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Recent Veterans' Self-Management of Health During Military to Civilian Life Transition: A Grounded Theory Study

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RECENT VETERANS' SELF-MANAGEMENT OF HEALTH DURING THE MILITARY TO CIVILIAN LIFE TRANSITION: A GROUNDED THEORY STUDY

by

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United States Veterans of combat within Iraq and/or Afghanistan return home to face an array of somatic and psychological health concerns. Little was known about how they manage their health after military discharge. The research question for this study was "how do OIF/OEF/OND combat Veterans and their primary support persons manage Veterans' health at home?" There is little information about these Veterans' perspective of self-management of health in the home. This study was designed to provide a theoretical understanding of self-management and family support in this population. The Family Management Style Framework (Knafl, Deatrick & Havill, 2012) was used as a sensitizing framework. This grounded theory study furthered development of the constructs within the Family Management Style Framework and addressed unique characteristics of the Veteran population. Using purposive, theoretical, and snowball sampling strategies, Veterans and support persons were recruited from American Legion posts within District 14, California. Fifteen Veterans and five support persons were interviewed. Data collection occurred at one point in time using field observations and semi-structured interviews. Data analysis consisted of open, axial and selective coding (Corbin & Strauss, 2008) with constant comparative methods. Veterans described four interacting dimensions of health: physical, mental/behavioral, relationship and career health. The core concept identified was the *military to civilian life transition* they experienced when they returned from deployment. Veterans' experienced health and self-management changes over time during this transition. The transition outcomes identified were *continuing military mindfulness, engaging in civilian life and acclimating to civilian life*. Study findings inform the healthcare community of Veterans' health perspective and unique needs. Self-management of health is a dynamic phenomenon during the transition from military to civilian life. This study contributed to knowledge for researchers and clinicians who aim to help Veterans to successfully return to civilian life from military life. Structured transition support early in the transition may benefit Veteran

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LIST OF ABBREVIATIONS

CA	California
CHF	congestive heart failure
CCHT	care coordination home telehealth
CCM	chronic care model
COPD	chronic obstructive pulmonary disease
DM	diabetes mellitus
DSME	diabetes self-management education
FaMM	Family Management Measure: reliable psychometric measure
FMS	Family Management Style
FMSF	Family Management Style Framework
GT	grounded theory
HF	heart failure
WLST	Withdrawal of Life-Sustaining Therapy
mTBI	mild traumatic brain injury
MVA	motor vehicle accident
n	sample attributes in statistics
N	population attributes in statistics
NAC	national alliance for caregiving
OI	osteogenesis imperfecta known as brittle bone disease
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OND	Operation New Dawn
PDC	partners in dementia care
PI	primary investigator

PTSD	post-traumatic stress disorder
REDcap	electronic data capture tools hosted at the University of Nebraska Medical Center.
RITO	Research Information Technology Office
SCI	spinal cord injury
TBI	Traumatic Brain Injury
WWII	2nd World War
VHA	Veterans' Health Administration

CHAPTER 1: INTRODUCTION

Many United States soldiers have returned home to face a tremendous array of somatic and psychological health conditions after serving in combat within Iraq and Afghanistan. Combat-related health conditions increase the risk of associated co-morbidities with negative health consequences for this population (Blakey et al., 2018; Griffin, Friedemann-Sánchez, Hall, Phelan & van Ryn, 2009; Melcer, Walker, Galarneau, Belnap, & Konoske, 2010; Milliken, Auchterlonie & Hoge, 2007; Robbins, Vreeman, Sothmann Wilson, & Oldridge, 2009; Wolfson & Schecter, 2011). *Health conditions* can be defined as physical or mental disease, illness, injury or impairment. Health conditions can be diagnosed or undiagnosed. Ultimately, the combat Veteran and his/her primary support person must self-manage many health conditions in the home.

Examples of somatic health conditions that have been studied in this population include traumatic brain injuries (TBI) (Blakey et al., 2018; Cifu, et al., 2014; Clark, Bair, Buckenmaier, Girond, & Walker, 2007; Lew et al., 2009; Robbins et al., 2009), spinal cord injuries (Griffin et al., 2009), effects of musculoskeletal injuries such as burns, fractures, amputations, phantom pain (Geiling, Rosen & Edwards, 2012; Lew et al., 2009; Robbins et al., 2009) and a variety of chronic pain problems (Bair et al., 2015; Cifu, et al., 2014; Clark et al., 2007; Otis, McGlinchey, Vasterling & Kerns, 2011; Robbins et al., 2009). Examples of psychological health conditions that confront combat Veterans include risk of suicide (Milliken et al., 2007; Tanielian et al., 2008), anxiety and depression (Brancu, Straits-Troster & Kudler, 2011; Milliken et al., 2007; Sayer et al., 2010) and relationship problems (Milliken et al., 2007; Knobloch & Theiss, 2011).

Health concern can be defined as a subjective term that represents a person's awareness of a health matter. Health concerns require behavioral responses in order for the person to maintain or attain optimum health. The concept of health conditions (objective situation: disease, illnesses and injuries) and the concept of Veterans' health concerns (subjective situation:

Veterans' perspective regarding health associated matters) are intertwined and together create a multidimensional contextual environment within which the Veteran and his/her primary support person operate. For example, post-traumatic stress disorder (PTSD) has been identified as the most commonly seen mental health diagnosis in Iraq and Afghanistan war Veterans (Cifu, et al., 2014; Geiling et al., 2012; Lew et al., 2009; Milliken et al., 2007; Solomon & Mikulincer, 2006). PTSD is a health condition and is also a major health concern for Veterans (Castro, 2014; Milliken et al., 2007) and their family members (Institute of Medicine, 2010). Combat Veterans are at risk of developing it whether or not they have been physically injured (Castro, 2014; Lew et al., 2009; Tanielian et al., 2008; Milliken et al., 2007). PTSD can occur from being in the proximity of explosions or from witnessing friends being injured or killed during war. PTSD presents unique health challenges; it is "associated with smoking, substance abuse, depression, anxiety, heart disease, obesity, diabetes, gastro-intestinal disorders, dermatologic disorders, musculoskeletal disorders, insomnia, chronic fatigue and increased dementia" (Geiling et al., 2012, p. 1239). PTSD symptoms may have immediate, delayed or long-term effects on combat Veterans (Castro, 2014; Geiling et al., 2012; Solomon & Mikulincer, 2006).

Somatic and psychological health conditions affect Veterans, their family members and their support persons. Moreover, family members and support persons who provided care to combat Veterans in the home may have elevated health risks of their own including depression and anxiety (Castro., 2014; McNulty, 2005; NAC, 2010; Renshaw, Rodrigues, & Jones, 2008; Knobloch & Theiss, 2011), PTSD, and dyadic distress (Knobloch & Theiss, 2011). For example, providing support for a Veteran with combat related illness can cause family members or support persons increased stress, sleep deprivation and unhealthy weight changes (NAC, 2010).

There is a rich body of literature with studies about combat Veterans' health conditions which represent the perspective of healthcare providers in medical, nursing and physiological fields. Conversely, there is very little research regarding self-management of health conditions or

health concerns from the Veteran's perspective. For example, Milliken et al. (2007) conducted a longitudinal study designed to evaluate mental health conditions and overall health concerns from Veterans' perspectives. The researchers surveyed Iraq Veterans twice within 6 months after they returned from deployment (n= 88,235). Milliken et al. (2007) did not specifically define the terms health condition or health concern in the study. Rather, they focused on post-deployment mental health conditions, mental health distress and the Veteran's overall health concerns from the Veteran's perspective. They found that 21% of the soldiers reported "fair or poor overall health," 35% reported "mental health concerns" or "mental health distress," and 55% reported "physical health concerns." Milliken et al. (2007) did not evaluate the combat Veterans' perspectives on self-management. Nor did they study primary support persons' roles in Veterans' self-management activities in the home. Therefore, there was an opportunity to contribute to the Veterans' literature and to the theoretical development of this important area of study. A grounded theory study helped fill the identified knowledge gap and added the perspectives of recent combat Veterans' views of health conditions and health concerns, along with the perspective of Veterans' primary support persons within the context of the home setting to the literature.

Significance

Over 2.6 million United States soldiers have served in Operation Enduring Freedom, Operation Iraqi Freedom and/or Operation New Dawn (OEF/OIF/OND) and have returned home from war zones since Oct. 2001. The National Center of Veterans Analysis and Statistics (2016) anticipates 3.5 million Veterans to return by 2019. (National Center for Veterans Analysis and Statistics, 2016). The "signature [physical] injury" of Operation Iraq Freedom (OIF) and Operation Enduring Freedom (OEF) Veterans is traumatic brain injury (TBI) (Blakey et al., 2018; Geiling et al., 2012; Griffin, et al., 2012; Wade, Dye, Mohrle, & Galarneau, 2007). Eighteen to twenty-two percent of Veterans returning from Iraq and Afghanistan met the criteria for a

diagnosis of traumatic brain injury (TBI) (Griffin et al., 2012; Hoge et al., 2008; Tanielian et al., 2008). Advancements in specially designed personal protective gear for soldiers and improved battleground medical care allow more soldiers to survive TBI than in wars past (MacGregor, Dougherty, Morrison, Quinn, & Galarneau, 2011). As mentioned above, the most common mental health conditions for returning OEF and OIF combat soldiers are PTSD and depression (Fulton et al., 2015; Milliken, et al., 2007; Seal, Bertenthal, Miner, Sen, & Marmar, 2007). Prevalence of PTSD within this Veteran population is unclear. Researchers have determined it to be from 1.4% (Fulton et al., 2015) to 22% (Shiner, 2011) to 41% (Cifu, et al., 2014; Sayer et al., 2010) to 44% (Clark et al., 2007; Hoge et al., 2008) to 67% (Fulton et al., 2015; Lew et al., 2009). Seal et al. (2007) found that 31% of returning combat Veterans were diagnosed with a mental health disorder and 56% were identified as having multiple mental health diagnoses (*n* = 103,788). Cifu, et al. (2014) found that 6% of OEF/OIF/OND Veterans report a constellation of the three study co-morbidities; TBI, PTSD and pain. The researchers described the prevalence of these health conditions derived from a significant number of Veterans (N = 613,391), however, there is no discussion regarding Veterans' self-management behaviors in the home or support persons' contribution to Veterans' managing in the home. Another research team (Blakey et al., 2018) conducted a study that considered the constellation of symptoms: TBI, PTSD and pain in the OEF/OIF/OND population. Using logistic regression analysis to determine the role of this polytrauma clinical triad (TBI, PTSD and pain) as risk factor as a group, as paired dyads and as individual factors on Veterans' violence ideation and suicidal ideas. They then used logistic regression analysis to evaluate a selection of innate and behavioral variables. The team found a significant relationship between (1) demographic and pain variables (2) polytrauma variables (3) addictive substance variables and increased risk of self-directed violent ideation (suicidal ideation) and violent ideation. In their discussion section, the team specified the need for more research regarding the significant risk factors found in their study, risk assessment strategies

the team developed and possible interventional strategies. This study supports the rationale for my study, specifically, to develop a better understanding of Veterans' healthcare needs and to identify intervention strategies for the healthcare needs of this population. Also, it is important to understand Veterans' health perspective and self-management behaviors for knowledge development. The study by Blakey et al. (2018) did not evaluate Veterans' self-management behaviors that this population used or did not use. My study provides for a deeper understanding of how combat Veterans may use self-management behaviors that would provide a deeper understanding for other research and intervention strategies that might prevent catastrophic outcomes.

Self-Management

Research studies that address self-management of Veterans' health conditions focus on chronic disease states such as diabetes mellitus (Funnell et al., 2008; Klobucar, Hibbs, Jans & Adams, 2012; Nelson, McFarland & Reiber, 2007), stroke (Lutz, Chumbler, Lyles, Hoffman, & Kobb, 2009), dementia (Judge et al., 2011) congestive heart failure (Darkins, Kendall, Edmonson, Young & Stressel, 2017; Shaw et al., 2014; Skaperdas et al., 2014). Guidelines developed from the perspective of healthcare providers provided recommendations for Veteran self-management of combat-related injuries (Carlson et al. 2009; VA/DoD Clinical Practice Guidelines 2015; VA/DoD Clinical Practice Guidelines 2018; Veterans Affairs Public Health, Brain Injury, 2014; Veteran's Health Initiative, 2004). However, recommendations for self-management practices based on combat Veterans' stated needs in the home are missing from the literature. Successes or difficulties Veterans experienced by following recommendations from their healthcare provider for self-management of their health conditions or health concerns in the home is unknown in the literature. To advance the science in this area, the perspective of Veterans and their primary support persons' was required. This study provided essential empirical evidence to contribute to scientific knowledge development and theory development.

Statement of the Problem

There is a small body of literature about Veteran self-management of chronic conditions in the general Veteran population. Additionally, there is a small body of literature about how caring for Veterans in the home affects Veteran support persons. However, there is no information about combat Veterans' self-management of health conditions or health concerns in the home. In order to better serve this Veteran population, this study was designed to generate scientific knowledge to better understand and serve this population. The study filled the gap within the scientific literature using a grounded theory approach to generate evidence-based knowledge of Veterans' needs and self-management of health concerns and health conditions, along with the role of the primary support person in the home.

Conceptual Approach

This grounded theory study used the family management style [theoretical] framework (FMSF), developed by Knafl and colleagues (Knafl, 2008; Knafl, Deatrick & Gallo, 2008) and the RFMF (Knafl, Deatrick & Havill, 2012) as a "sensitizing framework" (Blumer, 1969) to guide, yet not limit, the study. The RFMF uses a family systems approach to integrate self-management of individual health concerns and management by primary support persons and family members. It offers general guidelines or a "lens" for scientific inquiry while providing an opportunity to explore management characteristics unique to the Veteran population. The FMSF originated as a family theory framework and was developed using grounded theory methodology. It is now well established as a theoretical framework for pediatric populations with chronic conditions (Deatrick, 1990). Modifications and adaptations of the FMSF have demonstrated its versatility and expanded its applicability to populations outside of pediatrics into adolescent populations (McDonald & Deatrick, 2011; Wollenhaupt, Rodgers, & Sawin, 2011). The FMSF also has been used with adult populations (Nelson, Deatrick, Knafl, Alderfer, & Ogle, 2006; Grey, Knafl & McCorkle, 2006; Wiegand, Deatrick & Knafl, 2008; Beeber & Zimmerman,

2012). In order to clarify study concepts, Chapter 2 provides an in-depth introduction to family style management framework (FMSF).

Purpose of the Study

The purpose of the study was to generate a well-integrated grounded theory regarding combat Veterans' self-management of health conditions (objective) and health concerns (subjective) in the home, including an examination of the contributions to their care made by, and the perspective of, their primary support persons. The study population was combat Veterans of OEF/OIF/OND and their primary support persons.

The phenomenon of interest under study was combat Veterans' self-management of health conditions and/or health concerns in the home from their unique perspectives and those of their primary support persons. The results of the study filled an identified gap in the literature by providing a better understanding of the process Veterans use to manage their own health and the role of the primary support person in the context of Veterans' homes. Results can potentially serve as groundwork for future studies focused on post-deployment Veterans health needs.

Research Question

The central research question was: "How do OEF/OIF/OND combat Veterans and their primary support persons manage Veterans' health conditions and health concerns at home?"

Specific Research Questions

- What post-deployment health concerns do combat Veterans experience?
- What post-deployment health conditions do combat Veterans experience?
- What do Veterans do to manage their health in the home?
- What is the role of the primary support person or family member in managing the health concerns of combat Veterans?
- What health management resources do the Veteran/primary support person and/or family member/dyad interact with?

- What is the context in which these dyads manage health concerns in the home?
- What are the perceived consequences of Veteran self-management of health concerns and primary support persons in the home?
- What are the perceived consequences of Veteran self-management of health conditions and primary support persons or family members in the home?

Definitions

Health concern. Subjective term that represents a person's awareness or mindfulness of a health matter that urges or requires behavioral follow-through or other consideration in order for the person to maintain and/or attain optimum health.

Health condition: Objective term that represents a person's state of physical and/or mental health. *Health condition* can be a diagnosed or undiagnosed disease, illness, injury or impairment; it can be a physical or mental state.

OEF/OIF/OND: Commonly known acronym used in the military literature. Indicates dates of military service for all branches of military. Operation enduring freedom (OEF): Oct. 7, 2001 – present; Operation Iraqi Freedom (OIF): March 20, 2003 – Aug. 31, 2010; Operation new dawn (OND): Aug. 31, 2010 – present. (DOD, 2013).

Primary support person: One person identified by the Veteran who supports the Veteran the most to help manage Veterans' health concerns or conditions in the home. The use of the term "support person" seemed more fitting than "family caregiver" for the population of OEF/OIF/OND Veterans. Preliminary work with this population (including a project in my advanced qualitative research course and discussions with key individuals at potential recruitment sites) indicated that the term "family caregiver" may be off-putting to younger Veterans. However, the Veteran literature primarily mentions "caregivers" or "family caregivers." Therefore, I reviewed this literature in preparation for the study, as described below. As it turned

out the “support person” made more sense because the Veterans mostly needed emotional support rather than physical support.

Self-management: Skaperdas et al. (2014) define self-management: “It is widely accepted that self-management, a concept often defined as ‘‘patients’ active participation in their own treatment’’, is of crucial importance for achieving better clinical outcomes (Lorig & Holman, 2003; Lainscak, et al., 2011).

CHAPTER 2: LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The purposes of this chapter are (1) to present a literature review highlighting accomplishments and gaps in the research literature to date on Veteran self-management and family caregiving in the Veteran population, and (2) to present the conceptual framework for this study. The veteran self-management and family caregiving research literatures are reviewed in this chapter because these bodies of literature are most relevant to the study. Most Veteran self-management research to date focuses on the individual, and on Veteran self-managing chronic health conditions. A few of the self-management studies included family members in some way; however, the Veteran family caregiving literature focuses primarily on caregivers to the exclusion of the Veterans they are providing care for. The "Family Management Style Framework" (Knafl & Deatrick, 2003) was the sensitizing conceptual framework for this study. Chapter 2 describes the development of the framework, its associated program of study and rationale for using RFMF as a sensitizing theoretical framework in this grounded theory study.

Literature Review

Self-Management of Chronic Illness in Veteran Population

Self-management of chronic illness is a well-established concept within the research literature concerning various populations (Hoffman, Rice & Sung, 1996; Holman & Lorig, 2004; Lorig, 1996; Newham et al., 2017; Ryan & Sawin, 2009) and is an emerging concept in Veteran populations (Darkins, et al., 2017). Self-management is increasingly important as roles and responsibilities of professional healthcare providers change from primarily treating acute health issues to the management of chronic health issues (Holman & Lorig, 2004; Khusid & Vythilingam, 2016; Ryan & Sawin, 2009). Lorig and Holman (2003) researched the history of self-management literature and conceptualized self-management. One important aspect of successful self-management is the daily management of one's own chronic health needs in the home (Hoffman et al., 1996; Holman & Lorig, 2004, Lorig & Holman, 2003; Lorig et al., 1999).

As noted in Chapter I, there is a growing interest within the Veterans Health Administration (VHA) about both OIF/OEF/OND Veterans' health concerns and health conditions upon return from deployment (VA/DoD, 2015; VA/DoD, 2018). The Institute of Medicine (IOM) (2010, p. 24, 85 and 176) called for increased research on self-management of health conditions for combat Veterans from OIF/OEF/OND conflicts. The following provides an integrated literature review of what was found in the literature regarding the concept of self-management from recent and prior wars in both combat and non-combat related conditions.

Self-Management of Non-Combat Related Conditions in Veteran Population

Veteran self-management studies found in the literature focus on self-management of chronic care in diabetes mellitus (DM) (Darkins et al., 2008; Funnell et al., 2008; Funnell et al., 2012; Klobucar et al., 2012; Nelson, et al., 2007), dementia care (Judge et al., 2011), congestive heart failure (Shaw et al., 2014; Skaperdas et al., 2014) and stroke (Darkins et al., 2008; Lutz et al., 2009).

Nelson et al. (2007) found that despite sufficient recommendations for DM self-management from health care providers, many Veterans were unable or unwilling to adhere to self-management guidelines. Up to 45% of Veterans (n=717) reported non-adherence to medications, diet, and medical recommendations. The authors identified barriers to Veterans' self-management of diabetes and suggested interventions to increase self-efficacy and readiness to change health behaviors. They concluded that there was a need to promote self-management of glycemic control in the Veteran population. Funnell et al. (2008; 2012) suggest that Veterans, their families and caregivers require education in order to successfully adopt DM self-management strategies.

Mensing et al. (2006) published Veteran- focused *National Standards for Diabetes Self-Management Education* (DSME) based on empirical evidence in the literature. The promotion of self-management education was the core concept of the DSME. Updated in 2008 and again in

2012, the DSME continues to inform healthcare educators about how to best promote self-management of diabetes. The program is specifically designed for Veterans although it is useful for all diabetic patients (Funnell et al., 2008; Funnell et al. 2012).

Lutz et al. (2009) conducted a non-randomized open trial. Using a mixed method design to test "the feasibility to implement a stroke-specific, care coordination home telehealth (CCHT) program for Veterans with stroke and their family caregivers." They briefly mentioned the importance of educating Veterans and their family caregivers about self-management.

Judge et al. (2011) implemented an educational intervention for dementia self-management in the Veteran population. *The Partners in Dementia Care* (PDC) telephone-based intervention was designed to teach Veterans with dementia and their family caregivers in the home environment. Judge et al. systematically assessed the needs of the Veteran with dementia and the family member caregiver. This helped them identify care goals, and to "empower" the dyads using self-management interventions based on national standards of care for dementia. Judge et al. (2011) explained that the Veteran was encouraged to participate in plans of dementia care and self-management protocols despite their diagnosis.

Shaw et al. (2014) conducted an interventional study through a major VHA medical center targeting the improvement of Veteran self-management of congestive heart failure (CHF). Shaw et al. (2014) used the "chronic care model" as a theoretical framework for the study. The purpose of the study was to "examine the association between enhanced care coordination interventions and patient self-management of heart failure" (Shaw et al., 2014, p. 2) using an educational-interventional approach. A total of 40 study participants included 20 in the usual care group and 20 participants in the interventional group. The researchers provided specialized discharge education directly to the Veteran with enhanced CHF self-management instructions using a "teach-back" method. The intervention group then received one follow up phone call within 48 to 96 hours post discharge from a specially trained registered nurse-patient care

facilitator (RN-PCF). The RN-PCF asked the Veteran 14 specific questions, such as how they would weigh themselves, measure their blood pressure, avoid salty foods and how the Veteran's medication schedule was planned out. The findings included statistically significant weight control in the interventional group compared to the usual care group; however, there were no differences in the other teaching categories studied. The study did not use a family focus or caregiving framework.

The purpose of the Skaperdas et al. (2014) qualitative study was to "understand patients' experiences with primary care services for CHF and explore the relationship between health services and self-management" (p. 372-373). The researchers interviewed 39 Veterans with CHF in the presence of their support person (if the Veterans chose to have one there). They found four common themes relating patient experiences with healthcare providers and Veterans' ability to participate in CHF self-management: 1) Good care is personal and responsive 2) Perceiving a healthcare advocate improves patient experience 3) Self-management is not an individual activity and 4) Mental health concerns compete with CHF as a priority for self-care.

My study differs from the Skaperdas et al. (2014) study in important ways. The Skaperdas et al. (2014) research group appropriately used a practice framework (Patient Centered Medical Home Model) because they were studying effects of patient relationships with healthcare practitioners within a healthcare context. My study instead used a sensitizing family focused theoretical framework which provided a self-management perspective while guiding the study. This is an important distinction because the RFMF was a good fit in the context of the home environment. Other differences between the studies are that the Skaperdas et al. (2014) Veteran population was enrolled for healthcare in a VHA medical center located within a large metropolitan area, had CHF diagnoses and were aged 53 to 89 years old. My study sought to interview rural dwelling, younger Veterans and their support persons as dyads; to clarify their

Veterans' self-management perceptions of health who were not required to be enrolled for healthcare at a local VHA medical center.

Self-Management of Combat-Related Health Conditions in Veteran Population

Post-traumatic stress disorder (PTSD) is known as the signature psychological health condition (National Research Council, 2013) and most frequently diagnosed psychological issue within combat Veteran populations. It is a particular health concern for Veterans and their healthcare providers (Darkins et al., 2008; Dunn et al., 2007; Schnurr et al., 2003; National Research Council, 2013). Five articles briefly mention the concept of Veteran self-management of PTSD or self-management for Veterans diagnosed with traumatic brain injury, the signature physical injury of recent wars (Belanger, Uomoto & Vanderploeg, 2009; Cukor, Spitalnick, Difede, Rizzo & Rothbaum, 2009; Sheets & Mahoney-Gleason, 2010; Vasterling, Verfaellie, & Sullivan, 2009; Wakefield, Hayes, Boren, Davis & Pak, 2012).

Other researchers have pointed out the need for self-management research studies that would include a family focus (Friedemann-Sánchez, Griffin, Rettmann, Rittman, Partin, 2008; Griffin et al., 2009; Griffin, 2010) and better connection between recent combat Veterans and healthcare providers (National Research Council, 2013). These publications identify the need for studies that develop the concept of "Veteran self-management*,"* to provide evidence for scientific knowledge and empirical evidence to best practice guidelines and interventions to improve assistance for Veterans and their families. An example is an interventional study where researchers used an interactive internet program to promote "self-management cognitive-behavior therapy." The program goal was to "reduce PTSD symptom burden and to promote greater self-efficacy and confidence in coping capacities" (Litz, Engel, Bryant & Papa, 2007).

Evidence based and expert based clinical guidelines mention Veteran self-management for combat related conditions (Carlson et al., 2009; IOM, 2010) and Tanielian et al. (2008) mention self-management as a developing concept. Sayer (2012) incorporated self-management

into the strategic plan of the Department of Veterans Affairs Quality Enhancement Research Initiative (Cifu, et al., 2014) for polytrauma/blast injuries. These citations demonstrate an important growing interest in "self-management" in the Veteran population with combat related injuries.

Only two interventional studies have been conducted with stated goals of "self-management of symptoms of 'illnesses.'" Darkins et al. (2008) study was from a healthcare providers' perspective and used in-home telehealth technology to promote "self-management of chronic conditions." One goal of the VHA telehealth program is to use technology as a teaching tool to increase Veteran "self-management," however; "self-management" was not a specifically defined variable, nor was it a specifically measured variable in the Darkins et al. (2008) study. Schnurr et al. (2003) used a "focus group therapy approach" for Vietnam Veterans diagnosed with PTSD and "self-management of symptoms" was a goal of the interventional treatment plan. These studies did not use a theoretical framework.

In conclusion, very few studies address Veterans' self-management in the home. As a concept, "self-management" is used in a few articles that focus on chronic illnesses in the Veteran population; however, these studies lack family focus theoretical frameworks. Considering the literature as a whole, it lacks studies describing combat Veterans' self-management needs and priorities within the home or how self-management impacts the Veteran, the primary support person or family member.

Family Caregiving for Veterans with Chronic Conditions: A Review of the Literature

As noted in Chapter I, the appropriate terminology for the role played by family members and others supporting Veteran self-management has yet to be determined. I chose the term "support person," because "family caregiver" implies a certain degree of reduced ability for self-management, which is not necessarily the case with Veterans. The term "social support" does not necessarily highlight the type of close, everyday roles and relationships I sought to understand.

Thus, describing the role of "support persons" was an aim of this study. The literature that comes closest to my initial understanding of "support persons" is the literature on family caregiving. Thus, a summary of that literature is provided here.

A body of research addresses the area of family caregiving for Veterans with chronic conditions. Examples include Nelson, Fincher, Johnson, and Lai (2014) whose study was designed to "identify those needs and stressors" of caregivers of Veterans with Parkinson's disease. The authors state that the purpose of the study is to improve support for and development of "caregiver educational and interventional programs" (p. 84). The Nelson et al. (2014) article has no specific family focus theoretical framework and reviews the perspective of the Veteran caregiver without interviewing the Veteran.

Calhoun, Beckham and Bosworth (2002) conducted a study of Vietnam Veterans with PTSD and their partners. The researcher found that there was a relationship between "caregiver burden" and psychological adjustment of the partners of Vietnam Veterans with PTSD. Robinson-Whelen & Rintala (2003) studied demographics of paid and unpaid informal caregivers of aging Veterans with spinal cord injuries (SCI). They found that the caregiver demographics ranged from spouse or partner (59%), parent (17%), sibling or sibling's spouse (9%), child or spouse of child (9%), friend (2%), other such as grandparent (3%) to no one person identified as a caregiver (2%). Among the findings, Robinson-Whelen and Rintala (2003) indicated that aging Veterans with SCI were vulnerable because 54% stated they had no one else willing or able to care for them if their primary caregiver were no longer available to help them. Conclusions indicated an inverse relationship between paid caregiver hours and unpaid caregiver hours indicating that paid assistance may decrease the "care demands on informal unpaid care providers."

The National Alliance for Caregiving (NAC, 2010) published a landmark study entitled "Caregivers of Veterans," designed to determine Veteran caregiver demographics and assess the

needs of caregivers of Veterans from World War II (WWII) through the OIF/OEF conflicts. The study was broad in scope (n=462) and used multiple data collection methods such as interviews, focus groups, and quantitative data collected from caregivers of Veterans with any diagnoses from these war eras. The NAC study authors reported that Veterans' caregivers' needs and the needs of caregivers of civilian patients differ. For example, caregivers of Veterans report that caregiving is more stressful and more physically demanding than the caregivers of civilians report. While this study was one of the first to examine the general needs of family caregivers of Veterans, it did not include OND Veterans caregivers. Other study limitations include a lack of the Veteran's perspective and there was no theoretical framework or model used.

My intensive literature search found only one study which incorporated both family caregiving and self-management from a family perspective (Judge et al., 2011). Judge et al. (2011) study focused on self-management and dementia education. The chronic care model (CCM), an established theoretical framework, guided the Partners in Dementia care (PDC) interventional protocol. This study differs from the Judge et al. (2011) study in a number of ways. The population of my study differs: I interviewed/OEF/OND combat Veterans, whereas the Judge et al. (2011) study was conducted in the dementia population. The Judge et al. (2011) study is interventional; comparatively, my study generated grounded theory using a family focused sensitizing framework. This process is described in more detail in Chapter 3 within the methods section.

Unique Self-Management and Caregiving Needs of Veterans

Although extensive literature exists on self-management and on family caregiving in chronic conditions, generalizing the study results from the non-Veteran to the Veteran population is problematic. Veteran populations differ from civilian populations in numerous ways that may limit generalizability of research findings; this can have implications for self-management and family caregiving research. The National Alliance for Caregiving (2010) study argued that there

are significant differences between the injuries Veterans sustain and those of civilians. One example of these differences is the prevalence of PTSD in the Veteran population, which has been determined to be from 1.4% through to 43.9% (Fulton et al., 2015; Griffin et al., 2012) yet there is very little nursing research on PTSD in the Veteran population (Nayback, 2009). Seal et al. (2014) reported that Veterans have disproportionally high levels of both homelessness and risk for mental illness compared to the general population. In another example, much of the literature concerning TBI patients involved care of civilians with TBI at in-patient, clinical rehabilitation setting, or in the home setting just after discharge (Griffin, et al., 2009). Hoge et al. (2008) speculated that military experiences and environment impacted TBI injury in Veterans and concluded that the epidemiology of combat-related TBI is unique to the Veteran population and not well understood; the civilian focused TBI research has limited applicability to the TBI injured Veteran population.

Furthermore, Vanderploeg, Belanger, and Curtiss (2009) conducted a study which compared Veterans who had been injured with mild TBI (mTBI) and PTSD and civilians who had similar injuries. The researchers examined the evidence for a relationship between civilians who were diagnosed with mTBI, PTSD, and psychiatric conditions due to motor vehicle accidents (MVA) and Vietnam Veterans diagnosed with mTBI, PTSD and psychiatric conditions. The MVA injured civilians served as a control group. Of the study sample (n = 822) approximately half served in the military during the Vietnam era and half did not serve in the military. After controlling for a number of variables, the differences between the two groups were significant (= 0.05). Over time, the injured Veterans had twice the risk of developing chronic somatic and psychiatric symptoms compared to the injured civilian group.

Veterans have unique concerns about confidentiality and stigma while seeking care for mental illnesses, such as PTSD and depression, compared to civilians (Fulton et al., 2015; Institute of Medicine, 2010). The military has historically reported mental health diagnoses on

active military personnel "up the chain of command." A mental health diagnosis and treatment plan can be career limiting for soldiers, and their security clearances can be revoked. Concerns about confidentiality can follow the Veteran into civilian life at the conclusion of military service. Veterans may resist or refuse to seek help for mental health issues due to military social stigma (IOM, 2010; Tanielian et al., 2008). Many Veterans tend to have trust issues that manifest in "trusting" only other combat Veterans. This population often does not trust health care professionals or civilians, and sometimes Veterans do not trust anyone. Distrust is a unique-yet-common element within the Veteran population that can act as a barrier to mental health treatment (IOM, 2010). Veterans' mental health needs differ from civilian mental health needs, and combat experiences are often the core issue that these differences are based on (Jaffee & Martin, 2010; Kennedy, Lumpkin, & Grissom, 2006).

Summary and Conclusions

While a small of amount research addresses Veterans' self-management of combat-related health conditions, it does not include "family caregiving." An even smaller body of literature on family caregiving in the Veteran population does not specifically address the unique needs and related conditions of recent combat Veterans. The literature also does not address what the Veterans and family caregivers are doing to manage their health conditions. No research has examined Veteran self-management and family caregiving together in the population of Veterans who have returned from recent combat deployment. Furthermore, there are no theoretical frameworks that present a family perspective on this phenomenon. Theoretically-based research that addresses Veterans' military related health self-management and caregiving by family members or other support persons is needed to move this area of research forward. The OEF/OIF/OND Veteran population has been growing steadily over the years. Considering the size of the recent combat Veteran population and their unique health needs and the fact that Veterans' health will be managed primarily at home and will involve family members and other

support persons, further research on Veteran self-management and the role of their support persons is essential.

Conceptual Framework: Family Management Style Framework

As noted above, researchers have called for increased family focus in Veterans self-management research (Friedemann-Sánchez et al., 2008; Griffin et al., 2009; Griffin, 2010), yet aside from the current study, there are currently no family focused conceptual frameworks used in the Veteran literature. The Revised Family Management Framework (RFMF) is well suited as a sensitizing family focus framework for this grounded theory study to further develop the constructs in the theoretical model and to address the unique characteristics of the Veteran population. Concepts in the RFMF can "provide insight, direction…" for the concepts in this study (Corbin & Strauss, 2008, p. 40) and provide conceptual guidelines to sensitize how researchers can look at the data during analysis (Bowen, 2008; Corbin & Strauss, 2008). For example, rather than defining concepts with a "prescription of what to see" in the data (Blumer, 1969, p.7), the RFMF provided sensitizing concepts for the study and gave "the researcher conceptual starting points for building analysis" (Bowen, 2008; Charmaz, 2003, p. 259) and a "general sense of direction" (Blumer, 1969, p.7; Bowen, 2008) during data analysis. The major components of the RFMF align particularly well with the purpose and goals of this study.

The development of the Family Management Style Framework began with a simple question: 'How do families respond to a child's chronic illness?'" (Knafl, et al., 2008, p. 414). The purpose of developing the FMS Framework was to synthesize and organize existing voluminous literature and research findings into a usable theoretical framework for practitioners (Knafl & Deatrick, 1990). Prior to the development of the FMSF, no family management style typology was found in the literature. Knafl & Deatrick's initial approach was to critically review existing family theory literature, which recognized the family as a "unit of response" to children's chronic illness (Knafl & Deatrick, 1990, p. 8; Knafl, 2008). The Family Management Style

Framework (FMSF) program of research has enriched family systems theory literature for over two decades and continues to grow.

Antecedent work by Knafl, Deatrick and colleagues included conceptual analysis of the term "normalization" and empirical studies of families managing chronic illness (Knafl & Deatrick, 1986; Deatrick, Knafl, & Murphy-Moore, 1999; Knafl, Deatrick & Kirby, 2001; Knafl & Deatrick, 2002) or disabilities in pediatric populations (Deatrick, Knafl, & Walsh, 1988). Early empirical work focused on family management perspectives when a child was diagnosed with osteogenesis imperfecta (OI), a brittle bone disease (Knafl & Deatrick, 1986; Knafl, 2008). During interviews, some families revealed that they felt like a "normal family" even though these families were managing difficult issues of a child with OI. One result of this early conceptualization and qualitative work resulted in the concept of "normalization" being identified as a foundation for two out of the five typologies developed over time during the FMSF program of study (Knafl, 2008). Among other concepts, "normalization" remains an ongoing interest in the conceptualization work of the FMSF researchers (Knafl 2008; Knafl, Darney, Gallo, & Angst, 2010).

The FMSF research teams used qualitative research techniques to develop the framework including grounded theory, narrative inquiry and case studies (Knafl, 2008). During the development of the FMSF program of study, researchers often concurrently worked a variety of techniques such as empirical studies and research reports (Knafl, 2008; Knafl & Deatrick, 2008), conceptual analysis, methodological papers and integrative reviews (Knafl & Deatrick, 1990, 2003; Knafl et al., 2012). Later in the FMSF program of research, families with adolescents who sustained non-military connected post-traumatic stress disorder (McDonald & Deatrick, 2011) and spina bifida were evaluated (Wollenhaupt, Rodgers & Sawin, 2012) using the FMSF. Research in the FMSF program of study has expanded to include management of chronic illness in adults. Additionally, quantitative techniques were used to develop the Family Management

Measure (FaMM), a validated, reliable psychometric measure designed to determine Family Management Style (Knafl et al., 2011) for practice settings. Very little research literature that I reviewed has data or theory regarding Veterans' support persons.

Components of the Family Management Styles Framework

Originally, the family management style model consisted of three major components: definition of the situation, management behaviors and sociocultural context (Knafl & Deatrick, 1990, p. 8). The latest version of the FMSF includes "contextual influences such as social network, care providers and systems as well as resources in the model" and the model is called the Revised Family Management Framework (RFMF) (Knafl et al., 2012). "Definition of the situation" is defined as the significance of the situation from the perspective of the individual. In this context, "individual" may represent single family members or the "family unit" (Knafl & Deatrick, 1990, p. 8-9). "Management behaviors" is defined as "discrete behavioral accommodations" used by individual family members or used by the "family as a unit" to manage the family situation (p. 9). "The sociocultural component of the model includes culturally, ethically, and religiously influenced values and beliefs as well as social, political and economic structures and processes that shape how family members define and manage the illness experience". The significance of the sociocultural context in the framework cannot be overstated. For example, the meaning of illness to the family and the child is framed within cultural parameters and the family perspective is the core of FMSF (p.9).

Refinement of the Family Management Styles Framework `

As mentioned above, the FMSF program of study utilized a combination of research and refinement methods for knowledge development: conceptual, empirical and methodological work (Knafl, 2008; Knafl & Deatrick., 2008). Due to the robust size of the FMSF program of study only a selection of the teams' work can be provided in this review. FMSF conceptual work

consists of concept analysis and integrative reviews (Deatrick & Knafl, 1990; Knafl & Deatrick, 1990; Deatrick, et al., 1999; Knafl & Deatrick, 2003; Knafl et al., 2012).

Empirical work includes research reports (Knafl et al., 2010; Knafl, Knafl, Gallo, & Angst, 2007; Knafl & Zoeller, 2000; Weigand, Deatrick, & Knafl, 2008). Methodological work includes instrument development (Knafl et al., 2011; Knafl et al., 2009; Knafl et al., 2010). The FMSF program of study also contains innovative data analysis exemplars (Ayres, Kavanaugh, & Knafl, 2003; Knafl, Gallo, Breitmaye, Zoeller, & Ayres, 1993; Knafl & Gallo, 1995; Knafl, & Ayres, 1996). This synergistic combination of knowledge development and refinement has been a productive, powerful pathway for the FMSF program of research to grow (Knafl, 2008; Knafl et al., 2008) into the most recent rendition of the model called the Revised Family Management Framework (Knafl, et al., 2012).

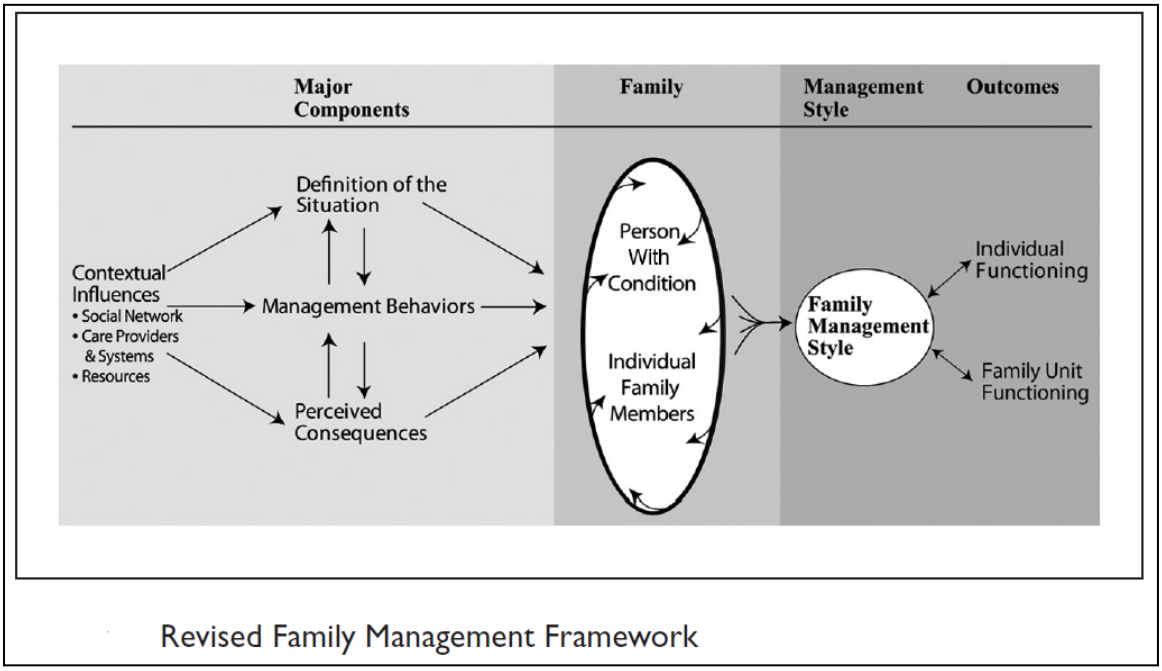
Refinement and validation of the FMSF was a natural progression in the pursuit of scientific knowledge (Knafl & Deatrick, 2003). A major step forward took place in 2003, when Knafl & Deatrick (2003) sought to expand the science of a focused typological approach to family system research, validate the original FMSF structure and refine the model through a review of published literature. Knafl and Deatrick used then-current research literature as a data set to meet their goals. Fifty-five studies representing a variety of research methodologies and objectives met inclusion criteria. The major components “definition of the situation” and “management behaviors” were defined and “perceived consequences” was incorporated into the model. Although “Family Management Style” typology had been established in 1996 (Knafl, Breitmayer, Gallo & Zoeller, 1996, p. 318), specific family management typologies remained unnamed in the model until 2003. An “Outcomes” section was added to the FMSF model and there are arrows depicting interaction between Family Management Styles and the outcomes section demonstrated that family management style typologies. The family outcomes are not static, these can fluctuate as family circumstances change.

Grey, et al. (2006) operationalized a modified FMSF for evaluating self and family management of chronic conditions in any age population, including adults. This was the first adaptation of the FMSF for adult populations. Subsequently, Wiegand et al. (Wiegand, Deatrick & Knafl, 2008) operationalized the FMSF for families who had an adult family member withdrawn from life-sustaining therapy. The "Withdrawal of Life-Sustaining Therapy (LST): Family Management Styles" framework was the first appearance in the literature of a remodeled FMSF for use in a specific adult population (2008, p. 22).

Bingham and Haberman (2006) employed the FMSF in adult populations to explore the role of spirituality in family management patterns within caregiver-care receiver dyads (the adult family member had a diagnosis of Parkinson's disease). Dunbar, Clark, Quinn, Gary and Kaslow used the FMSF to guide their study of families with adult cardiac issues. These studies used the framework with no modifications to the framework diagram, leaving that work for the future. Beeber and Zimmerman (2012) modified the FMSF for use in an elderly population with dementia. For the first time "elders", "primary caregivers" and "secondary caregivers" were identified under the "family members" domain (p. 125). Thus, previously unidentified in the outcomes section of the FMSF, "elder functioning" and "caregiver functioning" were added to the FMSF model. This innovative application of the FMSF provided a "foundation to guide future work aiming to identify family management styles specific to dementia care" (p. 143). The researchers concluded that future studies may identify family management styles in dementia care and ultimately provided "assessment guidelines" and "interventions to specific family, caregiver, and older adult needs." The types of acute and chronic illnesses that families are managing but that have not been explored using the FMSF in empirical work are far too numerous to identify. Some populations that could benefit from studies using FMSF or the RFMF are families managing acute care issues, mental health, substance abuse, difficult pregnancies, COPD, CHF, arthritis and cancer in adults, to name a few. Using the FMSF or the RFMF for closer

examination of familial caregiver roles and functions in families with chronic illnesses and gender specific evaluation could be useful for research, policy and practice implications. The researchers depict the most recent "adult" configuration of the FMSF as the RFMF (Knafl et al., 2012). The *Family Management Framework* was used in this study (See Figure 1.) The background of the RFMF and rationale for its further development is described in the abstract of the Knafl, Deatrick and Havill (2012) article.

Figure 1. Revised Family Management Framework



Knafl, Deatrick and Havill (2012)

Based on a review of 64 published reports, the Revised Family Management Framework, addresses the implications of current research for the further development of the Family Management Style Framework (FMSF) and RFMF. Articles were published in 46 different journals, including 13 in nursing and 12 in interdisciplinary outlets. Most studies are based on samples of less than 50 individuals. The review provides continuing support for the eight dimensions of the framework, with between 8 and 16 reports supporting the relevance of each.

Changes to the sociocultural component of the framework proposed as well as wording changes to reflect the broader applicability of the framework. The family's social network, health care and education professionals, and resources predominate as key influences on family management (Knafl et al., 2012, p. 11).

Eight dimensions of the Family Management Style Framework are 1) child identity 2) view of condition 3) management mindset 4) parental mindset 5) parenting philosophy 6) management approach 7) family focus 8) future expectation (Knafl, Deatrick & Havill (2012). I used the RFMF as a sensitizing framework for a study with United States of America combat Veterans from the Iraq and Afghanistan wars and their primary support persons. Justification for using the framework in this population was found in the successful use by researchers in the adolescent populations (McDonald & Deatrick, 2011; Wollenhaupt, Rodgers & Sawin, 2012) and in adult populations (Beeber & Zimmerman, 2012; Bingham & Haberman, 2006). The definition of the situation, management behaviors, contextual influences, and perceived consequences and outcomes are the major components of the RFMF and these served as sensitizing concepts for the study.

Conclusion

Relevant bodies of literature about combat Veterans' self-management of health conditions have developed in recent years. There also is literature that discusses vulnerabilities and challenges of combat Veterans' caregivers. However, the two lines of research have progressed separately and these concepts needed to be pulled together into one study to advance the Veteran heath literature. There is a distinct trend for the Family Management Style Framework to be adapted to an array of different populations in studies, and the RFMF was well suited to be used in this population. The theoretical framework planned for this study is relevant to the health situation but had never been applied to a Veteran population. Using the RFMF, this study provided a new approach for conceptualizing patient self-management and caregiving in

terms of definitions of the situation, self-management behaviors, caregiving behaviors, and perceived consequences presented in a context based on the perspectives of both combat Veterans and their primary support person.

Grounded theory method was chosen to explain the phenomenon of interest rather than simply describe it (Corbin & Strauss, 2008, p. 308). Therefore, this unique grounded theory study provided a pathway for Veterans' health perspectives, self-management of health concerns and family functioning (primary support person) to merge. The findings of this study provided insight and informed healthcare professionals to help them determine best practices that serve the needs of this important population.

CHAPTER 3: RESEARCH METHODS

Introduction to Grounded Theory

American philosophies of knowledge "Chicago interactionism" and "pragmatism" are both at the heart of grounded theory research methodology (Corbin & Strauss, 2008, p. 1- 6). These philosophies were written and discussed by John Dewey (1917 - 1930s) and George Mead (1917- 1950s). Pragmatists believe, in part, that the person influences knowledge generation when inquiring about knowledge. A pragmatic position regarding knowledge inquiry and the discovery of truth or validity is that truth lies in consequences or outcomes of knowing.

Herbert Blumer (1969), American philosopher and sociologist, further explicated the philosophical constructs of "interactionism" that George Mead developed in his writings. Herbert Blumer was the founding father of "symbolic interactionism". The construct of "symbolic interactionism" gives "meaning to a situation" through interaction between human beings or through interactions between a human and something else, such as language. Blumer is considered the "Grandfather" of grounded theory (Corbin & Strauss, 2008, p. 1- 6). Grounded theory, an established approach to qualitative research (Creswell, 2013, p. 83 -84), is particularly well suited when little information exists in a field of study. Grounded theory (GT) research methodology directly links theory development to study data. GT does not begin with a hypothesis that needs testing. Rather, the findings from data analysis inform the developing theory throughout the process until theoretical saturation occurs and a well-developed theory is evident. Theoretical saturation is a point where additional data do not add significant new information and/or new ideas to the grounded theory process.

Goals of grounded theory researchers generally focus on developing a better understanding of a process, action or interaction that could be described stepwise over time (Creswell, 2013, p. 85). Data collection for a grounded theory study usually occurs by interactive

interviews between the researcher and study participants. The development of grounded theory itself is a process that includes the researcher's observations and field notes concerning the study participants and data collection process as well as journaling data collection experiences using reflection, field notes and memos. The researcher uses data analysis techniques to compare the new data collected from interviews with emerging concepts that have been identified from prior data analysis. As data analysis progresses, a theory develops over time. Thus, the theory is "grounded in the data" that have been collected. Collected data include interviews done with study participants along with observations, reflections and field notes of the researchers. Data analysis in grounded theory studies often follows an arrangement of "open coding, axial coding and selective coding." This process was described by Strauss and Corbin (1998) and (Creswell, 2013, p. 85). After interviews are transcribed, open coding can commence. This is the beginning process of data analysis: the entire interview transcript is coded line by line. This coding process organizes the data from each interview so conceptual categories can be labeled and, cumulatively, emerging themes are identified. A major phenomenon is identified as the core of the developing theoretical model. The "intersection" or focal point of the categories becomes the focal point of the theory, this process is referred to as "selective coding" (Creswell, 2013, p. 85). Additional details on grounded theory development are found in this chapter under "data analysis."

Grounded theory was chosen to achieve the purpose of the study and to answer the central research question: "How do OIF/OEF/OND combat Veterans and their primary support persons manage Veterans' health conditions and health concerns at home?" This chapter describes the study design, sampling method, procedures, data collection, data analysis, ethical considerations, and strategies for validity and reliability.

Design

The study is a grounded theory design. The data were collected at one point in time from Veterans or dyads using an interactive interviewing technique. A dyad was defined as a participating Veteran who identified their primary support person.

Sample

Unlike quantitative studies where outcomes are based on data collected from random samples with sufficient statistical power, qualitative studies seek to gather data from participants that have experienced the phenomenon of interest. *Purposive sampling* can serve grounded theory researchers well in this regard. Inclusion and exclusion criteria were used to o identify the sample with "shared knowledge or experience" in a phenomenon of interest (Sandelowski & Barroso, 2003). The grounded theory researcher begins with a homogenous sample (Creswell, 2013, p. 154). This study collected rich data from combat Veterans who shared vivid stories of their experiences while they served in combat areas and after their return to the United States. Purposive sampling strategies allowed me to target study participants (Creswell, 2013), to "best form a theory" (p. 86) and provide quality data for the study (156-157). As the study progressed, I used theoretical sampling to select participants, narrow the study focus and obtain data that further developed the theory. For example, to better understand Veterans' access to health resources in a specific geographic location, data were collected early in the study to confirm Veterans' use and access to VA facilities and other healthcare resources. I anticipated "saturation of the model" (Creswell, 2013, p. 89) at approximately 20 dyad interviews; however, saturation of the model occurred within 20 total interviews. Each dyad consisted of a combat Veteran from a post September 11, 2001 war zone and his/her primary support person. Each Veteran identified a primary support person.

Inclusion criteria. 1) United States Veterans who have served in combat areas since 2001 and 2) Willing to invite a primary support person who helps the Veteran with health concerns or conditions in the home. 3) Participants were a) at least 19 years old at the time of recruitment b) able to speak, read, and write English c) willing to meet at Fresno State Nursing Excellence Center classroom, Fresno, CA; in a quiet room; by telephone or at the American Legion Post nearest their home for participation in the informed consent and interview processes.

Exclusion criteria. 1) Veterans or caregivers with impaired cognition or impaired ability to make a decision as evidenced by inability to independently engage in a discussion regarding informed consent documents. 2) Veterans who were homeless were excluded from the study because the purpose of the study is to better understand Veterans' self-management of health "in the home." Exclusion criteria were not based on age, race, ethnicity, or gender.

Setting. The study took place in the three Central California counties that make up District 14 of the American Legion, Department of California. According to the United States Census Bureau (2013), California has more Veterans than any other state. Specifically, over 2 million of our nation's 21 million Veterans live in California. Central California's San Joaquin Valley comprises eight counties where approximately 10% of California's 2 million Veterans live (US Census, 2013). Of those eight counties, three (Kings, Fresno and Madera) encompass the geographical area that makes up District 14 of the American Legion, Department of California (2014). The American Legion is a Veteran service organization, and District 14 is home to approximately 63,630 Veterans. Kings, Fresno and Madera Counties lie in the heart of the San Joaquin Valley of Central California. The region has an agriculturally driven economy (California Natural Resources Agency, 2013). Rich farm land produces many types of fruits, vegetables and other crops. This area is rural by definition. The area contains two small cities, Fresno and Hanford. Both are on California's "poorest cities" list (California Natural Resources Agency, 2013). Many tiny agricultural towns are scattered throughout the region. Two likely reasons the

region has more than its relative share of Veterans nationally are: 1) few other career opportunities are available in the area. 2) Characteristic of many poor rural areas, educational opportunities are minimal, and the quality of public education tends to be poor (Darling-Hammond & Post, 2000; CIS.org, 2010). In fact, in a 2008 review of educational indicators, California ranked 50th out of 50 States in the area of education (CIS.org, 2010). Military service is one career path available in the rural area of Central California. Due to distance and economic factors, combat Veterans in this rural setting may have difficulty finding or traveling to healthcare. The local Veteran's Health Administration medical center and its accompanying community based primary care outpatient clinics are situated within only 3 of the 7 rural counties they serve. Central California comprises thousands of square miles. Traveling long distances may be a barrier to healthcare delivery for some rural Veterans.

The primary investigator (PI) has lived and worked in the area for 30 years and has a longstanding professional relationship with the former District 14 Commander. Originally, the PI served as the Commander's mentor for 18 months while the Commander was earning her master's degree in Nursing Administration. After that, the Commander served as a proctor for the PI while she was taking a series of graduate statistics courses. Ultimately, she and I developed a longstanding fellowship, friendship and professional colleagueship. I contacted the District 14th Commander and asked her to read the first draft of my dissertation proposal and provide feedback about the possibility of recruiting rural dwelling Veterans for a study. After a series of social lunches and informal meetings the District Commander read the final draft of the protocol and was supportive of the study. She invited me to present the study idea to the District 14 Post Commanders at their meeting, June 4th, 2014 so I could ask them for their expert opinions on how recruitment efforts might be received by local American Legion Post Veterans. Upon attending

the Post Commanders meeting I found them interested in and supportive of the study concepts and the recruitment design. On Jan. 11, 2015 I attended another District 14 meeting and was introduced to the newly elected Commander. He stated he was also supportive of the study and provided me with his contact information so I could follow up with recruitment activities after obtaining approval from University of Nebraska Medical Center Institutional Review Board.

Procedures

Participant Recruitment

The District Commander provided a letter of support showing permission to recruit from the American Legion 14th District of California Post meetings (See Appendix A). In order to recruit for the study, as primary investigator (PI), I attended ten scheduled American Legion post, two Commander, and two American Legion community scholarship meetings within American Legion District 14 of California and presented the study goals to the audience. Audiences included American Legion leaders, Veteran members, their family members and friends. The study presentation included a brief overview of study goals (See Appendix B) and a sign-up paper was passed around the meeting room for interested parties to sign (name, email, phone number and best time to call; see Appendix C). I contacted parties who showed interest in participating in the study by signing up on the paper. Some handed me business cards.

During recruitment phase I called or emailed Veterans and provided additional information about participation in the study. Veterans and primary support persons were invited to participate in the study either in person, by email, or phone on a case by case basis. Attendees at the American Legion meetings were given study fliers to take home if they wanted to review them; these fliers explained inclusion and exclusion criteria in layman's terms. During my presentations to the American Legion Post meetings, Veterans and primary support persons were offered study fliers to take home for their review or for friends who might like to participate in

the study. During recruitment, I established a "participant record log" in which I documented recruitment procedures. The participant record log was kept on an encrypted password protected flash drive which was kept in a locked file cabinet when not being used for study purposes. During recruitment efforts if the Veteran did not answer the phone or said it was an inconvenient time to talk I counted it as one contact attempt out of a total of 3 permitted. In the case of a total of 3 failed telephone attempts the potential participants was no longer contacted to participate in the study. Participants were provided a $10.00 gas or coffee shop card to offset the Veterans' costs traveling to the meeting sites for an interview. Each participant received up to one gift card after their interview.

Informed Consent

After establishing eligibility, I would make an appointment to meet the Veteran and primary support person for the informed consent process. If participants wanted to meet twice, once for informed consent review in order to think about the study, and a second time for the interview, I accommodated them. After informed consent was obtained interviews were conducted at one of the following: local Fresno State University nursing excellence center classroom, an American Legion Post room, or a quiet room, whichever was preferred by the study participants.

Sampling strategies

Two sampling strategies were used: purposive sampling and snowball sampling whereby experiences of study participants contributed to development of a theory (Creswell, 2013, p. 158; Corbin & Strauss, 2008, p. 143; Heckathorn, 2011). As in the case of this study, purposive sampling was advantageous because little was known on the topic. Purposive sampling is not static; it is flexible and responsive to data findings (Corbin & Strauss, 2008, p. 144). Grounded theory data collection is not an isolated event, rather, it is interactive during all steps of the

process including data collection, data analysis, identification of concepts, refinement of interview questions and generation of theory that required collection of more data. In grounded theory studies, this cycle repeats until theoretical saturation is achieved. Theoretical sampling is a form of purposive sampling that occurred later in the study as emerging theoretical categories suggested a more focused approach to sampling than the original purposive sampling strategies. The flexible features of theoretical sampling fit the needs of this study because theoretical data collection and grounded theory generation techniques are both cyclic in nature and they complement each other by being responsive to data findings (Corbin & Strauss, 2008, p. 144-145).

Snowball sampling is when study participants recruit others by referring them to participate in a study. Additionally, the researcher may connect with those who know someone who is referred to participate in the study, yet the referring person does not want to participate or does not meet the inclusion criteria. The snowball recruitment method provided study participants who interviewed during this study (Corbin & Strauss, 2008, p. 158).

Data Collection

After participants had been recruited (as described in the prior section) and provided informed consent, the data collection session consisted of an interview for each participant. Each interview took between 45 minutes and an hour. The intention was to conduct dyad interviews separately, in order to preserve the perspective of each individual. However, in the informal pilot study that was part of my prior course work, some couples expressed a strong preference for a joint interview. This did occur during the study whereby the dyad wanted to stay together during interviews. Study interview appointments were made and we met at their convenience at either their local American Legion Post, the Fresno State Center for Nursing Excellence or a quiet room. Interviews were audio recorded with the study participant's permission (which was

obtained in the informed consent documents and often verified verbally during the start of the interview).

Field notes and observations were recorded after the interview. The data collection session consisted of using a semi-structured interview guide for each participant and a written demographic information form that was be filled out after the interview session. The interview guide consisted of a series of open-ended questions designed to elicit the participant's story. Open ended questions were followed by clarifying probes. The interview questions were guided by, but not limited by the RFMF components. See Table 1. for examples of open-ended interview questions for Veterans and see Table 2. for examples of types of focused questions that were asked of support persons during the interviews.

Table 1. *Examples of Interview Questions for Veterans, Based on Sensitizing Framework*

Major components of RFMF	Examples of questions:
Definition of the situation	• Please tell me about your health since returning from deployment? • What are your health concerns since returning from deployment? • What are your health conditions (diagnosis or physical conditions) since returning from deployment? • What are some difficulties you have in taking care of your health? • Are you experiencing some health conditions that you feel are connected to your military service?

	• What are your health problems that you feel are connected to your military service? • What are your health problems (some health concern or conditions) that you feel have developed since you returned home from deployment?
Management behaviors	• What do you do to maintain your health? • What is your daily routine of self- managing your health you just described to me? • What do you do to manage your health needs in the home? • How are you managing to take care of yourself in the home? • What are the health care recommendations you follow in caring for yourself in your daily routine? • Tell me about health recommendations you have been given but do not follow? From whom? Why?
Perceived consequences	• How does maintaining your health affect your daily life? • How do these health concerns or health conditions affect you in your daily life? • How does taking care of yourself affect you at home?

	• How does your health affect your primary support person? • How does taking care of your health affect your family in the home?
Contextual influences	• Tell me about what resources you use to maintain your health? • What resources are available to you to manage your health? • Do other family members or friends help out? • What resources do you use to care for yourself in the home? • Is there anything else you need to manage your health in home? • What other issues would you like to tell me about?

Table 2.

Examples of Interview Questions: Primary Support Person Based on Sensitizing Framework

Major component of RFMF	Examples of questions:
Definition of the situation	• Please tell me about your Veteran's health since he/she returned from deployment? • Tell me about your Veteran's health conditions since returning home from deployment?

	• What are some health concerns that you view as connected to your Veteran's military service? • What are your Veteran's health concerns since returning home from deployment? • What are some health concerns your Veteran has developed since returning home from deployment?
Management behaviors	• Tell me about your role in the Veteran's self-management of his/her health maintenance? • What do you do to care of your Veteran in the home to manage his/her health? • What is your daily routine while supporting your Veteran with management of his/her health? • What are some healthcare recommendations you follow to care for your Veteran during your daily routine?
Perceived consequences	• How does Veteran's health affect you? • How does your Veteran's health needs affect your daily routine? • How does taking care of your Veteran affect your Veteran in the home? • How does taking care of your Veteran affect your family in the home?

	• Tell me about health recommendations for your Veteran that you have been given but do not follow? From whom are the recommendations? ii. Why are the recommendations not followed?
Contextual influences	• What resources do you use to help care for your Veteran's health in the home? • What resources are available to your Veteran to manage his/her health? • Do other family members or friends help out? • Is there anything you need that you don't have to help you while supporting your Veteran's self-management in the home? • What other issues would you like to tell me about?

Data Management

Data management included verbatim transcription of the interviews, the demographic data and the use of REDCap research program to organize and share data with dissertation committee members. REDCap is a mature, secure web application for building and managing online surveys and databases. The REDCap program is often used for quantitative research projects. Study data were collected and managed using the REDCap electronic data capture tools hosted at the University of Nebraska Medical Center. Service and support were provided by the Research Information Technology Office (RITO), which is funded by the Vice Chancellor for Research (REDCap, 2019).

Data Analysis

The sensitizing theoretical framework (Revised Family Management Framework) provided direction for data analysis. The framework guided the following general categories in data sets: "definition of the situation, management behaviors, contextual influences and perceived consequences as guidelines" (Knafl & Deatrick, 1990). This study used a systematic approach to grounded theory based on the work of Strauss and Corbin (1990). Strauss and Corbin's three phase grounded theory data analysis system guided data analysis with "open, axial and selective" coding processes (Creswell, 2013, p. 195-197; Corbin & Strauss, 2008, p. 195-198; Strauss & Corbin, 1998).

Open coding. The first step in grounded theory analysis the researcher seeks to achieve a holistic understanding of the participant's perception of the situation and then proceeds to a detailed line-by-line analysis and coding process. Data analysis began with having the PI listen to the audio recordings of the interviews and then transcribing the interviews verbatim. Each transcript was read in its entirety several times to get an overview of the data. The topics addressed by the interviewees were noted and a summary memo was written to describe the researcher's initial understanding of the interview. Next the data were "coded" line by line. The coding process organized the data from each interview so concepts and categories were identified. The line by line data coding was an extensive process. The coding process organized the data from each interview so cumulative categories could be identified. "Open coding" is also known as "line-by-line" coding also drew the analyst's attention to specific details in the data. I worked on the line-by-line open coding on paper using color coded pens. The de-identified documents were scanned to transfer via REDCap to my Advisor and Professor for feedback.

Axial coding. Axial coding is the process of relating conceptual categories that had been identified in the data (Corbin & Strauss, 2008, p. 198). Using the "axial coding" process I identified a main category or phenomenon that emerged as the core of the emerging theory.

A process diagram assisted during data analysis and helped relate the core category of the phenomenon of interest to other categories represented as contextual influences, health conditions, self-management strategies and outcomes found in the data (p. 198).

Selective coding. Selective coding is the process of selectively relating core categories that have been identified to other categories in order to build a narrative or theory around it. (Strauss & Corbin, 1998; Creswell, 2013, p. 160-171). The outcomes of selective coding-data analysis were shown in a process diagram.

Grounded theorists use this three-phase system of qualitative data analysis (Creswell, 2013, p. 83 -84). The process of data analysis is continual from the beginning of data collection, when there are voluminous amounts of data from interviews, to the end of the study. Constant comparison is used, a process where participants' contributions are compared to the others in order to categorize and place similar statements together (Schreiber & Martin, 2013). Constant comparison methodology entails collecting and analyzing data simultaneously (Creswell, 2013, p. 86). The researchers then take a section of data such as a theme, a category, or statement from an interview and compare it to other sections of data to determine the similarities or the differences of the data. From the start of the data analysis process researchers "constantly compare" data in this way. This process refines and reduces large amounts of raw data to processed or analyzed data. "Theoretical saturation" was the point where no new significant information resulted from further analysis and no additional interviews would be needed. At the point of data saturation, the model is complete (Creswell, 2013, p. 89; Given, 2008, p. 72).

Ethical Considerations

Ethical research conduct requires investigators to think ahead about possible ethical scenarios they may encounter and have a plan in place for appropriately handling them. Although no emergency situations arose during interviews, given the high rate of mental health conditions among Veterans it was important that the investigator remained aware of the possibility of the

appearance of mental health symptomology during interviews. None of the participants experienced distress during the interview. If they had, the interview would have been stopped and health accommodation would have been promptly provided.

At the time of consent, information about mental health and support person resources were provided to all participants along with their informed consent packet. Part of the resources packet was a resource for Veterans' mental health services and caregiver support services through existing resources available to most Veterans and all community members. The local resources available include Veteran Affairs Central California Health System for certain Veterans, other VHA services for other Veterans, Veteran "caregiver" services, multiple local county services and a local school of psychology that provides services based on income using a sliding scale. Participants who used the sliding scale mental health services as a result of being interviewed for this study, may have found that their costs increased. The interview itself was not expected to cause emotional upset and was considered a minimal risk study.

Validity and Reliability Strategies

Creswell (2013, p. 244-268) describes eight core strategies that promote validation and reliability in qualitative research. After presenting and discussing these perspectives, Creswell recommends the use of a minimum of two of these eight core guidelines: *1) prolonged engagement and persistent observation; 2) peer review or debriefing; 3) negative case analysis;4) triangulation; 5) clarifying research bias; 6) rich, thick description; 7) external audits and 8) member checking* (p. 244-254).

This study embedded several of Creswell's eight key strategies in the data collection and data analysis processes (Creswell, 2013, p. 250). The first strategy was to use prolonged engagement and persistent observation in "the field". This required the researcher to spend time with the population of interest in order to establish trust with individuals from the population and to better understand their culture. I had these elements in my background. As primary

investigator, I am fortunate to have experienced prolonged exposure and persistent observation of the study population (recent combat Veterans). I built trust in the Veteran community by attending a series of luncheon meetings with the 2014 and 2015 Commanders of the American Legion District 14. I attended two Commander's meeting as a recognized guest and spoke at the meeting to solicit the Commander's feedback for the study. I also was immersed in a work environment that is Veteran-centric and rich in military culture for many years.

Other strategies planned and used to ensure scientific rigor within the study was peer reviews; my advisor (Dr. Schumacher) and dissertation committee professor (Dr. Barnason) provided peer support during this project. Comparable to interrater reliability used in quantitative research, peer review activities and debriefing sessions keep the "researcher honest" (Creswell, 2013, p. 251). In order to communicate data over distance with my Professors we used REDCap program.

Specifically, the *peer review* process during data analysis was as follows: I transcribed the recordings verbatim. First step was to read each transcript in its entirety twice to get an overall sense of the interviewee perspective. Using the coding technique described above and in Corbin and Strauss (2008, p. 65-72) the first dyad interview was coded. After the coding process was finished, I uploaded a number of documents into the REDCap program: 1) de-identified verbatim transcripts 2) documented the audit trail containing my notes, reflections and memos produced during the coding process. Dr. Barnason was then alerted via email or telephone that the data analysis and supporting documents were available on REDCap program for her review and feedback. We continued with this cycle until the first three or four interviews had been reviewed by Dr. Barnason. We then called a meeting with Dr. Barnason, Dr. Schumacher and myself to discuss the coding process and coding outcomes. Both Dr. Barnason and Dr. Schumacher had access to the REDCap account for their convenience. We continued with these steps during early

coding sessions until categories and theme analysis was underway. Finally, during the theory development phases, Dr. Schumacher served as Advisor and Consultant.

Member checking allowed some participants the opportunity to assess the accuracy of the data outcomes during analysis. I asked some study participants to provide feedback on data interpretations and language used. I also asked Veterans for their contributions to ensure appropriateness of future interview questions (Creswell, 2013, p. 252). *Rich descriptions* of participants and study settings offered the study audiences the opportunity for case transferability. Veterans' vivid stories were used while protecting participant identity. *Clarifying researcher bias and assumptions* (p. 251) is important to be recognized at the outset of the study for the benefit of the researcher, their peers, and ultimately the study audience. Biases and assumptions affect the interpretation of data and possibly the conclusion of the study. Therefore, researcher bias was explored and clarified at both the onset of the study and as the study progressed. I worked to clarify my own researcher bias, which includes my positive attitudes and admiration toward Veterans, primary support persons and my personal history related to these roles. I worked closely with my advisor and dissertation committee professor(s) after data collection sessions in order to debrief and provide reports of study experiences and reactions. Self-reflective notes on my perception of research bias were recorded in study memos as an audit trail.

Finally, Creswell (2013, p. 252) discusses *external audits* which provide an opportunity for an independent auditor who has no association with the study to review the data collection process and the data analysis interpretation and study conclusions. I kept study records and an audit trail and adhered to annual audits from the UNMC Institutional Review Board (IRB) and for supervisory committee requests. By following Creswell's guidelines to establish the validity and reliability of the data collection, analysis and interpretation of this study was assured.

Corbin and Strauss (2008, p. 297 – 312) discuss "quality" of research and provide an in-depth discussion of the criteria used to evaluate qualitative research using terms that are strongly tied to quantitative research: validity and reliability. Corbin and Strauss (2008) outline criteria specific to evaluating quality in grounded theory research, such as *fit, applicability, concepts, contextualization of concepts, logic, depth, variation, creativity, sensitivity* and *evidence of memos* (p. 305-307). Similar to "member checking" the "fit" criteria "compares the 'fit' of the findings" to the participants' experiences. Applicability refers to the usefulness of grounded theory findings to provide new insights, develop policy or add to professional knowledge (p. 305). The third and fourth criteria are "concepts" and "contextualization of concepts." These concepts frame study findings and provide structure for outcomes so they may be useful to healthcare professionals. "Logic" and "depth" are the fifth and sixth criteria used to evaluate quality of a grounded theory (Corbin & Strauss, 2008, p. 306). Findings were organized with a logical flow using memos to document decisions made within the grounded theory process. The "depth" criterion requires documentation of substantive details that bring clarity to findings and to the needs of the population for both practice and policy. In the study, variation was included in findings and outcomes. Flexibility, innovation and creativity comprise the core of the eighth criterion which required research findings to be linked together in new ways. The ninth criterion is sensitivity to participants and the data. Specifically, did the researchers allow the data to drive the research? Evidence of memos or an audit trail is a very important aspect of the 10th criterion. The evidence in researchers' reflective memos is important because researchers need to document their thinking and the process of the development of theory (p. 306-307).

There now are standards for evaluating and improving qualitative research proposals or manuscripts. There has been a need for qualitative research standardization for a long time. Joanna Briggs Institute has published checklists so faculty and students can use the checklists (Joanna Briggs Institute, 2018). They are complimentary for academics to use. Although the

critical appraisal documents were not available when I started this study, I will be using the checklist to inform the manuscript I am preparing for submission to a peer reviewed journal.

CHAPTER 4: RESULTS

Sample Description

Fifteen Veterans and five support persons participated in the study (n = 20). The Veterans were mostly male (n = 11) with (n = 4) female. The mean age of all the Veterans was 42 years and a standard deviation of 10.25 years. The mean age of the five support persons was 40 years with a standard deviation of 9.40 years. Eleven Veterans identified their race as Caucasian or white. Others identified as Black (not of Hispanic origin; n = 3) or Asian/Pacific Islander (n = 1). Five identified their ethnicity as Hispanic. Among the support persons, 2 were male and 3 were female. They identified as Caucasian (n = 3) and Asian/Pacific Islander (n = 2). The participating support persons were either spouses (n = 3) or boyfriend/girlfriend (n = 2). Veterans who were participating in the study without a participating support person considered their primary support person to be a spouse/partner (n = 7), a boyfriend/girlfriend (n = 5), a parent (n = 1) or friends (n = 2). Most Veterans came home to their support person. Others came home to live on their own or with their nuclear family, with their parents and younger siblings in rural sections of central California. Unfortunately, for some Veterans, they came back to a homeless situation. Other demographic characteristics of the sample are summarized in Table 3.

The sample was diverse in terms of socioeconomic characteristics, summarized in Table 4. Education ranged from some high school to graduate school. Incomes ranged from the category $30,000-49,000 to over $75,000. Two Veterans were retired, but the rest were employed in healthcare, business (including management), and government. The type of work in the military and currently in civilian life is provided in Table 4. All Veterans and support persons indicated that their income was at least sufficient and some usually or always had money left over. All had some type of health insurance and some had both private and military-sponsored health insurance.

Table 3. *Demographic Characteristics of the Sample*

Variable	Veteran (n = 15)	Support Person (n = 5)
Age in years		
20-29	0	1
30-39	5	2
30-49	3	1
50+	7	1
Gender		
Male	11	2
Female	4	3
Racial Identity		
White/Caucasian	11	3
Black/African American	3	0
Asian/Pacific Islander	1	2
Ethnicity		
Hispanic	5	0
Non-Hispanic	10	5
Marital status		
Married	5	4
Long-term commitment	3	1
Widowed	1	0
Divorced	4	0
Never married	2	0
Religious affiliation		
Christian	3	2
Catholic	5	2
Protestant	2	0
Non-denominational	2	0
Muslim	1	0
None	1	1
Prefer not to state	1	0

Table 4. *Socioeconomic Characteristics of Sample*

Variable	Veteran (n = 15)	Support Person (n =5)
Education		
Some high school	1	0
High school diploma	4	1
College or trade school	8	4
Graduate school	2	0
Type of Work: Military to civilian		
Warrior - Government	2	
Medic - Health care	5	
Mechanic - Business	3	
Mechanic - Other	1	
Leadership - Health care	1	
Leadership - Management	1	
Leadership - Retired	2	
Type of Work: Support Person		
Student		2
Law enforcement		1
Business		1
Retired		1
Currently employed		
Yes	13	1
No	0	3
Retired	2	1
If working, it is		
Full-time	11	3*
Part-time	2	0
Household income		
$30,000 – 49,000	4	3
$50,000 – 74,000	3	0
$75,000 +	7	1
Prefer not to answer	1	1
Ability to get by on current income		
Cannot make ends meet	0	0
Just enough and no more	3	1
Enough with a little extra sometimes	4	2
Usually have money left over	2	0
Always have money left over	6	2
Out of pocket expenses for health care		
Yes	10	4
No	5	1
Able to afford out of pocket expenses		
Yes	15	5
No	0	0
Health insurance**		
Private	5	3
Military sponsored	4	2
Veteran's Affairs	10	0

*Includes one student
**Some Veterans had both private and military insurance

The military characteristics of the sample are provided in Table 5. Three branches of the military were represented: Army (*n* = 11), Navy (*n* =3), Air Force (*n* =1). Veterans had served in Iraq (*n* =11) or both Iraq and Afghanistan (*n* = 4). Some Veterans had four or more deployments (*n* = 3) and/or many years in the military (*n* = 4; 21-30 years).

Table 5. *Military Experience*

Variable	Veteran (*n* = 15)	Support Person (*n* =5)
Branch		
Army	11	1
Navy	3	0
Air Force	1	0
War(s)		
Iraq	11	1
Afghanistan	0	0
Both	4	0
Deployments		
1	5	0
2	4	1
3	3	0
4+	3	0
Years in military		
1-4	3	0
5-10	5	1
11-20	3	0
21-30	4	0

Overview of the Grounded Theory

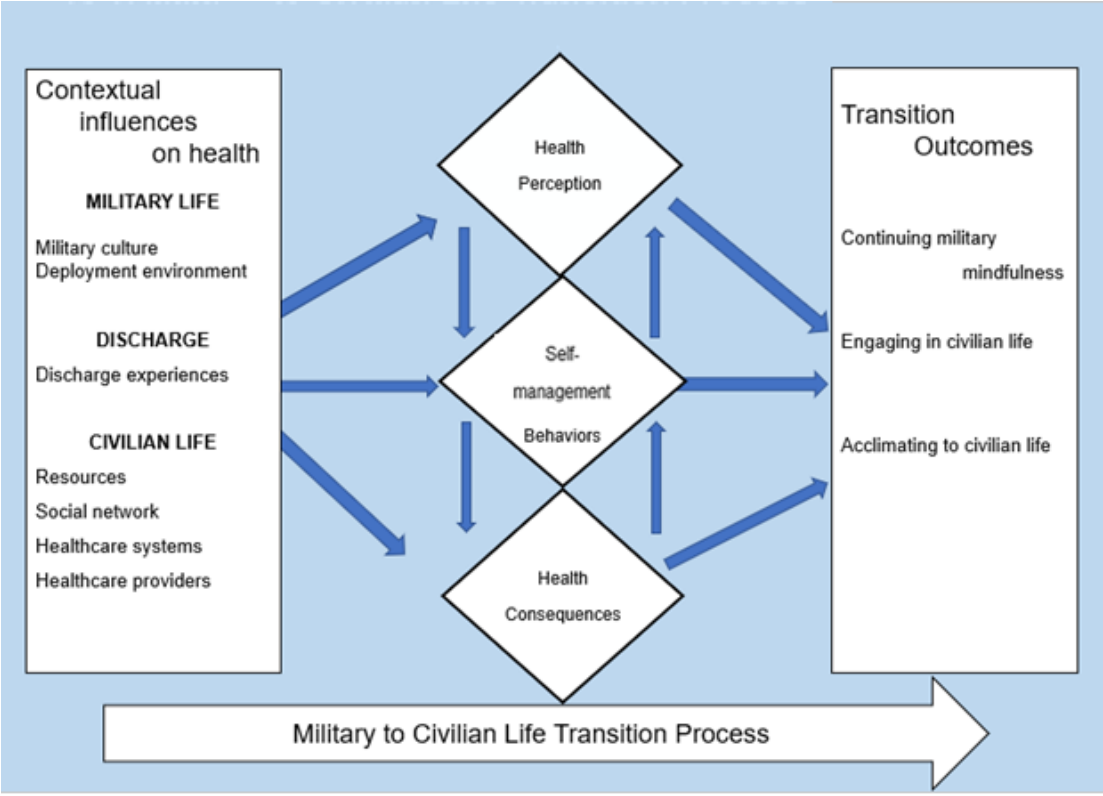
Core Concept: Military to Civilian Life Transition

The grounded theory model is presented in Figure 2. The central part of the model depicts three health-related concepts: health perception, self-management behaviors, and health consequences. These concepts are analogous to central components of the Revised Family Management Framework depicted on page 36 of this document. During data collection, Veterans and support persons provided detailed descriptions in response to interview questions that were derived using the RFMF model as a sensitizing framework. The data provided solid evidence of the relevance of the RFMF model in this combat Veteran sample.

An unanticipated finding that emerged during data analysis was the amount of change over time that Veterans experienced in their health perceptions, self-management behaviors, and health consequences. In response to open-ended questions, Veterans told vivid health-related stories that typically began with their deployment experiences, continued through their discharge experiences into the early weeks, months or years as a civilian, and culminated in their health situations at the time of the interview. Both gradual and abrupt health-related changes occurred during this period of time. Veterans described a transition as they moved from deployment in a combat setting to their current lives as civilians.

One Veteran shared his story of returning from deployment and experiencing a transition: “I feel like it’s a lot smoother now than it was. When I first came back, my mental health wasn’t all that great. I was still kind of going through a transition, being back in a normal environment.” Another Veteran explained that upon returning home from deployment she needed an adjustment period: “Yeah, it took me a long time to get used to being back home.” A third Veteran shared her transition experience of coming back from deployment: “I call it taking that [military] hat off. I didn’t take off that hat when I came back to the civilian world. So, it took a little bit of time to readjust.”

Figure 2. Military to Civilian Life Transition



The centrality of Veterans' transition experiences reported in their spontaneous stories which suggested that the original RFMF concepts could be placed within a transition model for the combat Veteran population. Thus, the *military to civilian life transition* was identified as the core concept of the grounded theory. It is defined as the personal experience each combat Veteran has from the time of preparing to be discharged from the military through to the time of the interview for this study. The difficulty or ease experienced by Veterans as they progress through the military to civilian life transition, over time, affected outcomes for each Veteran.

Contextual influences on Veterans' health were expanded in the military to civilian life transition model, compared with the RFMF. Contextual influences during military life in the deployment environment and during military discharge influenced Veterans health perceptions and self-management behaviors, and thus, their health consequences during civilian life. The

contextual influences identified in the RFMF, i.e., resources available, social network, healthcare systems and healthcare providers, were also relevant for study participants during civilian life.

Once discharged from the military, Veterans went home and entered civilian life. The *military to civilian life transition* occurred over time as veterans gradually left aspects of military culture and military life behind and began to get used to being back in the civilian world. When Veterans left their military life, they retained some aspects of a military identity. Some retained a more robust military identity than others. Veterans who began to make plans as civilians engaged in civilian activities and began to think about opportunities available to them. However, Veterans tended to maintain some level of military identity; it became a part of who they are. Working through health issues was part of the Veterans' *military to civilian life transition* work.

The transition from military to civilian life proceeded smoothly for some Veterans. They expressed satisfaction with their lives as civilians, while acknowledging the ongoing impact of their combat experiences. Others experienced significant challenges during the transition. At the time of the interview, they described ongoing health issues. Support persons provided insights into their involvement in the Veteran's transition. Three possible outcomes of the military to civilian life transition at the time of the interview were identified in the data. They varied considerably across the sample, and included continuing military mindfulness, engaging in civilian life, and acclimating to civilian life. Veterans could experience one, two or all three of the outcomes.

In summary, the constructs in this study's original sensitizing framework, the Revised Family Management Framework, explain what was "going on" with Veterans' health as they worked through the military to civilian life transition. Specifically, Veterans' health perceptions changed over time, as did their self-management behaviors and the health consequences of their self-management behaviors. These changes were influenced by the contexts Veterans experienced while in the military, during the discharge and as a civilian. Veterans' stories about their health

typically began with descriptions of the deployment environment, continued through the discharge, then up to the time of their participation in the study. At the time of the study, the Veterans had varying degrees of continuing military mindfulness and were engaging in civilian life or acclimated to civilian life, which were conceptualized as outcomes of the transition experience. Below, each component of the *military to civilian life transition* model is described in detail.

Contextual Influences

As noted above, contextual influences during military life impacted Veterans' health during deployment and during the military to civilian life transition. Also, self-management behaviors during deployment tended to continue for a while in civilian life. Contextual influence is defined as situational characteristics of both military and civilian life that affected Veterans' health perceptions, self-management behaviors, and health consequences in their civilian life.

Military Life

Veterans commented on their reasons for enlisting and then told extended stories about their life in the military, including the military culture and deployment environment in which they were embedded. Most of the Veterans in this study were young when they enlisted (age 17 to early 20's). Military experiences were individualized. Some Veterans felt that the military was the foundation for their life. Others enlisted with the intent for their military career to be their life's work. For example, this Veteran explained: "I planned retirement after 25 years in the military…I never knew anything else to do because I was trained to serve in the military and I was trained to train other soldiers." Other Veterans expected to serve in the military as an investment so they could use the military's educational grants and scholarships when they were discharged in order to further their career. One Veteran expressed his view of how military life affected him: "While I was over there---never any health problems while I was in the military. The military made me stronger. The military made me a man (laughs)."

Military culture. Military culture includes the traditions, job requirements, expectations, attitudes, routines, and practices that shaped the Veterans' daily lives starting in boot-camp (initial military training) and while deployed. Military culture shaped Veterans perceptions, values, and beliefs during military life, during deployment, and then upon return and continued into civilian life. Veterans described military culture during data collection. Some Veterans shared that military culture often placed them in an environment that posed continuous threat to their personal health, wellbeing, and was a risk to themselves and their military brethren. Many Veterans referred to military culture directly or seemed to have brought much of the military's culture and teachings home with them in symbolism, lessons, precedents and behaviors. As Veterans became accustomed to military life, military culture became embedded in their awareness and impacted the meaning of their lives. Military culture influenced Veterans' perceptions upon their return from deployment or retirement from service.

Veterans' self-management health behaviors began during deployment and were influenced by military culture. One recurring self-management behavior was *pushing through* or *powering through* when "the going gets tough" in the Veterans' lives. Veterans described the following philosophies they adopted from military culture: "just deal with it"; "mission first"; "just do the job" and "keep it to yourself." These concepts also seemed to be related to the behavior of "don't report injuries to the military" in order to protect themselves from potential negative bureaucratic responses. This was a recurring theme in the data. One Veteran explained: "those who complain or report medical needs may be shunned by others." He stated:

> I should have gone to 'medical' but in that last year I was still trying to promote… now regret not reporting my injury to medical. I should have told them "hey, you know what, I have an ongoing back injury". But I was still trying to get a promotion so, I kept it to myself.

Deployment environment. Veterans described deployment environments that included long ruck (marches) with heavy packs that caused back and knee pain, continuous toxic air from oil refineries, incineration pits used for eliminating camp trash and medical waste, and an uncomfortable sleeping environment. One Veteran explained "I'd go out and slept in the field on the ground or in a cot." This Veteran stated that he felt these early military sleeping arrangements contributed to his post deployment chronic lower back pain.

Another aspect of Veterans' experiences included PTSD. One Veteran explained that during the time they spent in the deployment environment, emotional reactions like PTSD symptoms, in the combat theater felt "normal" to them until they returned home. This Veteran described his pre-discharge and post-discharge PTSD experience:

> You don't really think that there's a difference because you're around the 130 guys that have all experienced the same thing that you have so you think (of your mental health issues) 'that's normal', you don't really start thinking that that's not normal until you get back into civilian population, or around people that haven't experienced, and then you know 'you're an oddity,' and then you start realizing like, ahh it wasn't that bad, until everybody says 'no dude, that's pretty bad'.

Veterans described continuous, long-term respiratory system injuries from exposure to smoke from burning trash, toxic pollutions in the air and on the land from oil refineries. Other toxic exposures were caused by a lack of running water for wash up. This was particularly hazardous to medics who experienced exposures from both the local population and their fellow Veterans' blood, bodily fluids and body parts in field hospitals. Medics had to do without resources that are taken for granted in civilian healthcare settings, such as masks and gloves for handling body fluids and running water for showers. In some cases, the Veterans reported they could not properly wash up for weeks to months at a time. Most of the Veterans interviewed reported insufficient hearing protection and thus hearing loss that ranged from mild to severe,

requiring hearing aids. They explained this was from deafening sounds such as battle sounds, engines, weaponry, and transport vehicles that caused hearing loss.

Discharge

Discharge experiences. Veterans told stories of their discharge experiences. They wanted to make their discharge happen as quickly as possible so they could get home. They were not interested in spending a lot of time on military formalities as they moved from the active duty status to Veteran status. For example, the military attempted to collect health status data from the Veterans during the discharge process, but both Veterans and the military tended to be in a hurry. As one Veteran said, "The whole out-processes from the military seemed like just a quick, fast process." For their part, Veterans described not wanting to engage in a lengthy evaluation of their health at that time; they wanted to get home. Some were not entirely forthcoming about health issues that were bothering them at the time of discharge because they did not want to jeopardize their future status and/or military clearances. They were in an ambiguous space between the active duty, "don't complain" military culture and civilian life, where health issues need to be acknowledged in order to be addressed and treated, and for Veterans to receive the relevant benefits.

One Veteran had a number of physical and mental health complaints manifest during his combat experience. He explained he was given health questionnaires on his way home. Yet he seemed self-protective when he explained: "I did what everybody else did, 'just lie on your questionnaire on the way back.'" Other Veterans told similar stories - that during the discharge process they were given health questionnaires that they did not fill out entirely truthfully because they did not want their military clearance affected; they wanted to protect their record. Many of those Veterans expressed that they later regretted incorrectly filling out those questionnaires. They did not realize the importance of those early health evaluations. They were too excited to

be discharged and going home. Not providing accurate or complete information on discharge health assessment forms had long-term consequences for them.

Another Veteran explained that at discharge his medical evaluation was confusing because he had been misdiagnosed during his time in combat. The misdiagnosis followed him through the discharge process and into his transition period in civilian life. After he was "completely out" of the military he then was able to get properly diagnosed. With the appropriate diagnosis he was able to get correct medical treatments. The Veteran described the following:

> Even still today, there is still confusion. Originally they were trying to say that I had [a certain injury] so I think the whole out-processing or being discharged, the process is you go through a medical evaluation, mental health evaluation, identify any problems that you're going to need treatment for once you get out, but that whole process, they were just telling me that I had [a certain injury] and I knew that it wasn't [correct] because I had [that injury prior….] in my younger years… I knew what those were, so I think it was just misdiagnosed, kind of fell through the cracks, and then finally once I was out completely and I was able to investigate, go to more appointments and be diagnosed properly. It took an angiogram to diagnose the issue. That was finally done at the VA after I was discharged.

Three other Veterans were told that they could no longer serve in the military due to physical injuries they had sustained during combat. All of these Veterans had entered the military very young, worked for years to strategize and establish their military careers: they were where they wanted them to be. Yet, due to injuries sustained in combat they were required to retire against their wishes. They had to leave their posts and thus their careers on short notice with reasons given as ongoing "medical conditions". They were all honorably discharged by their Command.

Good health was expected in military culture and was a requirement for continued deployment in a combat zone. Veterans described how this imperative influenced them and caused reluctance or even refusal to report injuries or mental health variations. They worried about reporting to a medic their physical or mental health disorders that affected their functioning because their superior would find out about it. Should this happen, the consequences could include missing a promotion, being removed from their military job or put in a less desirable job. One study participant recalls these aspects of military culture:

> I had gotten hit by a tractor trailer…. I hurt all over, you know after a week or so I went back to work and went back to business**…**If you report injuries 'they might put you on light duty' then when promotions come around the soldiers with injuries are passed over. When you get out of the military and you report your back is bad and then they say 'there is no medical documentation.' Looking back, I should have… gone to medical …. but I was still trying to promote.

Veterans who were injured while serving in the military described a variety of injuries that occurred during preliminary training exercises, at construction sites, motor vehicle accidents, explosions from improvised explosive devices (IED) and firefights.

Civilian Life

Despite the continuing influence of the military context on health and self-management behaviors, the context for Veterans' health as civilians was different from military life. Veterans shared their observations of healthcare resources and other contextual influences on their health as civilians. They shared specifics about healthcare systems they accessed and healthcare providers who helped them work through health issues.

Resources. At the time of the interview, combat Veterans and support persons seemed satisfied with their resources and the interviewees expressed that they felt they had sufficient resources for appropriate self-managed care. Study participants expressed that they were familiar

with the option for them to seek medical care from the Veteran Affairs (VA) medical centers and VA run Community Based Outpatient Clinics (CBOC). Healthcare associated resources described as present in rural areas of the San Joaquin Valley, CA. Many participants had utilized their local VA system as a health resource and others had accessed the VA system in other States within the United States. Veterans described healthcare systems they and their families accessed and healthcare providers who helped shape their health perceptions, self-management behaviors and health consequences.

Social network. Veterans reported other resources that were available to them, including social networks within their home area. The concept of social network primarily refers to social support alliances available for Veterans such as personal relationships, valued institutions that provide social supports such as Veteran Service Organizations (VSO) and church groups. Veterans spoke appreciatively of friends they met at Veteran Service Organizations (VSO) such as American Legion. Social networks included Veterans' families, fellow Veterans, friends, neighbors, church members, co-workers and other colleagues who provide social engagement and social support for the combat Veteran and his or her support person. Many Veterans spontaneously disclosed their social networks during interviews. One veteran expressed that "I network with a buddy or two for support, we were in the same troop." Another Veteran told how when his back "goes out" his friend helps out: "My friend helps a lot and comes over and does mechanics on the car, stuff I would usually do myself --does some errands for me."

Healthcare systems and providers. Combat Veterans have specialized healthcare needs and there are healthcare systems and healthcare providers available to meet these needs. Although some Veterans or their primary support persons provided critique on how to improve the Veterans Affairs (VA) system, overall, they spoke of the VA healthcare system with appreciation. Some Veterans or their support persons felt that the VA did a fine job offering Veterans' healthcare programs that target Veterans' specialized needs. For some Veterans, it took a while to seek help

from the VA, but when they did, they appreciated the results – sometimes dramatically so. One Veteran shared how much a Veterans' Affairs mental health program Licensed Clinical Social Worker (LCSW) helped him move out of a very "dark place" in his life:

> I saw ____, he is an LCSW. The breakthroughs that I had in my sessions with him I feel probably saved my life. I was able to understand what's actually happening to me, the PTSD and with that knowledge came empowerment. I was able to actually do something about what my body and my mind were doing."

Another Veteran shared his experiences and appreciation using VA healthcare system. He explained that he anticipated feeling hostile toward the VA medical center when he first arrived for outpatient help. As it turned out he had a good experience which the Veteran described:

> I'm [felt like I was] going to be hostile toward the VA... I went in there …now I'm seeing a mild traumatic brain injury person, which I think is called neuropsychologist, I'm seeing a psychiatrist, that's the one that gives you pills right? And a neuropsychologist. So, I was seeing three different experts. You know one for my brain, …uh I was seeing one for you know, the anxiety… and PTSD and doing medication and the other one doing group therapy. And uh, you know I just had to, I knew something was wrong, and I had to, I had to use the means to try to do something about it.

Aside from the VA healthcare system and their specially trained team of providers, Veterans mentioned other healthcare systems they use: Tri-Care, a military run healthcare system with providers who are specialized to meet the needs of active, reserve and newly discharged military personnel and their families. Veterans also have the option of using private insurance, civilian healthcare and providers and/or Medi-Cal, a welfare based medical insurance system. All

of the Veterans or their support persons interviewed felt that they had sufficient healthcare systems or providers that met their unique needs.

Health

Health perceptions

Originally, using the terms "health conditions and health concerns" was a useful approach for the focus of the study. Yet, it did not hold up in data analysis. As noted previously, data collection plans were designed to learn about both "health conditions and health concerns." However, what was found in the data was that *health conditions and health concerns* were so interwoven in the Veteran's stories that they could not be meaningfully used as separate coding categories. Veterans described how concerns became conditions when they received a diagnosis. Veterans also had concerns, such as worries or fears for the future, about diagnosed conditions. After writing many memos in which I worked to categorize data as conditions or concerns, I realized that the original categories were incongruent with Veterans' perceptions of health as described in the data, especially as they described how their health changed over time.

The categorization scheme for Veterans' health that emerged from the data has four categories: physical health, mental/behavioral health, relationship health and career health (Figure 3). As expected, stories about physical and mental health were prominent in the data. Veterans also provided extensive descriptions of how their personal relationships were an important part of their well-being. Therefore, relationship health was identified as a third category. An unexpected finding was the extent to which Veterans described their careers when responding to questions about their health. At first, it was unclear where to categorize career data in the emerging model. Ultimately, "career" was so important in Veterans own descriptions of their well-being that I identified it as the fourth dimension of health. All four dimensions of

health were evident in Veterans' health perceptions, their stories about self-management behaviors and the health consequences of their behaviors (see Figure 3. below).

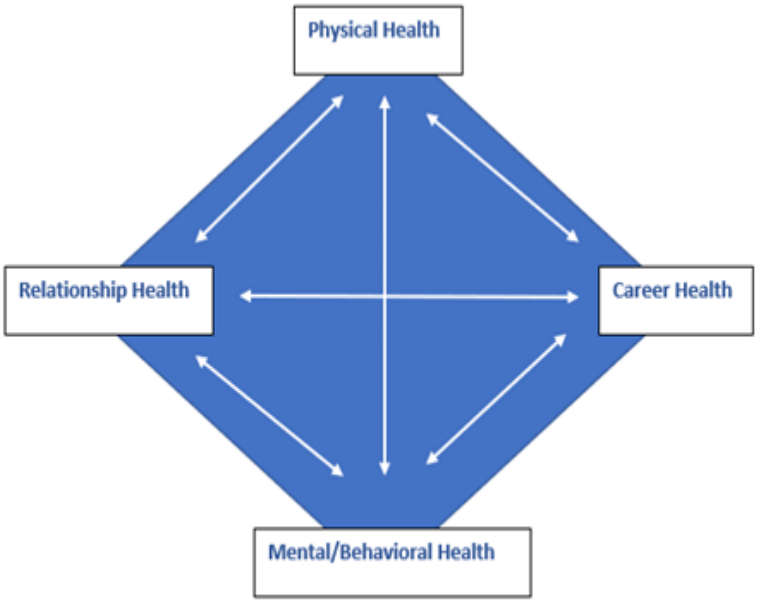


Figure 3. Four inter-related dimensions of health.

A key finding was the way in which the four dimensions of health interacted. Each affected the other. Identifying the relationships between the four dimensions of health is one example of axial coding. For example, mental/behavioral health affected relationship health and relationship health affected mental/behavioral health. Career health was intertwined with physical and mental/behavioral health. Veterans also described relationships between the four health categories over time. For example, mental/behavioral health affected relationships, and as relationships improved or deteriorated, mental/behavioral health changed as well.

The term "health perceptions" corresponds to the term "definition of the situation" in the RFMF model. Midway through the analysis, "definition of the situation" seemed too broad, as Veterans' overall situations involved more than health. Other terms were explored, including "definition of the health situation," "perceptions of health," and finally "health perceptions." "Health perceptions" seemed to be the best choice for representing both the purpose of the study

and Veterans' and support persons' interview data. Therefore, health perceptions represent Veterans' and support persons' perspectives about the Veterans' health.

Combat Veterans and in some cases, their primary support person, provided answers to interview questions including Veterans' health perspectives in four areas: 1) physical health such as pain, respiratory difficulties, orthopedic injuries, skin rashes, muscle injuries, aches and brain injuries; 2) mental/behavioral health issues such as post-traumatic stress disorder, depression, addictive substances and positivity 3) relationship health, including relationships with spouses, children, parents, teachers, friends, and professional colleagues; and 4) career health, including the military service-related educational opportunities, career planning and their life goals.

The military mindsets and behaviors that were ingrained in Veterans seemed to follow them through the discharge process and into civilian life. For example, a Veteran said: "I was ever- watchful for the enemies and I came home. I still feel like I am ever watchful." Another Veteran shared his perception after returning from deployment: "You start getting hyper, uh, hyper alert, and you start checking to make sure, you know, your egresses, of how to get places, or you know you want to sit facing the door and you want to know where the exits are."

In the study, the term "health perceptions" represents an individual Veteran's perspective on his or her health although it may also represent a Veteran's primary support persons' perspective. Some Veterans described a multitude of health issues. For example, a Veteran shared the following: "I had depression, PTSD and severe anxiety, physical health problems, tinnitus, sleep apnea, have lower back pain and I have physical therapy. Retired after over 25 years in the military. Worked on mental illness and physical problems concurrently."

Veterans described how their health changed over time as they made their way through the military to civilian life transition. Although this Veteran expressed satisfaction with the availability and quality of her healthcare insurance, when asked what would have helped her more when she was discharged from the military she explained: "I didn't at the time receive any

outreach from any VA or community or any support group. It's like I wasn't on anyone's list to call to see 'how are you doing?'" That kind of outreach would have made transition much easier. The Veteran continued:

> Yes, if I had somewhere to report to, that would have helped. People with similar experiences, someone looking out for me, making sure I left the room in a week, you know. It's really very, very lonely to be pushed out (of the military) into a world where you don't have to get up at a certain time, where you're not told what clothes to wear, where food is not provided, you go choose your time to eat and what you're going to eat. The regimen alleviates stress. I loved it. I loved the schedule, the structure, and so to not have any is hard.

Physical health. Veterans described many physical health issues they experienced during their transitions from military to civilian life. Included were respiratory, skeletal, skin, muscular and nervous systems. Many physical injuries, ailments and health conditions were mentioned: allergies, back injury, environmental hazard such as smoke from burning trash, exposures (bodily fluids), foot injuries, headaches, hearing loss, hip injury, knee injury, neck injury, permanent nerve injury, physical pain, degrees of pain, acute pain, chronic pain, respiratory issues, shoulder injury, sleep disturbance, traumatic head injury (TBI) and vocal cord injury.

Self-management of pain. Pain management in the home was often self-directed. Veterans reported using over-the-counter pain relief measures such as ice, heat, non-steroidal anti-inflammatory drugs (NSAIDS), sinus sprays, ointments (Bengay), transcutaneous electrical nerve stimulation (TENS) unit, and stretching, etc. Some Veterans reported self-management behavior to control pain by "never stop moving' – with a goal to improve functionality at work. Other Veterans' use chiropractic and physical therapy treatments for pain control.

Veterans experienced physical health changes over time during the transition. Many of their physical health conditions stabilized over time with little or no self-management

interventions. This is a "waiting it out" perspective. Physical health issues could improve over time with self-management behaviors the Veteran or support person initiated. Some Veterans used health management recommendations from their health providers to guide their self-management behaviors. Most Veterans use a combination of these self-identified self-management behaviors and health provider recommendations.

Sleep disturbance. Another unexpected finding was the extent to which Veterans' described sleep disturbances. Nearly every Veteran interviewed described some type of sleep disturbance. Some sleep disturbances originated during deployment and remained with the Veteran after discharge. Other Veterans explained that their sleep disturbances started upon return from the military services. Sleep was such a common issue found in the data that it is discussed in detail here. A litany of physical conditions is linked to sleep disturbance in the data. These include pain and injuries. For example, one Veteran's spouse (support person), was troubled by his sleep disturbance:

He does not sleep well, he is constantly 'twitching' and 'clearing his throat' so I hear that all night…he literally never stops moving whether asleep or settling down and 'I can't comfort him.' His 'twitching' disturbs my sleep even with a pile of pillows between us.

Post-deployment *sleep disturbances* as described by Veterans ranged from difficulty getting back onto the civilian life's sleep/wake cycle in the United States to severe insomnia. During an early study interview the Veteran stated: "Yeah, sleeping's trouble. I don't get a whole lot of sleep. So, I'm up quite often." The data analytic category of *sleep disturbance* emerged very early during data collection because of the spontaneous responses Veterans shared about sleep disturbance and disturbing dreams when they were asked about their health. It was such a common issue that the interview guide was modified to include additional probes to get more information from Veterans about their sleep. During one of the last Veteran interviews I asked the Veteran if she had sleep disturbances, and she immediately responded "Oh, yeah, for

sure…always." Veterans' sleep disturbances exacerbate physical symptoms. For example, Veterans' reported pain was more pronounced when sleep was not restful. When asked about sleep disturbance another Veteran explained that she had sleep disturbance from pain in her hips and that her hip condition was connected to her sleep disturbances: "they say I'll probably have trouble when I'm older with my hips, nerve damage. Yes. [I have] sleep disturbances also, if I'm on one hip longer than the other, it hurts...especially if it's cold." One Veteran responded to a question regarding what role disturbed sleep assumes in his health and he answered:

> The Army and the VA gave me a medication called _____ I think … And that helps me sleep. I only take it on the weekends. And I know that I, I uh, I toss around a lot. I can't sleep past 5 hours, I do get up in the middle of the night. You know, not just go to the restroom and pee, but I just as a habit, I'll walk around and look out the window…so…then… I go to sleep. And the other thing too that my psychologist found strange, I told my psychologist I'm, I'm asleep, but I feel like I'm awake. They just say, why do you know you're awake? Because my wife will tell--my girlfriend will tell me that story[?]. So, when she puts her hand on my face, I know I'm asleep, because I'm snoring. So, we found that kinda strange.

Another Veteran described a similar experience: "I sleep with one eye open."

Mental/behavioral health. Mental health includes Veterans' descriptions of formal diagnoses, such as PTSD and depression, as well as emotional symptoms they experienced that did not have a formal diagnosis. It was not possible to classify mental health issues in terms of formal diagnoses or un-diagnosed symptoms because they overlapped. For example, some Veterans were diagnosed with PTSD, while other believed that PTSD explained their symptoms, even though they had not sought professional help. Mental health conditions that Veterans reported included: depression, emotional pain (anger, anxiety, social avoidance or withdrawal, avoidance of interactions with persons), fear, flashbacks, moodiness, PTSD. Some reported suicidal ideation in

the past but no Veterans expressed suicidal thoughts during the study. Many Veterans reported having moodiness and anger when they first returned from deployment, which tended to level out over time for most of the Veterans who worked on their mental health symptoms. Often, Veterans disclosed that they tended to work on mental health issues when they realized what was at stake in their life, such as relationship difficulties. Some Veterans didn't recognize their own mental health symptoms as something they could work on until a turning point occurred in their lives, such as the threatened or actual loss of an important relationship such as their significant other, visitation with their children or the loss of their home. The following example illustrates Veterans' health perception, self-management behaviors with positive health consequences interacting together, which reinforce mostly positive health consequences of self-management behaviors. The Veteran shared:

I didn't go to any of those…VA sponsored therapy groups… I was talking to nothing but Veterans. Actually, I talked to a bunch of combat Veterans. It was just my peers. … people that were in the military, like combat vets themselves. I kind of started my own self-help group. We helped each other a lot actually.

Another illustration of Veterans' health perception linked self-management behaviors to health consequences and back to self-management behaviors or to health perceptions is described here as the Veteran worked on his personal journey healing his PTSD:

> I did one-on-one, cognitive, behavioral therapy and some exposure therapy and then during that time, I did a few groups too, I would say 10 or 12 groups, which I really didn't enjoy the whole group setting. I feel like for me a lot of us were on different levels of healing. So, then I felt like I was being triggered more so than being able to talk about my experiences. That wasn't helping, so I kind of dropped out of the group thing... I went through cognitive behavioral therapy a couple of times, so although I was able to learn really good coping skills for some of the issues that I was still having, so

> that was one thing that kind of improved everything, and then I just started taking care of myself better, in like a holistic way, relationships and spiritually, kind of focusing on that. Finding meaning in my past experiences in military and war specifically has helped and placing it in the context of my life and also our country and what we're doing, so I think therapy has definitely helped. In the past, because of the emotional stuff, PTSD stuff, I was in a very like dark place because of it, thinking about 'do I want to live this way, or what are my options,' so then a good friend of mine in _____introduced me to meditation…We did visualization meditation. I can remember the first time I meditated successfully, quieted my mind and everything. It was an emotional thing for me. I actually started crying because I couldn't remember a time before that where I just shut everything up and my mind- I wasn't thinking about Iraq. This was early on when I returned. So, he taught me visualization meditation so now I try to meditate at least every day. Sometimes I'll miss a day, but that's one thing I do, and another thing is reconnecting with nature, being outdoors.

Sleep disturbances and mental health. As noted above, sleep disturbances mental health appeared related. As it turned out, all of the Veterans and support persons interviewed reported some level of sleep disturbances in combat Veterans' civilian life from minimal impact sleep disturbances to severe sleep disturbances that included "violent dreams." Some Veterans explained that their sleep disturbances originated during deployment. Another Veteran has sleep disturbance and terrible dreams. His primary support person, his wife, says that during the Veteran's sleep: "he fights with someone and he kicks in his sleep." This sleep disturbance occurred even though it had been quite a few years after leaving military. Acclimating to sleep in their civilian life was reportedly difficult for many Veterans. For example, some Veterans woke up panicky and disoriented, not knowing where their military-issued weapon was. One Veteran shared her experience:

> When I came back from ____ I couldn't sleep for like a week because I kept waking up looking for my rifle…you have your rifle 24/7, like you sleep with it, so for week probably, like five weeks, I kept waking up grabbing for my rifle because I thought…I was in trouble. So, it was like a mini PTSD session, I guess.

Another Veteran had a similar experience to share:

> I woke up and for like a minute plus, I was looking for my weapon, looking for my boots, but I was at home in my apartment…and what had happened was I was woken up abruptly by some city workers, and they were jack hammering, and it sounded just like gunfire, so I'm fumbling for my boots. I'm confused, where's my weapon, where am I?

Some Veterans compared their sleep/wake cycle they had grown accustomed to in combat environment and they described insomnia that lasted weeks, months or longer upon returning home. For example, one Veteran spoke of the difference in these sleep/wake cycles:

> Just sleeping odd hours, like I would get super tired getting off work, 4 or 5 o'clock, and…go to bed and keep my eyes open, and I knock out 5 or 6 o'clock, and I wake up about midnight and can't go back to sleep, cuz over there you know they're 12 hour ahead of us, so pretty much night and day is reversed, so it's like you're used to being wake during the night and asleep during the day on the US time.

Disturbing Dreams. Disturbing dreams are defined here as dreams, nightmares or terrors that Veterans experience. Their support persons may have also noted the Veterans' experiences and describe them during the interviews. For example, one support person, the Veteran's spouse, said: "Some night he wake up and he wake me up and he is dreaming of war and violent stuff. Real violent stuff." Disturbing dreams trouble some Veterans during their sleep-time or even bothered them during the day. For example, when this Veteran was asked if he experiences sleep disturbances he answered:

> Yes. My sleep is the first thing that deteriorates. I'm even still affected b triggers

> today: If I see an intense scene on the news and it's like war related. I'm better at handling that stuff now. I don't get going physically like I would in the past. My heart would start going, I'd start remembering things from deployments, but it comes out of my sleep. I'll start dreaming about it and it just kind of mixes with everyday reality, family stuff, and then I'll have these horrific images from my past mixing with family, everyday friend stuff.

Disturbing dreams sometimes affect Veterans whereby they don't want to go to sleep because they don't want to experience them. For example, after asking one Veteran if his dreams prevented him from wanting to sleep, he answered

> It'll get to that point. It's been a couple of years since that has happened, but that's how my sleep is affected, yes…so then I just don't feel like sleeping or dreams become more frequent and then that's when I know I have to do something.

Another Veteran shared his sleep disturbance experiences "My wife tells me that I sleep, sometimes I shout, either I'm doing or fighting with somebody. Sometimes I kick in my sleep…she's just used to it."

Relationship health. Relationship health pertains to interpersonal relationships the Veteran faces upon returning from combat deployment. This "state of a relationship" could mean from when the Veteran first returns home through the entire transition. Some relationships changed over time and there was all manner of situations the Veterans faced regarding the relationships they encountered. Relationships could be with significant others, support persons, children, family, friends, work colleagues, schoolmates and professors. Upon return from deployment, combat Veterans experience a huge change from military life to civilian life, which affects their relationships. One Veteran shared his story:

> Well I returned from my initial deployment which was 2003 or 2004. I did not realize that uh, due to injuries incurred in the war, that I had the extent of my TBI which is

> traumatic brain injury. I also didn't understand the condition of what is now termed as post-traumatic stress disorder. And, my lifestyle was changed in that… difficulty in focusing, concentrating, and basically holding a relationship.

Another Veteran described his perception of a troubled relationship with his daughter:

> I felt like I was in a bubble. And, nothing mattered. Not even my daughter…I was in divorce court, and one of the things that was told to me [by the Judge] was that I need established a relationship with my daughter. Well to me, my daughter was sort of like a, I don't, for lack of better words, well sort of like a puppy. You know it's there, but it, it's there. It was meaningless. It was like a hidden block to me. And so, I knew I had to establish that relationship, so I went to, um, I went to counseling, I paid for counseling on my own, with the child counselor.

During the military life to civilian life transition, typically, the Veteran returned from military life and was reunited with family and friends they had left behind when they deployed. Some Veterans felt at home upon return; however, most felt as if they were no longer part of the civilian culture. Veterans described feeling as if civilians did not understand what they have been through at the war zone. This can make some of the Veterans feel distant from civilian life, family members and friends. One Veteran shared:

> I started disassociating myself with family events and I wouldn't try to spend too much time with the family. It was always an excuse to work or stay home instead, so I kept myself away from the public as much possible. I stayed home a lot, actually.

Career health. As noted above, the emphasis Veterans placed on their career opportunities and goals when discussing their health was an unexpected finding. Unlike Vietnam Veterans who are now generally at retirement age, Veterans from the wars in Afghanistan and Iraq are typically younger, with potentially many working years ahead of them. Many participating in this study were thinking in terms of a long-term career, rather than a job for the

present time. Although career health is not traditionally identified as a dimension of health, the decision was made to include it here because of the stated importance to the Veterans in this study. They discussed careers in terms of identifying goals and pursuing opportunities, as well as finding satisfaction in their current jobs.

> For purposes of this study, career health is defined as Veterans' perception of well-being in their chosen livelihood after return from deployment and in civilian life. Veterans could successfully provide for themselves and their families by choosing a new career goal or by reinstating a prior career. Veterans may have the opportunity to use a government scholarship to attend higher education.

Veterans who were attending or finished attending school wanted a career change in their civilian life. They explained the importance to them between their career plans and anticipation that they would be able to support their families outside of the military. Veterans seemed most motivated at their career choices when they had good relationship health. Thus, when Veterans had encouragement and support from family and friends to pursue school or other career plans, they were most successful.

As shown in Figure 3. the dimensions of health: physical health, mental/behavioral health, relationship health and career health were found be interrelated categories. For example, mental health affected relationship health. Several Veterans described that they had to "come to terms" with a need to address their mental health in order to restore the health of their relationships. Mental health affected physical health. Physical, mental health/behavioral health, relationship health and career health could all change over time. Restoring to a healthful state and maintaining these different types of health are part of the transition that Veterans faced when returning to civilian life from military life.

Self-Management Behaviors

Self-management behaviors are defined as the activities Veterans and/or their primary

support persons engaged to maintain or improve the Veterans' health. Some self-management behaviors corresponded with a specific dimension of health, i.e. physical health, mental/behavioral health, relationship health and career health. Other behaviors were cross-cutting, undertaken to improve multiple dimensions of the Veteran's health at once. Some Veterans' self-management behaviors were recommended by health professionals. Other self-management behaviors were initiated by the Veterans. Veterans mentioned health-promoting self-management behaviors they chose to work into their lives, such as exercising, stretching, bicycling, healthy eating, rest and recreation. When discussing self-management behaviors some Veterans mentioned avoiding detrimental behaviors such as the use of tobacco, over using alcohol and other substances.

The extent to which Veterans engaged in self-management behaviors varied greatly. Some had routines they followed daily. Others reported that they found it difficult to self-manage their health since returning from deployment. One Veteran explained "it has not been easy for me" and "it's been a challenge for me" since returning from deployment. Another Veteran stated "I found my doctors by word of mouth at [Veterans' Service Organization]." Veterans' self-management behaviors include Veterans gravitating toward using healthcare systems and healthcare providers that understand their particular needs.

Self-management of physical fitness. One imperative in the military that continued to shape Veterans' lives as civilians was staying in top physical fitness. Many Veterans shared their appreciation for learning from the military how to keep in shape; to use strength training and to endurance training in their lives after deployment. In civilian life, staying fit pertained to all dimensions of health. Many Veterans felt their physical fitness directly reflected their value and self-worth. If they lost physical fitness over time Veterans expressed dismay and many stated they had some self-management behavior they wanted to use in the future for restoring and maintaining their physical fitness. Thus, physical fitness behaviors were mentioned frequently as

a key approach to promoting continuing good health and restoring the ability to function after an injury or illness. For example, this Veteran shared his story about keeping fit:

> I have scoliosis now. I use rest to manage my injuries. I do abdominal core exercises to keep my weight down and keep my core strength really strong. It offsets my weak back, midsection that it acts like a natural brace. That's just because I learned this stuff on my own, no one taught me that. Every other day I do pushups, chin-ups, wide-arm, and then lower body I do stair climbers. Those are the more common ones. I try to do that three or four times a week. Sometimes I'll do it six or eight times, but twice in one day.

Study participants also mentioned the importance of staying in tip-top shape so that they could pursue their livelihood outside the military. Some considered this an individual responsibility, so they continued to be reluctant to pursue formal health care, even when it may have been helpful. For example, one Veteran said:

> Hit the road at least 3 times a week…that includes running and walking. I include cardiovascular, like strength training. I do weights. I do a lot of body weight training, just because [in my profession] I have to keep my body strong and healthy because this is how I make my living. Without me being strong and healthy, I just wouldn't be able to do it.

Other self-management behaviors that Veterans and primary support person discussed during interviews included respiratory treatments, managing joint injuries such as knee, hip shoulder and back, rashes, muscle aches, auto-immune disorders and brain injuries. Self-management behaviors to regain health include the use of "TENS" unit; knee and back braces; pain medications, use of hearing aids for hearing loss, swimming for exercise, bike riding, hiking and allowing the support person to help the Veteran dress.

Self-management of mental health. Reluctance to pursue formal care was especially prominent for Veterans dealing with mental health issues. For example, one Veteran said… "I believe I have PTSD and I've taken some of the surveys and screening tests to see if I have PTSD

and I have it, I've been recognized as having it, but I've never done anything to see a doctor or anything like that." Another Veteran said:

> When I came back from the war, you know I did have a hard time coming to terms with PTSD, I called it, temporary moments of mild anxiety. I didn't want to be caught 'by that term,' I was afraid I would lose my clearances, I was afraid that I'd be weird, you know. It, giving myself the label of PTSD to me meant that I was a broken toy.

Another Veteran, who was early in the transition from military to civilian life felt his life was being affected by PTSD, however he has chosen not to pursue medical help and stated:

> I'm thinking about going to the VA to see some of the professionals there who might be able to help me with some of my TBI issues and PTSD issues but I'm not ready to go there yet. I'm not ready to do that yet. I am still thinking about going to do that. And the last thing I wanted to talk about is…I'm not ready to see anyone at the VA because I'm just not ready to do it and talk about it. It's too soon and I've only been back a few weeks and I'm still trying to adjust.

Self-management behaviors mentioned by several Veterans include formal and informal social networking with other Veterans to self-manage their PTSD symptoms. Other Veterans expressed the effectiveness of working through mental health issues in a Veterans' group. One veteran expressed "It is hard for family to understand. That is why we turn to fellow Veterans". A female Veteran explained that she needs support; however, her husband just can't relate to her experiences in the military:

> Honestly, that is something that surprised me about being in the military, is that I can't share a lot of experiences with my husband because he can say he understands but he doesn't, and so there is a bit of loneliness that exists just because of that. I am alone in my experience and he does not understand.

The following statement illustrates how self-management behaviors could change as a Veteran made their way through the transition from military to civilian life. This Veteran moved from concealing mental health symptoms to finally acknowledging them and seeking help.:

> I went in there (to the VA medical center) for my initial interview, I finally decided to just kinda tell the truth to their little PTSD questionnaire every time you go into the VA, and like I really wanted to kinda talk to somebody, so I talked to a resident [physician]….that was on her psych rotation, but she was cool, she was like…are you okay talking to me? I said yeah, so I talked to her, and so I did my initial one where I talked to like two people, and then they said well I don't think it's PTSD. I think it's depression and I was like ok, so I talked to one of the residents and so they decided to put me on, oh, put me on an anti-depressant medication.

Self-management of sleep disturbances. Some combat Veterans' sleep disturbance prevents them from sleeping well during the night. Some Veterans use daytime naps as self-management of sleep disturbances. For example, one Veteran shared his morning routine after sleeping poorly in the night: "Well, I wake up in the morning to brush my teeth, and I pops a Vicodin, just so I can be able to get through the pain. And…then I go back to sleep. I do a lot of sleeping, cuz I'm hoping that the sleep will help my body to recover some, so I sleep [during the day] a lot." The Veteran's support person, his spouse, explained that when her Veteran woke from a nightmare: "I scratch his back and his neck to try to get him to relax and go back to sleep but he wakes up with pain with back issues." Many combat Veterans associated sleep disturbances with TBI or PTSD symptoms. These Veterans had a variety of self-management behaviors; some use medications for sleeping on a regular basis. Some Veterans have accepted their sleep disturbance as "normal."

Light sleep or sleeping while "staying aware" of ones' surroundings was one of the behaviors some Veterans reported, which kept them from getting as much rest as they need. This

could be described as one of the difficulties Veterans face that affects their overall health. Veterans' support persons had offered to help their Veterans' sleep disturbance problems. Their support persons (all were significant others) shared their own ways of self-managing their Veterans' sleep disturbances. Veterans who did not have spouses had a different sleep disturbance experience because they had to self-manage the insomnia and sleep disturbance symptoms on their own. In terms of insomnia self-management, one example of a female Veterans' military experiences and injuries caused her to become choosy about which people she would be around. She "practiced" how to manage her life. As a self-described "goal oriented" Veteran, she said:

> I find myself sometimes frozen in periods of time and I need to be actively working toward something to feel productive…. Occasionally, when it gets too bad, I do seek mental health services, and by too bad, that means my insomnia gets really bad, or my husband bugs me to. I take care of myself. I keep my mind active. I keep my body active. I swim. I usually like running if it's good weather like this, run after the kids, that kind of stuff. They're busy. And I will, I'll continue.

Self-management of relationship health. The veteran who described problems in his relationship with his daughter sought extensive help on his own. As he explained:

> I knew I had to establish that relationship, so I went to… to counseling, I paid for counseling on my own with the child counselor, I went to the VA hospital…I went to a social worker and I went to go see a PTSD counselor. I knew something was wrong, I knew that to establish a relationship, like recognizing my daughter. So, I tackled that. So, I went to counseling and I read a lot of books. On how to motivate your children, how to establish a relationship with your children, and I took what I could, that, I could within my means. From those books. You know, building your self-confidence, okay. Um, that type of deal. What to say to your child that makes them feel loved. And the other thing too is, I needed to find peace in my mind, to not be stressed...So I was seeing three

> different experts. You know one for my brain, uh I was seeing one for you know, the anxiety, and PTSD and doing medication, and the other one doing group therapy. And uh, you know I just had to, I knew something was wrong, and I had to, I had the means to try to do something about it.

Other self-management behaviors. Some Veterans used detrimental behaviors like the use of tobacco, abusing alcohol and other addictive substances as part of their self-management health behaviors. Self-management behaviors that are recommended by health care professionals included local community resources. However, some Veterans interviewed did not always choose the use community resources until they met a "breaking point." For example, a Veteran shared: "My health affects my relationship with my wife, daughter, grandkids. They like me better when I am going to therapy and group. My health effected my work before I started going to counseling for PTSD and "group". Also, I have "one on one therapy." I did not agree I needed treatment classes about PTSD, but that is what I do to survive."

Health Consequences

Self-management behaviors used by Veterans resulted in a wide variety of health consequences. Some health consequences were described as desired and others were described as negative. Negative consequences were often the motivation for a change in self-management behaviors. Veterans' perceptions of their health, the behaviors they undertook to manage their health, and the consequences they experienced all interacted, as depicted in Figure 2. These interactions were going on during the transition from the military to civilian life.

Health consequences were in flux such that some health consequences were stable, while others changed over time. Some health issues got better for Veterans and in some instances, they got worse. For example, one Veteran might have a quick success from self-management behavior that targets one type of health problem. Yet that same Veteran may have difficulty managing

another health problem, using several self-management behaviors during their transition to civilian life.

Other health consequences from long term self-management behaviors were found in the data. For example, a Veteran might persist for a long time before deciding to get help or to change their self-management approach. So, health consequences are very much tied to the perception of a problem and the self-management behavior the Veteran used to manage the problem. Therefore, a Veteran may have a combination of positive health consequences that can resolve a certain problem and another type of problem is not as easily resolved. If Veterans did not like the health consequences that they experienced, they could change directions of their self-management behaviors. Veterans experienced differing health consequences over time in terms of four dimensions of health: physical health, mental/behavioral health, relationship health and career health.

Physical health consequences of self-management behaviors

One Veteran explained his short-term self-management use of alcohol for mental health, coping, which had consequences for his physical health. He subsequently cut back on his alcohol intake:

> The high blood pressure also, didn't help…with the 'coping mechanisms' of alcohol and smoking…also alcohol can increase your blood pressure… usually using it as an out, to cope, doesn't help with your blood pressure on top of it. I stopped smoking … since I've been married…my alcohol intake has been drastically reduced.

This example illustrates how a self-management behavior to deal with one problem leads to a different problem and ultimately to a new self-management behavior with more satisfying consequences. Finding ways to achieve better consequences was a part of the transition from military to civilian life.

Mental/Behavioral health consequences of self-management behaviors

Mental/behavioral health self-management behaviors can have a strong relationship to both short term and long-term health consequences. An example demonstrating a connection between self-management and long-term mental health/behavior health consequences is from a combat Veteran who struggled at first to care for himself on his own. He explained how his self-management of pain directly impacted his PTSD symptoms. Worsening PTSD symptoms could be a consequence of not managing his pain:

> Or, you know, pain management, you know 'the stretches." That's all I can do is stretches…the reason I keep on bringing up my mental health is because if I allow my pain level [to get] high…I live with pain in my right leg. If my pain gets high…it's easy for me to fall off the ladder, and my anxieties will start to merge in as well, you know. So, I'm always hyper…that's why I'm always hyper alert. You know, if I don't manage my pain, it's easy to fall into a PTSD moment.

Relationship health consequences of self-management behaviors

Relationship health consequences could have a short term or long-term impact on Veteran relationships. As noted above, many Veterans discussed their relationships being affected by their deployments or by their final discharge. The veteran who sought counseling to improve his relationship with his daughter described an improvement in their relationship outcome as a result:

> So, what I did was, I learned that listening is good. I did improve my relationship with my daughter. But really, she was only five, so that relationship initially was more mechanical. And, and then I think that changed my relationship with my daughter, we became more close.

Career health consequences of self-management behaviors

Veterans described various results of their efforts to establish a satisfying career during their transition from military to civilian life. Career health consequences were ideally a post-military service career that satisfied their family needs, their financial needs and their educational goals. Some Veterans had concerns about being able to support their families after discharge and others had a strong career plan that made them happy when they were discharged. Most but not all Veterans started working on their new career plan soon after discharge. Sometimes they had to try more than one approach to their career before they were satisfied with the results. One Veteran shared this career development experience:

> That's all I knew. Um, I was a soldier and a trainer. The soldier skill was…that's all I knew. I was afraid to learn another skill, because I didn't have the patience and I didn't have the mindset. I didn't have the ability to focus, uh, to get a new skill. I wasn't aware …I had post-traumatic stress. I didn't work. I didn't have a job. Because of the injury. I realized my challenges. Some people would say the 'condition or shortcoming.' So, I applied for the only job I knew how to do, outside the army and that was to be government employee as a _____. I sold myself short…I worked for the federal government as a _____ and I sold myself short in that I took a lesser position.

Another Veteran explained she is satisfied with her family, marriage, children, and is looking forward to her career when she gets out of school. She has a number of physical combat injuries (mainly shoulder and ribcage injuries) and some mental health issues she described as minimal PTSD experiences; but she will be starting a new career when she graduates from her master's degree program.

In order to self-manage his career, this Veteran kept focusing on his work. The Veteran explained one of his self-management behaviors he used in his new job in order to be successful and to develop a healthy career to support his family:

> Ok, with the TBI…I learn every day--during my day, I get up every 15 minutes. It's to kinda, it's to, it helps me refocus. It helps me maintain focus by, um, getting breaking it [my focus] and then coming back to it. It's kinda like I keep on refreshing myself. Ok. So, I can complete my task.

Yet other Veterans were still working the transition and were in an unsatisfying behavioral loop that kept the Veteran from advancing through the military to civilian life transition to satisfactorily resolve their career health or transition outcomes.

Transition Outcomes

The ways in which Veterans self-managed their physical, mental, relationship, and career health contributed to the outcomes of the military to civilian life transition. Although many Veterans expressed that they felt as if they were still working on transitioning from their military life to their civilian life at the time of their interview, three potential outcomes of the transition emerged during the data analysis: *continuing military mindfulness, engaging in civilian life, and acclimating to civilian life.*

Continuing Military Mindfulness

Despite transitioning to civilian life, some Veterans described how the military continued to be part of them even in civilian life. They described a preference for being with other Veterans and continuing to think and act as they did while on active duty. Some combat Veterans felt their transition from military life to civilian life was made easier when they shared it with fellow Veterans in some way - as Veteran service organization members or Veteran service organization commanders or by going to their local VA hospital just to hang around there to be with other Veterans. Some Veterans divulged that their spouses or significant others were also Veterans. For example, when one Veteran was asked what he does for rest and relaxation he responded

"movies, video games, volunteer activities at American Legion…and... I go to three (American Veteran) posts. Another Veteran described the continuing military mindfulness this way:

> There is nothing like the experience, the love that you share with people who are in the military, because I spent [over 20] years, I've been through so much, and I will always have my love for fellow Veterans and those who served, and we can laugh and joke about the things that we've gone through that only people in the military understand. I totally support (Veterans) always will. It's like a passion. It's like a love.

The following is a good example of how a Veteran can have a continued military mindfulness upon her return deployment, but it was not a comfortable situation for her. She described her feeling:

> What did I do when I came back? …I had this little animosity toward people, the civilians, because I felt like - I was gone away for a year and I'm a woman and I know it's all volunteer [military] but I felt like the people back home didn't really take what we do seriously. I would come back and you would go by Starbucks and people just casually hanging out drinking their coffee and that would irritate me, because I was thinking - There's my brothers and sisters over in Iraq doing this and doing that and you guys here act like there's nothing going on in the world, so I kind of was getting offended. I had this attitude. Yeah, I had this attitude. And I also had this attitude like kind of get out of my way, like when I would drive, I felt you need to move out of my way, and I would kind of drive like that. I didn't get in a crash or nothing, but that's kind of like what we practiced over there. We were the rulers.

Engaging in Civilian Life

Veterans who are actively working on getting comfortable in their civilian life are *engaging in civilian life.* One Veteran went straight into school after deployment, and said he has a happy family and is almost ready to graduate with a good job lined up for after graduation. At

the time of the interview, said he had satisfactory family relationships. This Veteran's transition outcome at the time of interview was *engaging in civilian life.*

Another Veteran shared the following when asked to about his career plans:

> Maybe going back to school, or us moving to a new area, or me changing where I want to be working. My wife is from _____. There're more job opportunities, there's more schooling opportunities. So, just more opportunities and her family are from there…her parents can help out with babysitting and such."

This Veteran's transition outcome was *engaging in civilian life* because he is still actively working on getting situated into civilian life, he is working on getting comfortable in his civilian life and working his way through the transition.

Another example of a Veteran whose behavior showed that she was *engaging in civilian life* at the time of the interview explained: "When I came back, I was really happy. My son was really young still…at 6 or 7 years old…it was good time to come back and rekindle…but having to start almost a new relationship with him because he had changed, so it was almost like we had to learn each other again, but it was really good to reintegrate back into civilian world.

It was important for Veterans to have rest and relaxation activities as they engaged in civilian life. Veterans shared a wide variety of activities they felt served them during their rest and relaxation periods. Several Veterans disclosed that on their days off they "go to the gym" or they "workout." Another Veteran shared that he goes on vacation on his own (fishing expedition) leaving his family, support person and significant other behind. Another Veteran shared that he goes to the movies with his wife weekly to monthly and they go on an annual trip out of town to Hawaii or the Caribbean. Other Veterans named a wide variety of activities as their preferred "rest and relaxation." These activities included reading, biking, hiking, camping, boating, BBQ parties with their family or in their neighborhood, volunteering at church, out to eat and just lounging on their couch watching sports or other television.

Acclimating to Civilian Life

Veterans who have been through the transition and are comfortable in their civilian life have *acclimated to civilian life.* As defined here, acclimating to civilian life means that the Veteran is comfortable in his or her civilian life at the time of interview. They are no longer working on becoming comfortable in their civilian life, but rather they are already comfortable and they feel as if they "fit in" to civilian life. For example, the following Veteran worked through the transition experiences the until she became comfortable in her civilian life in a fairly short and smooth transition with a positive outcome. She explained that when she returned from deployment and moved to a new state that had an area with a fabulous beach: "Oh, I loved it. It's very fun and I enjoyed that for a long time. I got into surfing, found a really happy life for myself there, just kind of found my way again, found a new plan and hope for my life when I started going to school". She shared that she is now happily married, has great children, a job she loves and is doing well with her physical and mental health. This Veteran works out consistently for fitness and health because she learned to take care of herself as a young military recruit.

Acclimating to civilian life could take time. The following is an example of how the military to civilian life transition can take some time, but eventually can reach a phase when the Veteran is satisfied with his/her civilian life. This Veteran is now *acclimated to civilian life:* "Yeah, when I first came out (over 10 years prior), 'snappy'. I had a short temper" …" When I came out, I had an attitude. I had PTSD, very angry, depression and anxiety. Now 'I'm in good shape.' I am a member of two veteran service organizations, but I don't go to the meetings."

CHAPTER 5: DISCUSSION

Summary

Chapter 5 includes a brief summary of the research problem, study design and methods followed by an overview of the study results, contributions to knowledge, potential limitations, implications for future research, implications for clinical practice, and conclusions.

Many United States Veterans have returned home to face a tremendous array of somatic and psychological health concerns after serving in combat situations within Iraq and Afghanistan. Yet, little is known about how they manage these conditions after discharge from the military. Goals of grounded theory researchers, generally, focus on developing a better theoretical understanding of phenomena for which little theory exists, or for which further work on existing theories is needed. The phenomenon of interest associated with this study was *combat Veterans' self-management of health concerns in the home from the perspectives of Veterans and their primary support persons.* The purpose of the study was to generate a well-integrated grounded theory regarding combat Veterans' self-management of health in the home, including an examination of the contributions to their care made by, and the perspective of, their primary support persons.

The original research question was "how do OIF/OEF/OND combat Veterans and their primary support persons manage Veterans' health conditions and health concerns at home?" The Revised Family Management Framework was used as a sensitizing framework for this study which suggested an initial approach to data collection and analysis that focused on Veterans' health perceptions, self-management behaviors, and health consequences in the context of social and healthcare resources. Veterans' perspectives on their health, derived during data collection, were interwoven with stories about their military lives and their civilian lives after discharge from the military; including their health experiences over time as they transitioned from military life to civilian life. Unique perceptions of Veterans and their primary support persons contributed to

study findings. Veterans' descriptions of their health were coded and categorized (Corbin & Strauss, 1990, p. 426) into four interrelated dimensions: physical, mental, relationship and career health. Veterans described changes in these four dimensions of health, beginning when they were still deployed. They also described their movement from military to civilian life as a transition. Therefore, the military to civilian life transition was identified as the core concept of the grounded theory. Health perceptions, self-management behaviors and consequences took place during this transition. The contextual influences on health changed as the Veteran moved from deployment to civilian life. The military to civilian life transition theory represents a set of concepts grounded in the data (Corbin & Strauss, 1990, p. 425). The military to civilian life transition theory provides a major contribution to Veterans' health literature. The study findings contribute to knowledge by providing Veterans' accounts of their health changes over time from military experiences in their youth as fresh recruits through their health experiences in civilian life and finally transition outcomes. Specifically, military to civilian life transition outcomes are identified as *continuing military mindfulness, engaging in civilian life and acclimating to civilian life*.

Contributions to Knowledge

This study was the first of its kind to use the Revised Family Management Framework as a sensitizing theoretical framework for a grounded theory study of health self-management among OIF/OEF/OND Veterans. Although there is a growing body of qualitative research focusing on Veterans, many of the qualitative studies use thematic analysis or descriptive methods rather than generating theory. Grounded theory studies regarding Veterans' health self-management remain sparse.

The following four sections introduce this study's substantial contributions to research literature: the military to civilian life transition theory, Veterans' self-management of health,

Veterans' inclination to stand alone regarding matters of health, and rural dwelling Veterans' access to healthcare resources.

The Military to Civilian Life Transition Theory

There were four major results of the grounded theory analysis: 1) military to civilian life transition theory 2) Veterans' self-management behaviors for treating, promoting and maintaining four dimensions of health that occurs within the military to civilian life transition 3) contextual influences are antecedent to Veterans' health perceptions, self-management behaviors, and health consequences. For example, Veterans are taught to remain physically fit during their military service. After discharge Veterans use a variety of self-management behaviors to maintain physical fitness and 4) an unexpected finding that Veterans and their support persons expressed was overall satisfaction of healthcare resources available to them in rural areas of Central California. This is contrary to what is found in the research literature regarding populations in rural areas. Literature describes healthcare discrepancy and access barriers in rural areas (Caldwell et al., 2016; Douthit, Kiv, Dwolatzky, & Biswas, 2015).

This is the first known grounded theory study to develop a theory about health changes that occur during the military to civilian life transition. The antecedent section of the theory begins is contextual influences upon Veterans' health perception during military life from the deployment environment through discharge experiences. After Veterans are discharged, contextual influences represent aspects of civilian life experiences as: resources, social network, healthcare systems and healthcare providers. Veterans use each other for references or networking for self-management of health ideas.

Consisting of Veterans' health perceptions, self-management behaviors and health consequences, the middle section of the military to civilian life transition model illustrates key interactive concepts which work together in a continuous reflective feedback loop: health perceptions influence Veterans' self-management behaviors which in turn influence Veterans'

health consequences. Conversely, Veterans' health consequences influence self-management behaviors which influence Veteran's health perceptions. As mentioned above, changes occur over time as the military to civilian life transition advances. Transition outcomes are represented in the model as: continuing military mindfulness, engaging in civilian life and acclimating to civilian life. The military to civilian life transition is a significant contribution Veterans health literature and a foundation for future research and clinical practice.

Self-Management Behaviors

Despite magnitude of health concerns regarding Veterans there is very little about Veterans self-management in the literature. Veterans perform a wide variety of self-management activities and behaviors that reflect what happened during their time in the military. Some behaviors address medical self-management and much of what Veterans' do for self-management behaviors is to keep fit. Self-management behaviors to keeping fit and be well is on the priority list for many Veterans. A great deal of the what the Veterans do is manage their health.

Self-management behaviors feedback loop. There is a great deal of activity demonstrated between the middle concepts of the military to civilian life transition model that drives a dynamic self-management feedback loop. This feedback loop adds knowledge for better understanding of how OIF/OEF/OND Veterans self-manage their health at home. This feedback loop represents three concepts stationed in the middle of the military to civilian life transition model which primarily represent Veterans' health improvements. Although Veterans mostly get healthier during military to civilian life transition, in some instances Veterans fall prey to unhealthy behaviors such as substance use where the feedback loop reflects negative health behaviors. As noted in Chapter 2, few studies have focused on self-management behaviors in

combat Veterans from recent war, and none, to my knowledge, have described the interactions between different domains of health.

Veterans' inclination to self-manage their own matters of health. During data collection, Veterans could readily name a primary support person, however, not all Veterans interviewed lived with their primary support person. I expected Veterans to rely more heavily on their support person than was reported by most of the Veterans. Veterans who lived with their primary support person also did not depend on their support persons to the degree originally expected. Similarly, Veterans reported that they often ignored their own medical needs with an inwardly directed philosophy likely learned in the military to "suck it up", "just keep the mission in sight," "don't be weak," etc. Veterans who appeared to require help managing their health minimized their requests for help from their support person. Even Veterans who needed the most help (after surgery, etc.) did all they could on their own and seemed to avoid asking for their support person's help. In some instances, the Veterans seemed to deny acknowledging their need for help from their support person or preferred to shield their support person from having to provide them help. This finding has implications for the use of family theories, such as the RFMF, for this population. Further research in this area is needed.

Veterans living in rural areas. District 14 of California's American Legion organization is comprises Fresno, Kings and Madera counties. These three counties are primarily agriculturally based economies and also encompass the Lemoore Naval Air Station. The area produces a large amount of fruits, stone fruits, vegetables, dairy, cotton, grain, etc. Ten American Legion posts are scattered over 9476 square miles located within Central California. These posts are where I began recruiting combat Veterans and their support persons for this study.

Healthcare resources. Veterans who lived in rural counties within Central California indicated that they had sufficient healthcare resources available for themselves and their families.

Most were aware of the Veterans' Affairs (VA) medical center location and three alternate VA community-based outpatient clinics (CBOC) that are available throughout the more distant rural areas. Other healthcare resources are available for Veterans and their families such as Department of Defense (DoD) Tri-care, private insurance and county health insurance.

Contrary to my expectation, when asked, all the Veterans and their support persons stated that they had sufficient healthcare resources available and they did not need any other choices. California's Central Valley may be a unique environment for Veterans. The high number of Veterans in the Central Valley, as noted above, may mean that there is more awareness of the services needed by this sizable proportion of the population. Research is needed on the experiences of Veterans in other rural environments.

However, a number of Veterans mentioned that they would have liked to be contacted by the VA system or the DoD system to be checked on by a healthcare professional who would be available to provide resources and education regarding the Veterans' needs early in the military to civilian life transition.

Study supports findings in the literature

Runge, Waller, MacKenzie and McGuire (2014) conducted a descriptive study using open-ended questions to interview military spouses (*n* =1,332). The military spouses were asked about their experiences after their Veterans returned home from war. The research team "uncovered" a number of concepts that reflect the "impact of military deployment" on Veterans' spouses; their findings included responses from military spouses on the following topics: "demographics; the military member's deployments; physical and mental health; family." Runge et al. (2014) used questionnaires and open-ended questions about "'spouses' health and well-being'" since their Veterans returned from deployment. The open-ended questions brought to light the following topics: "'inadequate support', 'deployment impacts', 'suggestions for supporting agencies', 'appraisal of experiences' and 'coping strategies.'" My study was designed

to collect both Veterans' and their support persons' perceptions for theory generation, as opposed to topics or themes.

Another qualitative research team, Ahern et al. (2015), used a semi-structured interview technique and then applied an inductive thematic analysis approach to data. Ahern et al. (2015) "aimed at characterizing key aspects of the transition process by identifying topics that arose repeatedly and considering how those topics were explained by veterans" (i.e., what language and metaphors were used). The Ahern et al. (2015) research team found three overarching themes in their analysis: (1) military as family; (2) normal is alien and (3) searching for a new normal. In comparison, my study used grounded theory methods while the other two above mentioned studies used "thematic data analysis." The research problem for this study was "little is known about how Veterans manage their health after discharge from the military" and the research question was "how do OIF/OEF/OND combat Veterans and their primary support persons manage Veterans' health conditions and health concerns at home?" This grounded theory study called for data collection using the FMSF theoretical model as a sensitizing framework and data analysis using self-management of health behavioral lens. The study progressed using the constant comparative method for data collection and data analysis (Corbin & Strauss, 2008, p. 73-77; Creswell, 2013, p. 229-230). The Ahern et al. (2015) research team avoided aspects of Veterans' health, while my study specifically targeted Veterans' health aspects during interviews. Another difference between the Ahern et al. study and this study is that Ahern et al. (2015) used a thematic inductive analysis and my study used classic grounded theory analysis (Corbin & Strauss, 2009, p. 73-74, 77) which rendered the *military to civilian life transition* theory.

A recent review by Mobbs and Bonino (2018) focused on Veterans with PTSD, "transition stress" and how these factors affect Veterans when they return from deployment to civilian life. The article focuses on Veterans reaction to "transition stress" during the identified transition period. The researchers stated there is a lack of theoretical

framework and evidence needed to better understand "the cognitive, emotional, behavioral, or psychological impacts of the soldier-to-civilian transitioned theoretical framework" that would represent stress experienced by Veterans when they leave military life in order to "adjust to civilian life." Consequently, Mobbs and Bonanno (2018) suggest that a theoretical framework is needed to move forward the state of the science of Veterans' transition experiences. The military to civilian life transition theory seems to partially meet the gap in the literature that Mobbs and Bonanno (2018) identified.

Implications for future research

This study was not designed to find or understand the military to civilian life transition theory. The transition experience emerged from the data. Therefore, an implication for future research would be to design a study that would work to explore Veterans' experiences in the military to civilian life transition and possible alternate or additional military to civilian life transition outcomes compared to the current study. It would be a logical next step to design a study for healthcare providers to best understand and treat this population of Veterans as they experience the *military to civilian life transition*.

Implication for Clinical Practice

Study findings informed and clarified changes needed for health professions' care guidelines for Veterans and their support persons. When Veterans travel home from deployment, they feel pressure to quickly get through the discharge processes and get home to their families and friends. Veterans described the current discharge system as including a medical and mental health assessment on the way home. Veterans were anxious to get home, and some disregarded the importance of the health assessments. Therefore, they rushed through as quickly as possible. Some Veterans explained that they wanted to keep their medical problems and mental health

symptoms private. Many Veterans didn't feel free to disclose all of the medical information on the way back from the war theater.

One recommendation for meeting the needs of the Veterans is for the military and the VA system to work together to provide veterans with a multi-phase assessment early in their transition. The first phase of the assessments would occur as they do now, on the way back from deployment. The second phase of medical and mental health assessment could be an in-depth assessment performed 30 days after the Veteran returned home; that way Veterans would be in a better mindset to understand their own medical needs and disclose their medical and mental health symptoms to their healthcare provider. The third phase of assessments would be scheduled for six months later for another in-depth medical and mental health assessment. This multi-phase assessment schedule would catch more medical and mental health issues earlier so healthcare providers could do a better job helping Veterans when they come home from theater of war. The transition experience described by Veterans in this study suggests that Veterans may be more inclined to address their health later in the transition, rather than at the time of discharge or early in their transition at home.

Another clinical practice suggestion is for the clinicians to work with Veterans' support persons. This would encourage the support persons to learn all they can about the Veterans' mental health or medical condition so they could apply best practices and evidence-based practice to collaborate with Veterans support persons. Thus, the clinician can better meet the needs of the Veteran.

Potential Study Limitations

Although the study has diversity within participants' ethnicity and gender, the study participants had a great deal in common. They are primarily from relatively small towns in a rural, agriculturally based area. Thus, combat Veterans from large cities may bring a different

perspective or study participants could have a different viewpoint of their health or health access from those in the smaller rural area.

As primary investigator my viewpoint is a possible source of bias due to life and career experiences. I have many positive attitudes and admiration toward Veterans and primary support persons. I have worked around combat Veterans for years and have had many conversations with Veterans at my workplace. Every precaution has been taken so I can remain an objective researcher. For example, data analysis included review by two nursing professors at different times. According to Creswell (2009) "researchers recognize that their own background shapes their interpretation, and they 'position themselves' in the research to acknowledge how their interpretation flows from their own personal, cultural, and historical experiences."

Conclusion

The core concept of this research study is *Military to Civilian Life Transition* that Veterans experience when they come back from deployment. The findings from this research study contributed to the knowledge base for researchers, social workers and other practitioners who are interested in helping Veterans to successfully return to civilian life from military life.

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Appendix A
Permission Letter for Study from District Commander

The American Legion
Department of California
Thundering 14th District

June 30, 2014

Narda A. Ligotti
PhD Student
Univ. of Nebraska Medical Center
College of Nursing

Dear Mrs. Ligotti:

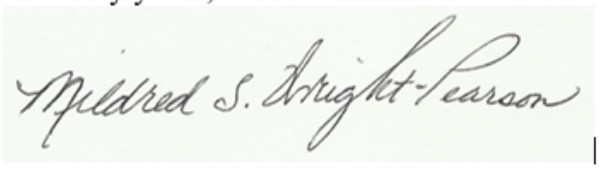
It is with great pleasure to inform you that your request to give presentations to the members of this American Legion Organization is granted. As a former Registered Nurse, and a veteran, I know the difficulties you face in obtaining permission to perform studies of the type you are attempting. I also know that studies of this type are essential to the well-being of veterans.

This organization is one that supports the interests of veterans, their health, and their families. It is made up of veterans from across the spectrum of wars and conflicts. I am quite sure that you will be able to obtain the information from and cooperation of our veteran population.

Unfortunately, you will only be granted a 5-10-minute presentation timeline due to the complexity of our meetings and the material we must cover in the time allotted for our meetings.

I wish you good luck in the completion of your study and if there is anything, I can do to assist you in the future, please do not hesitate to ask.

Sincerely yours,



Mildred S. Wright-Pearson
District Commander

Appendix B
Study overview for American Legion meeting handout

Dear Veterans:

Thank you for inviting me to present my study project. I am a PhD student at Univ. of Nebraska Medical Center, College of Nursing. I also work as an RN at the VA hospital in Fresno. I come from a military family; my father, uncles, father in law and grandfather all served in wars past and my nephew is currently serving in Afghanistan as a truck mechanic.

My project is to conduct a research study that interviews Veterans from recent wars (from 2001 and forward). I am interested to ask Veterans and their main support persons for their viewpoint on health.

The study will not specify anyone's military service history, name, rank or serial number! You will be anonymous and your input is valued.

I would like to contact you to make a plan to present more information about how to be interviewed for the study. Please sign the clipboards that are being passed around if you are interested in more information.

My contact information:

Narda A. Ligotti, RN MSN

Please email me at nligotti@unmc.edu

Or call or text my cell phone: (559) 709-9005

Appendix C
Sign up paper for Interested Veterans

Sign for more information about being a study participant. Study title is "Care of Combat Veterans in the Home: A Grounded Theory Study of Self-Management and Family Caregiving"
Contact information for study manager and researcher: Narda A. Ligotti, MSN, RN, 559-709-9005, email: naligotti@gmail.com

Date of presentation _____Location of American Legion Meeting:

PLEASE PRINT CLEARLY				
Interested Party's Name	Email	Phone number	Best time 2 times of day try calling	