your activities in the past two weeks. If the past two weeks were really different from each other you will need to give me the average of how you felt over the past two weeks.

IN THE PAST TWO WEEKS?



1	2	3	4	5	6	7
Completely Disagree	Very much Disagree	Disagree	Mixed	Agree	Very much Agree	Completely Agree

CRIS PERCEIVED LIMITS SCALE 1

	Completely disagree	Very much disagree	Disagree	Mixed	Agree	Very much agree	Completely agree	Don't know	Refused to Answer	Not Applicable
1 It was easy to concentrate on what I was doing.	1	2	3	4	5	6	7	77	88	99
2 I was careful and attentive to detail.	1	2	3	4	5	6	7	77	88	99
3 I remembered what I read.	1	2	3	4	5	6	7	77	88	99
4 I was able to understand complex reading materials such as long forms, legal documents, or instruction manuals.	1	2	3	4	5	6	7	77	88	99
5 I was able to start important tasks and activities without being reminded	1	2	3	4	5	6	7	77	88	99
6 I was able to do two things at once such as doing a chore and having a conversation.	1	2	3	4	5	6	7	77	88	99
7 I was able to complete tasks that I started such as doing a chore.	1	2	3	4	5	6	7	77	88	99
8 I could cope with life's ups and downs.	1	2	3	4	5	6	7	77	88	99
9 I found it easy to show concern, love and warmth to others I cared about.	1	2	3	4	5	6	7	77	88	99
10 I settled my own conflicts with others through discussion and compromise.	1	2	3	4	5	6	7	77	88	99

Continued on following page

CRIS PERCEIVED LIMITS SCALE 1 (continued)

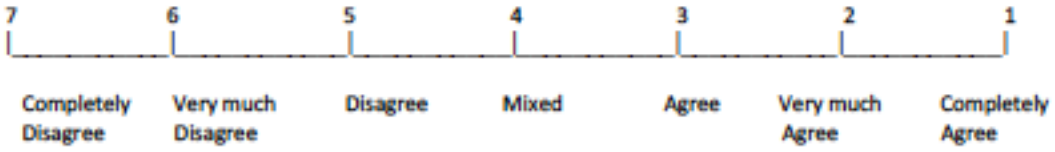
	Completely disagree	Very much disagree	Disagree	Mixed	Agree	Very much agree	Completely agree	Don't know	Refused to Answer	Not Applicable
11 Overall, I took care of what I needed to do where I lived.	1	2	3	4	5	6	7	77	88	99
12 Overall, I felt that I fulfilled my financial responsibilities where I lived.	1	2	3	4	5	6	7	77	88	99
13 I woke up when I had to.	1	2	3	4	5	6	7	77	88	99
14 I had a regular, daily routine of eating.	1	2	3	4	5	6	7	77	88	99
15 I had the transportation I needed to get where I wanted to go.	1	2	3	4	5	6	7	77	88	99
16 Getting along with others in my family was important to me.	1	2	3	4	5	6	7	77	88	99
If married or in a relationship, ask: 17 I got along with my spouse or significant other.	1	2	3	4	5	6	7	77	88	99
18 I got along with my friends.	1	2	3	4	5	6	7	77	88	99
If working, ask: 19 I did my job well.	1	2	3	4	5	6	7	77	88	99
If working, ask: 20 I had no problem getting my work done in my job.	1	2	3	4	5	6	7	77	88	99
If working, ask: 21 I got along with my supervisor.	1	2	3	4	5	6	7	77	88	99
If working, ask: 22 I got along with people at work.	1	2	3	4	5	6	7	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Perceived Limitations Scale 2 – Respondents Instructions

For the next set of questions, you will use the same response categories that we used in the previous scale (*place scale in front of respondent*). The only difference in this scale is that the numbers associated with the words are in reverse order.

IN THE PAST TWO WEEKS?



CRIS PERCEIVED LIMITS SCALE 2

	Completely disagree	Very much disagree	Disagree	Mixed	Agree	Very much agree	Completely agree	Don't know	Refused to Answer	Not Applicable
1 *I was limited in training for a new job.*	7	6	5	4	3	2	1	77	88	99
If looking for a job, ask:										
2 I felt discriminated against in getting a job.	7	6	5	4	3	2	1	77	88	99
3 I was easily confused when in a busy or noisy environment.	7	6	5	4	3	2	1	77	88	99
4 I was limited in following directions.	7	6	5	4	3	2	1	77	88	99
5 I was limited in handling day to day problems.	7	6	5	4	3	2	1	77	88	99
6 I was limited in using the phone, e-mail, or mail to contact others.	7	6	5	4	3	2	1	77	88	99
7 People misunderstood what I was trying to say.	7	6	5	4	3	2	1	77	88	99
8 I was limited in keeping track of my daily tasks and activities	7	6	5	4	3	2	1	77	88	99
9 I was easily frustrated by things that other people said or did.	7	6	5	4	3	2	1	77	88	99
10 I said critical or hostile things to my friends or loved ones.	7	6	5	4	3	2	1	77	88	99
11 I felt that I might hit or strike someone.	7	6	5	4	3	2	1	77	88	99
12 Others felt that I interrupted inappropriately when we were talking.	7	6	5	4	3	2	1	77	88	99
13 I needed to be reminded to eat.	7	6	5	4	3	2	1	77	88	99
14 I was limited in doing exercise or light to moderate physical activity (such as walking) for at least 30 minutes.	7	6	5	4	3	2	1	77	88	99
15 I avoided going to crowded places such as the mall, or community gatherings.	7	6	5	4	3	2	1	77	88	99
16 I avoided going out alone after dark.	7	6	5	4	3	2	1	77	88	99
17 In general, I avoided being a passenger in a car.	7	6	5	4	3	2	1	77	88	99
18 Others expressed distress while being a passenger in my car.	7	6	5	4	3	2	1	77	88	99
19 I had a problem or limitation in driving.	7	6	5	4	3	2	1	77	88	99
20 I put myself or others in harms way while driving.	7	6	5	4	3	2	1	77	88	99

Continued on following page

CRIS PERCEIVED LIMITS SCALE 2 (continued)

	Completely disagree	Very much disagree	Disagree	Mixed	Agree	Very much agree	Completely agree	Don't know	Refused to Answer	Not Applicable
21 Others felt that I need to cut down on my drinking or drug use.	7	6	5	4	3	2	1	77	88	99
22 Others felt that my actions put my health and safety at risk.	7	6	5	4	3	2	1	77	88	99
If subject has children or step-children under 18, ask: 23 Others felt that I was limited in looking after my children's or step-children's needs.	7	6	5	4	3	2	1	77	88	99
24 I was limited in experiencing physical intimacy.	7	6	5	4	3	2	1	77	88	99
25 I had difficulty managing my money either in paying my bills or in keeping track of my expenses.	7	6	5	4	3	2	1	77	88	99
26 I had financial problems because I was careless with money or didn't pay my bills on time.	7	6	5	4	3	2	1	77	88	99
27 I was limited in doing volunteer activities.	7	6	5	4	3	2	1	77	88	99
28 I was limited in going places like going to work, going out to a store, or for a walk.	7	6	5	4	3	2	1	77	88	99
29 I was limited in doing my hobbies.	7	6	5	4	3	2	1	77	88	99
30 I was limited in participating in recreational activities not including watching TV.	7	6	5	4	3	2	1	77	88	99
31 I was limited in engaging in social gatherings.	7	6	5	4	3	2	1	77	88	99
32 I felt I spent too much time alone.	7	6	5	4	3	2	1	77	88	99

Community Reintegration of Service Members (CRIS) Measure

Satisfaction Scale – Respondents Instructions

This section of the survey will ask you questions about how satisfied you are with different aspects of your life. These questions should be answered using the responses from the satisfaction scale (*place scale in front of respondent*). On the left side of the scale is "very unhappy." On the right side of the scale is "very happy." In the center is mixed. There is a range of answers in between.

Please answer these questions using the responses on this scale, even if you did not perform an activity to indicate your level of satisfaction with the activities that you do or do not do.

IN THE PAST TWO WEEKS?

CRIS SATISFACTION SCALE

		Very unhappy	Unhappy	Mostly Dissatisfied	Mixed	Mostly Satisfied	Happy	Very happy	Don't know	Refused to Answer	Not Applicable
	If married or in a relationship, ask:										
1	How satisfied were you with your relationship with your spouse or significant other?	1	2	3	4	5	6	7	77	88	99
2	How satisfied were you with your ability to learn new things?	1	2	3	4	5	6	7	77	88	99
3	How satisfied were you with your ability to think clearly and logically?	1	2	3	4	5	6	7	77	88	99
4	How satisfied were you with your ability to think clearly while in a busy or noisy environment?	1	2	3	4	5	6	7	77	88	99
5	How satisfied were you with your ability to make decisions?	1	2	3	4	5	6	7	77	88	99
6	How satisfied were you with your ability to handle day to day problems?	1	2	3	4	5	6	7	77	88	99
7	How satisfied were you with your ability to read long documents or books?	1	2	3	4	5	6	7	77	88	99
8	How satisfied were you with your ability to understand material you have read?	1	2	3	4	5	6	7	77	88	99
9	How satisfied were you with your ability to start basic **everyday tasks and activities without being** reminded?	1	2	3	4	5	6	7	77	88	99
10	How satisfied were you with your ability to do two things at once such as doing a chore and having a conversation?	1	2	3	4	5	6	7	77	88	99
11	How satisfied were you with your ability to do several things in a row such as following directions, or doing several tasks one after another?	1	2	3	4	5	6	7	77	88	99
12	How satisfied were you with your ability to keep track of your daily tasks and activities?	1	2	3	4	5	6	7	77	88	99
13	How satisfied were you with your ability to get and stay organized?	1	2	3	4	5	6	7	77	88	99

Continued on following page

CRIS SATISFACTION SCALE (Continued)

	Very unhappy	Unhappy	Mostly Dissatisfied	Mixed	Mostly Satisfied	Happy	Very happy	Don't know	Refused to Answer	Not Applicable
14 How satisfied were you with the way you coped with life's ups and downs?	1	2	3	4	5	6	7	77	88	99
15 How satisfied were you with the way that you participated in conversations?	1	2	3	4	5	6	7	77	88	99
16 How satisfied were you with your ability to make yourself understood?	1	2	3	4	5	6	7	77	88	99
17 How satisfied were you with moving around or getting around indoors as you wanted to?	1	2	3	4	5	6	7	77	88	99
18 How satisfied were you with the way you protected yourself from harm?	1	2	3	4	5	6	7	77	88	99
19 How satisfied were you with the way you managed your stress level?	1	2	3	4	5	6	7	77	88	99
20 How satisfied were you with the way that you took care of your health?	1	2	3	4	5	6	7	77	88	99
21 How satisfied were you with your ability to prepare meals?	1	2	3	4	5	6	7	77	88	99
22 How satisfied were you with your personal cleanliness?	1	2	3	4	5	6	7	77	88	99
23 How satisfied were you with your participation in exercise or light to moderate physical activity such as walking?	1	2	3	4	5	6	7	77	88	99
24 How satisfied were you with your ability to control your intake of alcohol or use of drugs? *(other than what has been prescribed for you)*	1	2	3	4	5	6	7	77	88	99
25 How satisfied were you with your stress level while being a passenger in a car?	1	2	3	4	5	6	7	77	88	99
26 How satisfied were you with your stress level while driving a car?	1	2	3	4	5	6	7	77	88	99

Continued on following page

CRIS SATISFACTION SCALE (Continued)

	Very unhappy	Unhappy	Mostly Dissatisfied	Mixed	Mostly Satisfied	Happy	Very happy	Don't know	Refused to Answer	Not Applicable
39 How satisfied were you with your participation in social gatherings?	1	2	3	4	5	6	7	77	88	99
If working, ask: 40 How satisfied were you with your relationship with your supervisor at work?	1	2	3	4	5	6	7	77	88	99
If working, ask: 41 How satisfied were you with your relationships with people at work? ***If subject works alone, circle "99" for Not Applicable***	1	2	3	4	5	6	7	77	88	99
42 How satisfied were you with your level of involvement in hobbies?	1	2	3	4	5	6	7	77	88	99
43 How satisfied were you with the amount of time you spent in recreational activities not including time spent watching TV?	1	2	3	4	5	6	7	77	88	99
44 How satisfied were you with the way you kept up with the news?	1	2	3	4	5	6	7	77	88	99
45 How satisfied were you with the number of hours that you worked?	1	2	3	4	5	6	7	77	88	99
If working, ask: 46 How satisfied were you with your job performance?	1	2	3	4	5	6	7	77	88	99
47 How satisfied were you with your ability to manage your money by paying bills or by keeping track of your expenses?	1	2	3	4	5	6	7	77	88	99

CRIS Scoring Instructions

Three separate subscale scores are calculated for the CRIS: Extent of Participation, Perceived Limitations, and Satisfaction with Participation. Follow the directions below to calculate the score for each of these subscales.

Extent of Participation: This subscale utilizes the scores from the four Extent of Participation scales.

1. Calculate the total score by adding the scores for every item from each of the four Extent of Participation scales for which the response is 1-7.
2. Calculate the number of items completed by tallying the number of items completed for each of the four Extent of Participation scales. Do not count items that are marked "Don't Know," "Refused to Answer," or "Not Applicable."
3. Divide the Extent of Participation score by the number of completed Extent of Participation items
4. Calculate the final score by multiplying the total by 10.

Perceived Limitations: This subscale utilizes the scores from the 2 Perceived Limitations scales.

1. Calculate the total score by adding the scores for every item from each of the Perceived Limitations scales for which the response is 1-7.
2. Calculate the number of items completed by tallying the number of items from each of the 2 Perceived Limitations scales. Do not count items that are marked "Don't Know," "Refused to Answer," or "Not Applicable."
3. Divide the Perceived Limitations score by the number of completed Perceived Limitations items.
4. Calculate the final score by multiplying the total by 10.

Satisfaction with Participation: This subscale utilizes the scores Satisfaction with Participation scale.

1. Calculate the total score by adding the scores for every item for which the response is 1-7.
2. Calculate the number of items completed by tallying the number of items from each of the 2 Perceived Limitations scales. Do not count items that are marked "Don't Know," "Refused to Answer," or "Not Applicable."
3. Divide the Satisfaction with Participation score by the number of completed Satisfaction with Participation items.
4. Calculate the final score by multiplying the total by 10.

	Total Score	# Completed	$\frac{\text{Total}}{\text{\# Completed}}$	Final Score
Extent of Participation Scale	_____	/ _____	= _____	(X 10) = _____
Perceived Limitations Scale	_____	/ _____	= _____	(X 10) = _____
CRIS Satisfaction Scale	_____	/ _____	= _____	(X 10) = _____

UNIVERSITY of HAWAI'I SYSTEM

Sarah Murray <sarahjm@hawaii.edu>

Re: Using the CRIS tool for Dissertation

Resnik, Linda <linda_resnik@brown.edu> Wed, Sep 23, 2015 at 8:35 AM
To: Sarah Murray <sarahjm@hawaii.edu>
Cc: "Resnik, Linda" <Linda.Resnik@va.gov>

Hi Sarah,

The CRIS and the CRIS-CAT version are free for public use. You don't need my permission to use them- but you certainly have it.

Congratulations on finishing your comprehensive exam and defending your proposal. Best of luck with your research,

Linda

On Wed, Sep 23, 2015 at 9:19 AM, Sarah Murray <sarahjm@hawaii.edu> wrote:

> Hi Dr. Resnik,
>
> I wrote to you last year about my dissertation work on Veterans and reintegration. I a now through my comprehensive exam and have had my proposal defense. I am writing for permission to use the CRIS tool for my dissertation work.
> I am doing a mixed-methods study that will use qualitative phenomenology and interview Veterans who were treated at the US Army burn center for there combat burn injuries. In addition, I want to administer the CRIS tool. I hope to further validate this tool and gain support for long-term follow up for the Veterans that have burn injury.
>
> In order to use the tool I need some sort of written permission from the authors. I appreciate your support.
>
> Very Respectfully,
> Sarah Murray
>
> --
> Sarah J. Murray, MSN-RN, APRN
> ACNS-BC
> UH Manoa School of Nursing and DH
> PhD Candidate
> 210-748-5063
> sarahjm@hawaii.edu

--
Linda Resnik, PT, PhD
Research Career Scientist
Providence VA Medical Center

Professor (Research)
Department of Health Services, Policy and Practice
Brown University
Providence, RI

Appendix C

Consent Forms

Consent to Participate in Research Project

Title of Research: *Community Reintegration of the Severely Wounded Veteran: a Mixed Methods Study.*

My name is Sarah J. Murray, PhD Candidate, MSN-RN. I am a doctoral student at the University of Hawaii at Mānoa. I am a nurse who is interested in learning about how military Veterans reintegrate into the civilian community after they are wounded in war. The purpose of this study is to learn how the Veteran reintegrates back into the civilian community. For the purpose of this study, the term "reintegration" will use the VA definition which means that the Veteran is able to participate as a family member, friend, spouse or intimate partner, parent, community member, student or worker. The idea of reintegration means that the Veteran is able to return to some level of independence in their community and family. Also, the Veteran is able to enjoy leisure activities like hobbies or sports. I am asking you to participate in this study because you were identified by the United States Institute of Surgical Research (USAISR) Burn Center as having been treated for burn injury sustained while deployed.

Project Description—Activities and Time Commitment

If you participate, I will interview you face-to-face. The interview will consist of a short demographic question set, then series of questions about your life experience after you were injured up until this point in time. The questions I will ask are about your experience reintegrating into your community. I am interested in your perceptions about your experience and what you can identify about your community that contributed to where you are today. You may have a family member or friend present if you feel it will help you answer questions. The interview may last 30 to 45 min. However, if you need more time it can go as long as you need. I can schedule more than one interview with you if you need the extra time and 45 min is too long for one session.

You will also complete a survey called the Community Reintegration of Injured Service Members (CRIS) that assesses level of reintegration. This tool typically takes 15 minutes per section. There are 3 sections to complete.

Benefits and Risks:

I believe that there may be a limited direct benefit to you for participating. You may feel validated as you talk about your experience. The results of this study will help researchers and program developers learn how Veterans returns to a life they enjoy living. This information could help the VA or other entities provide better services and treatments to the Veteran with TBI.

There are some potential risks to participating in this study. You may feel overwhelmed by the interview. Or, the interview may bring up feelings that are painful or frightening. If this happens, we can stop the interview at any time. We can skip questions that you do not want to answer. You can also withdraw or quit at any time. I believe the risks are very minimal. I will also provide you with an information sheet listing the agencies nearby that can provide health support if you feel you need help due to participation in the interview.

Confidentiality and Privacy

I will keep your identity completely confidential. Only I will know your identity. I will give you an alias for the purpose of the study that does not contain any personally identifiable information. After the interview recording is transcribed, I will erase and destroy the tapes. Once the final report is written, I will supply you with a copy of the summary.

Voluntary Participation
Participation is completely voluntary. You can withdraw at any point in this project without any penalty.

Questions:
Please contact me by phone at 210-748-5063 or by email at sarahjm@hawaii.edu if you have any questions or concerns. If you have any questions about your rights as a P in this study you can contact the University of Hawai'i, Human Studies Program, by phone at (808) 956-5007 or by e-mail at uhirb@hawaii.edu.

Please keep a copy of this form.

----------CUT HERE----------

Signature for Consent:
I agree to participate in the research project called: *Community Reintegration of the Severely Wounded Veteran: a Mixed Methods Study.* I understand that I can change my mind about participating in this project, at any time, by notifying the researcher.

Your Name (Print): _____
Your Signature: _____
Date: _____

Appendix D

Texas Code for Advanced Directives

The following agents are described by Texas codes for Advanced directives (Tex. Probate Code, Chapter XIII, § 679, Tex. Probate Code, Chapter XIII, § 767(a)(4)), Title 2, Health & Safety Code, §§ 166.151-166.166, and Title 2, Health & Safety Code, §§ 166.001-166.081)

“(1) a patient’s legal guardian with the authority to make decisions regarding medical treatment; or

(2) a person designated as a surrogate decision-maker by the patient in a medical power of attorney or Advance Directive

In the absence of either of the above, an adult surrogate from the following list, in order of priority, who is available after a reasonably diligent inquiry, may consent on behalf of the patient:

(1) the patient's spouse (including a common law spouse);

(2) an adult child of the patient who has the waiver and consent of all other qualified adult children of the patient to act as the sole decision-maker;

(3) a majority of the patient's reasonably available adult children;

(4) the patient's parents; or

(5) the individual clearly identified to act for the patient by the patient before the patient became incapacitated, the patient's nearest living relative, or a member of the clergy.

Texas law recognizes common law marriages (technically called an “informal marriage” under state law), so a common law spouse has the same rights and responsibilities with regards to being a health care surrogate decision-maker as does someone who was formally married. In order to form a common law marriage, there are three requirements:

1. The couple must have "agreed to be married;"

2. The couple must hold themselves out as husband and wife by representing to others that they are married to each other.

3. They must have lived together in this state as husband and wife.

There is no required amount of time which the couple must have lived together; even one-day cohabitation can form a marriage so long as the other two elements are met. As for what constitutes “holding out” as husband and wife, some examples are introducing their partner socially as "my husband" or “my wife,” and indicating on documents (such as tax returns, deeds, insurance applications, utility bills) that they are married.

If a dispute arises as to the right of a party to act as a surrogate decision maker, it may only be resolved by a court of record having jurisdiction under Chapter V, Texas Probate Code. Thus, researchers should not enroll a person in a trial if a dispute arises as to who has the authority to give consent and there is no court order granting such authority to someone (or some entity).

There are some limitations on the authority of a surrogate decision-maker who in categories (1) through (5) above. All decisions must be based on knowledge of what the patient would desire, if known. Someone higher on the list can choose not to be the surrogate, in which case you would move on to the next person in the order of priority, however that person may not appoint someone else as the surrogate decision maker. Furthermore, health care providers are obligated to file the wishes of a patient that are delineated in an Advance Directive or a Declaration for Mental Health Treatment, unless there are statutory provisions granting deviations from said documents” (Perry, 2008).