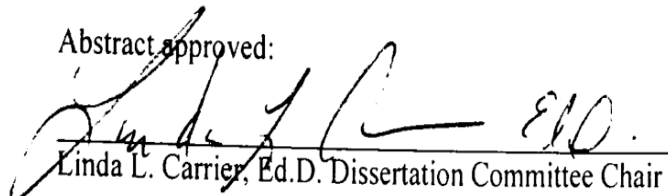


AN ABSTRACT OF THE DISSERTATION OF
David Michael Ferruolo
for the degree of Doctor of Education in Learning, Leadership and Community
Presented on August 29, 2018.

Title: *Veteran Focused Equine Facilitated Mental Health*

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Linda L. Carrier, Ed.D. Dissertation Committee Chair

Abstract

This dissertation reports on explanatory sequential mixed methods study that sought to understand the effectiveness of a veteran focused equine facilitated mental health (VF-EFMH) program. Forty-nine exit surveys from one specific VF-EFMH program that was offered ten separate times between 2013 and 2017 were analyzed using SPSS software. Results from this analysis suggest that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Interviews were then conducted with six former participants of the program offerings. Results from analyses of interviews support the quantitative results that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Further analysis revealed the themes of social connection, internal processing, and the horse are vital to the success of this type of programming.

Veteran Focused Equine Facilitated Mental Health

By

David Michael Ferruolo

A DISSERTATION

Submitted to

Plymouth State University

In partial fulfillment of
the requirement for the degree of

Doctor of Education

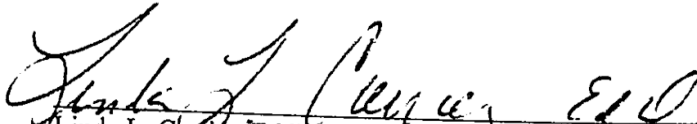
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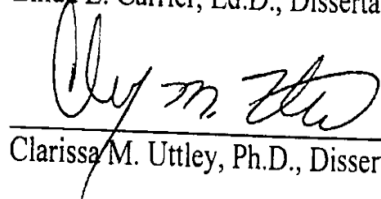
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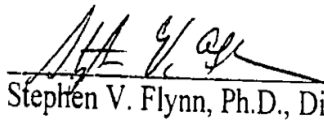
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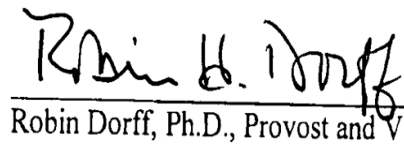
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Acknowledgements

Eleven years ago I took a leap of faith to change my life. At that time I was running a successful business that I started in the early 1990s. “You are crazy,” is what I heard most when I told people my plan to sell my business and go to college. And once I started, I never quit. I met a lot of amazing people on this journey. So many helped me to get here, starting in undergrad with that one professor that pulled my academic writing talents out of me, offered me the opportunity to publish and told me that I’d have a doctorate one day. She was right! I had amazing professors at the University of New Hampshire where I received a Masters degree in clinical social work. Those professors over-prepared me for clinical work and my further academic pursuits. I am grateful for Plymouth State University for believing in my research and giving me the opportunity to pursue my passions in my own way. I am appreciative of the doctorate of education faculty for the support and lessons learned. I am thankful and happy that my dissertation committee believed in me enough to be my committee members. And I am exceedingly grateful for the tireless efforts of my committee chair and for putting up with my moods and endless texting.

This dissertation marks the end of a decade of struggle. Although one has to do the work alone, the support needed is tremendous. I received amazing support on this journey; too many people to mention. But first, I have to say that I did not take this journey alone. My son, Nicholas, had to endure this journey with me. And I do say, endure. I am sure the past eleven years were not always cream and cookies for him, as I spent every waking hour either at work or working on assignments. At one point during this doctorate journey, I reflected on how much suffering I might be creating in the

world, not just to others, but for myself, because of my determination to climb the ladder of *success* and to “change my life.” Being a single father, working full-time, and being in college full-time is quite overwhelming. I know I was not always nice to be around. And Nicholas always got the short end of the stick, as his father worked endlessly. I hope that I imparted some wisdom upon him as he watched me from the shadows. I hope he learned that working hard pays off. But I also hope he learned that life is more than working and striving endlessly. I hope he learned that life is more about living life, being with the people that mean the most to you, creating memories and enjoying the experiences of life. I hope he learned the importance of a good education and what it can get you. I have changed my life and am receiving tremendous value and return from my academic pursuits. BUT, I hope he learns through my misgivings and mistakes, through my regrets, that balance is key, and that enjoyment of life is the best way to live life. I hope I provided good examples of what to do, but also what not to do! It is the latter, I think, that is most important!

We were lucky. I was lucky that I had so many people that stepped up to help me guide my developing son while I was otherwise always busy and away. I am grateful for my family for their support of Nicholas while I worked crazy endless hours. I was amazed at how many friends were willing to care for Nicholas and always be there to help me when I needed. You all know who you are, and I thank you from the bottom of my heart for all you have done for both Nicholas and I. There is absolutely no way I would have been able to keep it together for the past eleven years without all of my family and friends, always there, always willing to help. There is no way I can ever repay any of them, no words that can appropriately express my gratitude. I will always be

humbled when I think of this time and the people who love and care for Nicholas and me. And Nicholas. I cannot give him back the time lost, the experiences missed, or the memories that will never be. I'm sorry for that. For both of us... But I hope that also I have shown him to live for today and endeavor to create a better tomorrow.

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Abstract

This dissertation reports on explanatory sequential mixed methods study that sought to understand the effectiveness of a veteran focused equine facilitated mental health (VF-EFMH) program. Forty-nine exit surveys from one specific VF-EFMH program that was offered ten separate times between 2013 and 2017 were analyzed using SPSS software. Results from this analysis suggest that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Interviews were then conducted with six former participants of the program offerings. Results from analyses of interviews support the quantitative results that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Further analysis revealed the themes of social connection, internal processing, and the horse are vital to the success of this type of programming.

Keywords: veteran, equine, mental health, reintegration, treatment

Chapter One

Introduction

My name is Dave Ferruolo. I am a former United States Navy SEAL who has experienced many of the reintegration issues that veterans face today. It was a difficult path, and the biggest catalyst for pulling me out of my *stuff* was working with horses. Since the mid-1990s I have been practicing natural horsemanship personally and professionally, and in 2013 as part of earning my Masters Degree in Clinical Social Work at the University of New Hampshire, I started to study Equine Facilitated Mental Health (EFMH) and developed a Veteran Focused Equine Facilitated Mental Health (VF-EFMH) program. It was at that time that I conducted a pilot study of VF-EFMH with the veteran population by collecting and analyzing exit survey data and conducting interviews with participants (Ferruolo, 2016; Ferruolo & Sollars, 2013). Since that pilot program in April of 2013, I have continued to deliver a consistent VF-EFMH program and continued to collect exit survey data. This mixed-methods dissertation study examines these collected exit surveys from the past five years and follows up with interviews of prior participants. I have termed this specifically designed and specialized veteran focused therapeutic equine program as Veteran Focused Equine Facilitated Mental Health and throughout this dissertation, I will also be using the term, Equine Facilitated Mental Health; however, it is important to know that in the literature EFMH is also termed: Equine Assisted Mental Health (EAMH), Equine Assisted Social Work (EASW), Equine Assisted Therapy (EAT), and Equine Assisted Psychotherapy (EAP). Equine Facilitated Mental Health (EFMH), and Veteran Focused Equine Facilitated Mental Health (VF-EFMH) will be used hereafter for all such references.

This chapter will start with the contextual, historical context of my personal journey of reintegration to civilian society. Within this contextual synopsis, I will weave in relevant literature that connects and supports my personal story to that of many veterans in the United States. I will then discuss the 2013 pilot VF-EFMH program (Ferruolo, 2016) that I developed and implemented and provide the theoretical underpinnings of this studied VF-EFMH program. This chapter will conclude with a summary of this dissertation study, including the purpose, rationale, the methods, and an overview of the findings. Chapter two of this dissertation will be a comprehensive literature review highlighting veterans' issues, treatments and EFMH literature. Chapter three will provide the methods I used for this study. Comprehensive findings and connections back to literature and the VF-EFMH program will be found in chapter four. Chapter five is written as a journal article for submission to *Social Work*, as encouraged by my Plymouth State University dissertation chair.

Contextual Literature Review: A Sailor's Journey Navigating Reintegration

When I separated from the military, I left the community of United States Navy SEALs feeling like I was on top of the world. When I entered civilian life, that all changed rather quickly. One would think that after being an elite Navy SEAL I would have no issues rejoining society. That was not the case at all. I struggled with the same reintegration issues as any other veteran might and often found myself very frustrated as I tried to fit in and navigate the civilian world.

Elnitsky, Blevins, Fisher, and Magruder (2017) and Freytes, LeLaurin, Zickmund, Resende, and Uphold (2017) tell us that up to 50% of returning veterans coming home from deployments will suffer with reintegration issues. Many veterans struggle with

balancing the dichotomous mind-sets of military and civilian cultures (Elnitsky et al., 2017; McCormack & Ell, 2017; Orazem et al., 2017). I know all too well the inability to readjust back to civilian life. Relationships were difficult, and I preferred to be alone instead of in the company of a potential partner. There is research (Monson, Taft, & Fredman, 2009; Price & Stevens, 2017) that suggests veterans have a lot of difficulties with relationships and divorce rates for veterans are higher than the civilian cohort (Pollard, Karney, & Loughran, 2012). In the workplace, I often struggled with my perceptions of civilian work ethics and what I thought were unreasonable rules and policies. Trusting and counting on someone was near impossible. Working side-by-side with people was problematic. The research (McCormack & Ell, 2017; Orazem et al., 2017) suggests that I was not alone, with many veterans experiencing hardships in occupational settings. For a long time after I separated from service, I continued to think and act like I was still in the military and part of my SEAL team. My ingrained warrior mind-set (Orazem et al., 2017) often clashed in negative ways with civilian people and systems I came in contact, causing me to be frustrated, causing others to not want to work with me, and leading me to negative or unwanted outcomes. This identity crisis and clashing of military and civilian identities can lead to internal questioning of self-worth and decompensating psychological states (Orazem et al., 2017). Reintegration issues can significantly increase psychological distress and lead to marked impairment in social and occupational functioning (Elnitsky et al., 2017; Freytes et al., 2017; McCormack & Ell, 2017).

Personally, I rarely admitted my inner psychological turmoil to others or myself. I suffered in silence. I did not meet criteria for posttraumatic stress disorder (PTSD);

however, looking back, I did experience depression and anxiety. Depression and anxiety are the two most common diagnoses in the Veterans Administration (VA) system (Espejo et al., 2016; Karstoft, Nielsen, & Nielsen, 2017). Near 20% of all VA diagnosis of veterans include depression (Karstoft et al., 2017) and almost 75% of veterans have symptoms of anxiety (Espejo et al., 2016). Posttraumatic stress disorder is also a major concern for returning veterans with 5.5% of returning military personnel meeting criteria and up to 45% of combat unit veterans meeting the criteria (Hoge et al., 2014). Many combat veterans will incur a moral injury, where the experiences of war that they took part in or witnessed are in conflict with and causes questioning of personal morals and values (Litz et al., 2009). Although moral injury is not a diagnosable mental disorder, inner moral and ethical dissonance can lead to deteriorating psychological health (Litz et al., 2009; McCormack & Ell, 2017).

Reintegrating back into society took me a long time and like many veterans out there I did not seek guidance, nor did I share my inner struggles with anyone. Veterans often struggle for years, with an average of ten years passing before getting any treatment (Sayer et al., 2009). Veterans struggle with unemployment (Loughran, 2014), as I did for years. Financial issues forced me to live in a tent for a while and to walk back and forth to work for an entire winter. Financial issues significantly increase likelihood of homelessness and veterans are disproportionately homeless compared to civilians (Elbogen, Johnson, Wagner, Newton, & Beckham, 2012; Smelson, 2017). It was a difficult road and like many veterans, the stigma of being considered a failure and seen as weak kept me silent about my situation (Straits-Troster et al., 2011; P. J. Williams, 2012). Although the going was tough for me, I did not suffer as much as some of my brethren. I

did not suffer with PTSD or moral injury, nor did I succumb to substances, whereas a large percentage of veterans have substance related issues; higher percentages than civilians (“National Survey on Drug Use and Health,” 2015). I also continued to have hope and lived my life the best I could. Many fellow veterans gave up, gave in, and committed suicide. It is alarming that about 5000 veterans take their life each year (Kaplan, McFarland, Huguet, & Valenstein, 2012; U.S. Department of Veterans Affairs Office of Mental health and Suicide Prevention, 2018).

I was lucky enough to escape the grasp of many of the pitfalls veterans face, and my military mind-set kept me moving forward despite my psychological disposition. I did realize that the skill set and mind-set I received in the military was valuable and I used it to my advantage. I was able to transfer my military taught skill of scuba diving into a civilian occupation, and the never quit, never fail attitude instilled within me by military training kept me going. Daywalt (2013) tells us that the military teaches valuable skills that are sought out in the civilian job market and that veterans typically learn new job skills quickly, making veterans valuable. Skill sets do not hinder veterans; but they can be limited by psychological disposition and mind-set. Getting help is the key, and there are varying options and forms of help for veterans.

There are many evidenced-based treatments for veterans, including cognitive behavioral therapy (Beck & Beck, 2011), mindfulness based therapies (Germer, Siegel, & Fulton, 2013), prolonged exposure therapy (Peterson, Foa, & Riggs, 2011); cognitive processing therapy (Williams, Galovski, Kattar, & Resick, 2011); eye movement desensitization and reprocessing (Russell, Lipke, & Figley, 2011); virtual reality exposure therapy (Reger & Holloway, 2011); psychosocial rehabilitation (Penk, Little, &

Ainspan, 2011). However, there are limitations (i.g. Moore & Penk, 2011) to these treatments and a lot of veterans are actively seeking alternatives (Phillips & Wang, 2014). Equine facilitated mental health is a promising alternative treatment modality for veterans (Craven, 2013; Ferruolo, 2016; Mayfield, 2016).

I stumbled upon the therapeutic effects of horses by accident. It was not my intention to learn natural horsemanship or to get involved with working with horses as an adjunct to psychotherapy. Nor was it ever my intention to become a psychotherapist, for that matter. I had ridden for several years prior to going into the military and soon after I separated, I leased a rather high-strung Arabian gelding. Being with this horse (and the others that followed) was a way for me to disappear, to isolate myself, but at the same time, I felt calm and at peace when at the barn. Isolation is a coping mechanism for feelings of not belonging and not fitting in (McCormack & Ell, 2017). It was quite by accident that I read an article about the benefits of natural horsemanship. I then took a one-day workshop and watched natural horsemanship clinicians work with anxious horses with miraculous outcomes. This looked like it was good for the horse, but I never could imagine the positive effects working with horses would have on me. Working with horses has to be good for and benefit both the human and the horse (Parelli, 2004). Working with the horses and other seasoned natural horseman become my alternative to therapy. Working with horses seemed to dramatically help reduce my symptoms of depression and anxiety, and helped to raise my self-confidence, self-esteem, and overall wellbeing. This effect is supported by EFMH research (Ferruolo, 2016; Holmes, Goodwin, Redhead, & Goymour, 2012; Klontz, Bivens, Leinart, & Klontz, 2007; Schultz, Remick-Barlow, & Robbins, 2007; Smith-Osborne, 2012).

Years of learning about horse psychology (Knapp, 2013; Parelli, 2004) and learning how to communicate with horses (Parelli, 2004) subtly taught me important relational skills that began to transfer to other areas of my life. Helping horses to trust, taught me to trust. Teaching horses to effectively communicate with a human, taught me how to communicate better with humans. Facilitating calmness in the training arena taught me how to be more mindful. As my views on my former military career and myself started to transform from negative to positive, I started to see the hidden value in myself and in the training I had received in the Navy. The military does an exceptional job of instilling pride and confidence and teaching a focused and deep work ethic. I took these skills and my inner attributes and was able to excel in business and in college. Those skills, that mind-set, those ethics of work along with having horses in my life, led me to this dissertation study.

I take tremendous pride in my graduate studies and those morals and ethics transferred into the co-creation of this VF-EFMH program for veterans (Ferruolo, 2016; Ferruolo & Sollars, 2013). My innate passion and inner drive for continued excellence and constant improvement follows me as my academic journey comes to fruition with this dissertation study. I remain passionate and focused on helping both veterans and horses, and I believe wholeheartedly that for a segment of veterans seeking treatment for depression, anxiety, and reintegration issues, that a VF-EFMH program will be effective. This is my bias, and I will own it and make it perfectly, visibly transparent. This passion may seem like a deep personal bias and a confounding factor to this study, however, the drive, the passion, the determination for betterment and excellence, and the deeply

instilled morals and values that constitute the person I am will hopefully provide an effective foundation to the credibility and legitimacy of this dissertation.

Pilot Study: Context and Theoretical Underpinnings

In April of 2013, I was the primary investigator, co-developer, and co-facilitator of a two-day, fourteen-hour pilot VF-EFMH retreat for veterans suffering with post-combat related psychological issues (Ferruolo & Sollars, 2013; Ferruolo, 2016). This pilot study provides the backdrop for this dissertation study.

Context. Ironstone Farm is an 18-acre working horse farm located in Andover, Massachusetts. Their mission, as stated on their website, is to provide therapeutic, educational and recreational opportunities using horses and the working farm environment to help people achieve optimum quality of life (ironstonefarm.org). They accomplish this mission through two primary programs, Challenge Unlimited and Ironstone Therapy. According to Ironstone Farm's Executive Director Deedee O'Brien (personal communication, April 7, 2013), the overall goal of both programs is to employ horses in a working farm environment to benefit clients with emotional and psychological issues and cognitive and physical disabilities, through equine facilitated mental health, therapeutic riding, physical and occupational therapies, and recreational riding activities. O'Brien (personal communication, April 7, 2013) explains that the farm is governed by a 16-person board of directors and employs over 20 professionally licensed instructors and therapists and manages about 200 volunteers. Ironstone collaborates with 35 different organizations and serves 450 to 500 adults and children weekly from more than 90 cities and towns throughout Massachusetts and New Hampshire.

Deedee O'Brien approached Pam McPhee, MSW at the University of New

Hampshire (UNH), to expand their programs to work with veterans. Pam McPhee is the director of the Browne Center and faculty in the kinesiology department at UNH, and she and her colleague Dr. Paul Smith (deceased) had been conducting equine facilitated learning programs for cancer survivors. McPhee and Smith were leading experts in EFMH. Dr. Paul Smith was a program director at Prescott College in Prescott Arizona, where he developed and coordinated an equine assisted learning and psychotherapy clinical mental health counseling masters degree program. Paul was my friend and my mentor. He passed away in 2016 and is greatly missed by family, friends, and the EFMH community. At the time, I was enrolled at UNH in a clinical social work masters degree program and independently studying veteran issues and EFMH. Through a self-designed independent research course, I developed the curriculum for the VF-EFMH pilot program at Ironstone Farm and co-facilitated the program with Pam and Paul. The pilot program was a two-day retreat, which focused on reintegration issues and depressive and anxiety disorders (Ferruolo, 2016; Ferruolo & Sollars, 2013). Ten veterans living in a nearby Veterans Administration (VA) domiciliary volunteered to take part in the retreat. Three VA clinicians were on site and also joined in the activities and discussions. At the conclusion of the retreat, a survey was administered to the participants. Eight questionnaires were collected and the data suggested that Paul, Pam, and myself had successfully facilitated a VF-EFMH model with potential for being an effective treatment modality for veterans. With the success of the pilot study, the decision was made to offer the equine program on a regular bases. Over the next two years, I facilitated delivery of the VF-EFMH program at Ironstone Farm and exit surveys were collected.

In 2014, I made the transition from Ironstone to working with a non-profit out of

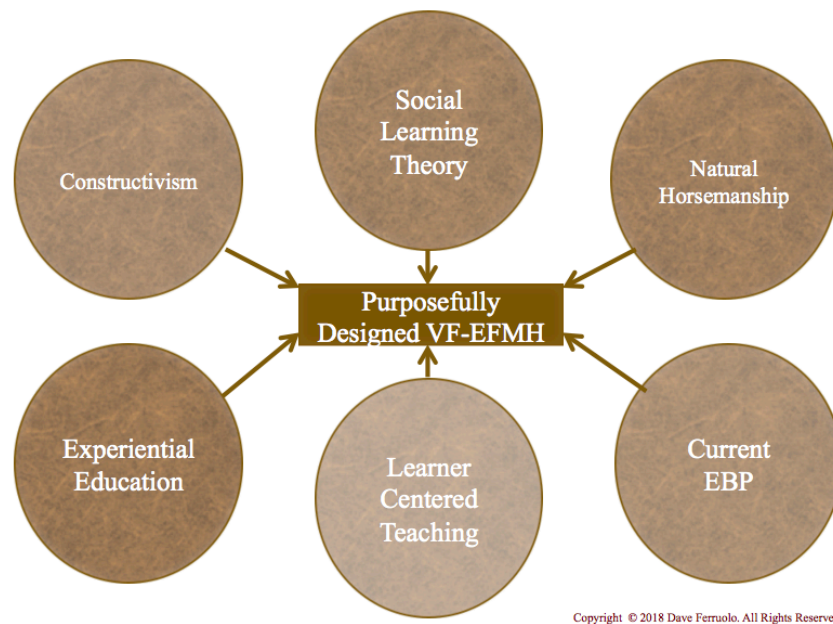
Gilford, New Hampshire called The Patriot Resilient Leader Institute (PRLI). The mission of PRLI is to help veterans suffering with psychological and reintegration issues to “bounce back in mind, body, and spirit” (prli.us) by offering varying weeklong *Camp Resilience* retreats that combine experiential activities with life-skills and therapeutic workshops. I was asked to join the board of directors and to bring VF-EFMH to PRLI. I ran the first PRLI Camp Resilience VF-EFMH programs in 2014 at a private farm in Gilford, NH, then in the spring of 2015, I moved delivery to Live and Let Live Farm (LLLLF) in Chichester, NH. Live and Let Live Farm is a “Non-profit, volunteer rehabilitation, rescue and sanctuary for animals” (liveandletlivefarm.org). Teresa Paradis, owner of LLLF, was happy to accommodate the VF-EFMH program as she was looking for ways to expand opportunities to veterans. Live and Let Live Farm is 70 acres and at any given time can have 60 or more rescued horses living on the property. Early in 2018, I resigned from PRLI and partnered with Live and Let Live Farm and several other entities to create the Human Horse Initiative (HHI). The HHI is “is a collaborative effort to create a sustainable veteran focused equine facilitated psychotherapy and learning center for under-served, oppressed, and marginalized veterans and unwanted, discarded rescued horses” (humanhorseinitiative.com).

Theoretical underpinnings. The foundation of the purposely designed VF-EFMH program (Figure 1) is based in the following theoretical frameworks: outdoor education research (Brown, 2010; Dewey, 1938; Gillis & Gass, 2004; Sibthorp, Furman, Paisley, Gookin, & Schumann, 2011; Kolb, 1984; Priest & Gass, 1993); existing research on EFMH (Kakacek, 2007; Klontz et al., 2007; Knapp, 2013; Meinersmann, Bradberry, & Roberts, 2008; P. N. Schultz et al., 2007; Smith, 2012); current evidenced-based

treatments for depression, anxiety, and PTSD, while also considering reintegration issues and moral injury, using cognitive and behavioral therapy approaches and mindfulness interventions, within a person-in-environment, person centered, strengths perspective (Beck & Beck, 2011; Corcoran, 2006; Dillon, 2003; Germer et al., 2013; Maguire, 2002; Shulman, 2012; Van Wormer & Besthorn, 2011; Walsh, 1999; Wilber, 2000); social constructivism, and learning theories (Bandura, 1977; Ferrari, Robinson, & Yasnitsky, 2010; Grusec, 1992; John-Stern & Mahn, 1996; Van Wormer, 2011).

Figure 1:

Theoretical Underpinnings



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It is important to note that the foundation of this particular VF-EFMH program is rooted solidly in relational building. Each activity is carefully designed with the notion of relational skills and development of relationship between human and horses and human and human. Creating community and fostering friendships is the primary goal. Close social connections and a network of trusted individuals are significant insulators to psychological issues (Barlow & Durand, 2009; Ciccarelli & White, 2015).

Through the pilot study (Ferruolo, 2016), I identified that VF-EFMH is a facilitative construct in which the clinician works with a horse to encourage and allow the emergence of spontaneous therapeutic instances through use of transference, metaphor, analogy, and anthropomorphization. When these spontaneous therapeutic instances occur, it is the responsibility of the clinician to recognize the opportunity and to employ an evidenced-based treatment within the VF-EFMH construct. Because by nature EFMH is a dynamic and spontaneous modality, the clinician must be creative, dynamic, spontaneous, and also be knowledgeable of a diverse and eclectic mix of evidenced-based treatments. As Moore and Penk state (2011) it is important for clinicians working with veterans to be well versed and skilled at working with veterans to ensure successful treatment outcomes.

The design of the VF-EFMH program was carefully constructed in flow and process to build community and connection; create a mindful, peaceful environment; to allow for internal processing; to allow for the process of change to emerge individually and within the group; to address depression, anxiety, PTSD with consideration for reintegration issues and moral injuries. The VF-EFMH program is broken up into several parts: guided experiential equine activities, personal reflection, and group processing. Experiential equine activities are the core component of the program. Through these activities, the horse is used as a metaphor for problems and for life and also as a mirror to reflect back onto the participant his or her way of being and interacting in the world (Ferruolo & Sollars, 2013). Each experiential activity is through participant willingness and choice and is framed in such a way as to facilitate the opportunity to learn and grow. Participants are encouraged to be curious about the activities, the horse, the environment,

themselves, and others; and, to be willing to explore that curiosity to see what might evolve and unfold. Exploration, experimentation, and creativity are supported. Ample reflection time allows for internal processing, and group processing is done to reinforce the lessons learned and to discuss the emergent themes.

Connecting process to theory. An example of an experiential activity and how it connects to theory and evidenced based practice is when a participant is asked to lead a horse from one location to another, point A to point B. Most participants in the VF-EFMH programs have never been close to a horse before, never mind attempt to lead one. In this instance, participants can become perplexed and try to rely on those skills and strategies that typically work with within a person-to-person interaction.

As a means of further developing understanding of the experience the following scenario, a compilation based upon typical experiences with the program, is provided:

A veteran attempts to move the horse from one point to another identified point, and it does not comply with what the veteran is attempting to do. At this point the veteran tries varying strategies, but nothing works. The veteran pulls and tugs on the lead rope; the veteran stomps his foot on the ground; the veteran commands the horse to move with military like affect. When this all fails, the veteran gets to the place of unknowing. A core consideration in adventure based learning is that a participant is placed in an environment where existing knowledge and coping skills no longer work forcing him to step back, reflect and learn alternative ways (Dewey, 1938; Kolb, 1984; Priest & Gass, 1993).

In the scenario provided, I would use a person-centered, strengths based approach (Lietz, 2007; Shulman, 2012) to encourage the participant and applaud his attempts. I would then use the constructivist notion of a more knowledgeable other (Papalia, Olds,

Feldman, & Gross, 2001) to encourage the participant and the group to join in the brainstorming of options. Sharing and helping among participants of a group creates bonding and stronger group cohesion (Shulman, 2012). The social learning theory notion of zone of proximal development (Papalia et al., 2001) is also considered during these experiential activities. Experiential activities are designed to be challenging and to push participants beyond their comfort zone, but being mindful of not creating a situation that produces anxiety to the extent of causing frustration or hopelessness. When doing this, it is important to be aware of where participants and the horses are functioning in order to keep them within the zone of proximal development. This requires the skill and knowledge set to manage both human and horse thresholds appropriately, promoting interest in a compelling way without pushing horse or human out of the learning zone and into the fight, flight, or freeze zone. Experiential activities must also facilitate learning by focusing on the process and not the goal (Kolb, 1984). The underlying theme for all experiential VF-EFMH activities is to create partnership, with creating and strengthening relationship being the primary process, and ultimately the hidden agenda behind the overt set goal of moving the horse from point A to point B. Discussions among the group with input from myself would guide the participant back to the process of relationship, as creating and maintaining relationship will often lead to partnership between human and horse, and eventually completion of the goal. As a reminder, activities must always be good for both horses and humans, so taking the time it takes to foster relationship and partner with the horse leads to meeting goals in less time (Knapp, 2013; Parelli, 2004).

These veteran focused equine facilitated mental health experiential human-horse activities are further designed to create therapeutic instances; or, more precisely that by

the nature of the human horse interaction, therapeutic instances naturally emerge. These therapeutic instances act as opportunities to challenge negative thinking patterns and internal schema. In the example of leading a horse from point A to point B, a participant might make comments about his perception of the horse. A participant may state that *the horse is stubborn, the horse is ignoring him* or that *the horse doesn't like him*. These instances of anthropomorphization, where humans will perceive human qualities in a nonhuman species, provide the opportunity to employ an evidence-based treatment to address those cognitive distortions. The participant might generalize, focus on negatives, and catastrophize by commenting that she is never good at anything, so this would not be any different, that she is a failure. Participants often transfer their inner thinking and feelings onto the horse. Transference might sound like: *that horse is nervous because it does not like the loud truck noises going by and that is why it she is standing over there in the corner*; or *This horse is really shy. It doesn't like a lot of people around and likes to be alone*. The cognitive restructuring techniques of reality testing and reframing (Beck & Beck, 2011) might be used, for instance, to address these instances. I use an eclectic mix of therapeutic techniques to strengthen agency and internal locus of control (Schultz & Schultz, 2009) and to instill optimism and hope by challenging and changing participants explanatory thinking style (Seligman, 2006; Seligman, 1978) and encouraging participant to question their thinking and belief systems that might be catalyst to depression and anxiety (Beck & Beck, 2011; Corcoran, 2006).

Subtle yet integral to the curriculum and design of the VF-EFMH program is education about mindfulness (Germer et al., 2013; Kabat-Zinn & Hanh, 2013) and teachings of transpersonal psychology (Walsh, 1999; Wilber, 2000). When attempting to

lead a horse from point A to point B, a participant might develop anxiety and start to become dysregulated. At this point, it is vital to coach the participant in mindfulness relaxation techniques. Deep breathing and relaxation techniques are part of the framing conversations in the group discussions and prior to each experiential activity.

Mindfulness techniques have also been shown to prove effective for treating veterans suffering with anxiety and PTSD (Fiore, 2014; Kearney, McDermott, Malte, Martinez, & Simpson, 2013). To address moral injury and the inner conflicts that might percolate during processing or activates, I use Buddhist philosophy and transpersonal psychology (Walsh, 1999; Wilber, 2000). A participant might comment that he is not worthy of feeling joy or receiving help because of the things he did in combat. Brief counseling within a group construct may reduce these thoughts and feelings. Counseling should be encouraged to veterans who are identified to be suffering with significant mental illness or moral injury. These instances are opportunities for psychoeducation for the entire group, without focusing directly on any individual participant. Stress tolerance techniques, which include a mixture of cognitive behavioral and mindfulness skills, might also be used as a brief technique to help dysregulating veterans regain emotional control in the moment.

Why horses. Why the human-horse interaction creates circumstance that is conducive to psychotherapy and learning is a question I am asked often; it is also a question that is difficult to quantify. There are several aspects that might be important to conceptualize the answer to *why horses work so well with humans in a therapeutic construct*, however, Knapp (2013) suggests that it is difficult to explain something that is felt. I agree with Knapp. There is a certain sentience, an understanding and knowing, that

I have experienced for myself and that I have witnessed in other seasoned EFMH practitioners. This sentence informs my practice in the moment when facilitating experiential activities. This understanding is based on several things, including the overarching theme of horse psychology, which includes the predator-prey relationship and understanding horses' hierarchy of needs.

Predator-Prey Relationship. One thing that is crucial in the human horse relationship is that humans are predators and horses are prey. From a human-centric frame, this might be difficult to understand at first, with the human propensity for anthropomorphization. The bottom line is horses don't hunt and eat people; people hunt and eat horses. They are a food source in the natural environment. And although in the U.S. the sentiment does not generally hold true, horses, anthropologically and evolutionarily, intrinsically know all too well that they are prey, and that any moment a predator might kill them. They are continually cognizant of this, and it's interesting that horses don't particularly fear predators; they fear predator behavior (Miller, 2007; Parelli, 2004). Horses are hypersensitive and reactionary to behaviors that they perceive might put them in harm's way, and they will act accordingly. Horses are flight animals, meaning that their first instinct is to flee. Humans, by nature of being a predator, have different behaviors when confronted with danger. Humans can also flee, they can freeze, but they can fight in the face of real or perceived harm (Ciccarelli & White, 2015). Horses will react as individuals to various stimuli, but in general will defend themselves when retreating is not an option (Clinging, 2012; Greene, 2009).

This hypersensitivity to predator behavior and the accompanying reaction that horses have to these behaviors, allow for learning to happen on part of both the human

and the horse. The job of the facilitator is to understand these varying dynamics. The facilitator must be cognizant of the horse's sensitivity, the ongoing dynamics between human and horse, and be able to anticipate, and to frame each situation as it unfolds so that it has a therapeutic and learning value for both human and horse. Continued focus on relational building will enable the human to act less like a predator, and the horse to act less like prey, thus enabling them to interact relationally and create partnership. A skilled EFMH clinician understands this complexity and can guide and frame the activities to be beneficial for the human and the horse.

As an example, when a human acts in an inauthentic way, the horse can sense this disconnect between the outer presentation and inner emotion and will react as a prey animal. The horse might move away, freeze, or otherwise seem uncooperative. If a participant is inwardly fearful and nervous of interacting with the horse, but is acting confident and strong, the horse sense this disconnect and will be weary of connection, not trusting the person. The horse might shy away, or exhibit nervousness, which may be their way of communicating that they do not feel safe. When the participant presents in an authentic way, not cloaking their nervousness or fear behind a facade of false confidence, the horse feels safe and will be more open and willing to connect. In my experience, learning to manage fear based behavior and reactions to provoking situations and acting and communicating in an authentic way will assist greatly in creating relationship with horses and with humans.

Hierarchy of needs. The needs of the horse are much different than the needs of a human, or a dog, for that matter (Parelli, 2004; Williams, 2004). Humans and dogs are predators and horses are prey. Understanding the difference in hierarchy of needs for a

horse and a human will help better to understand why horses work so well in the therapeutic setting. Human hierarchy of needs starts with basic physiological needs (air, food, water, sleep), then moves up to safety needs (security, resources), then love and belonging (relationships), then esteem needs (confidence, respect, self-esteem), and at the top, self-actualization (Maslow, 2013). Bekoff (2017) suggests that the hierarchy of needs for dogs is congruent to that of humans. Horse needs are much different (Williams, 2004). As a prey animal, core to a horse's needs is safety. First and foremost, a horse must feel safe. A horse's hierarchy of needs includes: safety, being in the herd, comfort and play, food and water (Parelli, 2004). Thus, a horse must first feel safe before it will eat, before it will play, before it will connect with a human. Because of this intrinsic difference in nature and needs, horses respond to stimuli differently than humans, or dogs. Humans and dogs respond well to praise, gestures like a pat on the back or petting, and rewards like food. Horses do not (Miller, 2007; Parelli, 2004). Horses respond to safety and comfort. If they feel safe and are comfortable with a human, they will be open to connection. These differing inner needs create a dynamic that is conducive to learning within a facilitative construct. As the human changes their approach and behaviors to better meet the intrinsic needs of the horse, the horse then will change behaviors to meet the requests and needs of the human.

Natural horsemanship. It is important to understand that the foundational principals of natural horsemanship are based in horse psychology and the predator-prey relationship (Miller, 2007; Parelli, 2004; Trotter, 2012). Natural horsemanship is about a paradigm shift from a human-centric frame of understanding to principals and action based on an equine informed frame. Natural horsemanship is a philosophy and a set

methodologies of working relationally with horses that is grounded in the horse's innate, instinctual methods and ways of communicating and acting; with consideration that horses learn through pressure and the release of pressure, rather than through reward, praise, force, or pain (Knapp, 2013; Miller, 2007; Parelli, 2004; Rashid, 2000).

Natural horsemanship is based on a set of underlying principles. Parelli (2004) articulates these principles in an easy to understand, pragmatic way, with many being core to the VF-EFMH program. These principals include: (a) Humans should not make or teach assumptions; (b) Communication is two or more individuals sharing or understanding an idea; (c) Horses and humans have mutual responsibilities; (d) Humans should not act like a predator; (e) Humans should think like a horse; (f) Horses should not act like prey; (g) Humans should have an attitude of justice; (h) Humans need to understand that body language is universal; (j) Unilaterally, horses teach humans as humans teach horses; (k) Humans need to understand that principals, purpose and time are the tools for teaching.

(Parelli, 2004)

Natural horsemanship creates a framework for the VF-EFMH program. With these predator-prey relationship principals and working from a species-informed frame, experiential activities can be framed and created to teach humans different ways of interacting, communication, and being in a relationship. These psychoeducational, therapeutic teaching strategies center on the human-horse interaction, by highlighting what is going on between the participant and the horse, and encouraging the participant to be curious and investigative about how the interaction is creating the observed outcomes. The process of curious observation, introspective awareness, and a willingness to think,

behave, and interact in a different way, creates internal change that may effect the human-horse interactional outcomes. How it affects the human and the horse and the human-horse construct is fraught with variation. This is one of the powerful mechanisms of EFMH. Think of it as a triadic reciprocity of constant emerging outcomes that continually offer opportunities for learning and growth, through the process of observation, introspection, and willingness to continually adapt.

To assist in understanding why a natural horsemanship framework might work with a veteran who is suffering with depression and anxiety from his or her military experience or from issues of reintegration, the following illustration is offered. Take the example of a veteran who is depressed, isolates himself, and presents in social situations and interactions with a military mind-set. When in the ring with the horse, using more forceful methods of predator-like interaction will cause a horse to perceive predator behavior, feel unsafe, and act like prey. To establish the opportunity for connection, the human must first think and behave in a more horse-centric frame, using the philosophy and skills of natural horsemanship, which are taught in the VF-EFMH program. When the human acts less like a predator, the horse is likely to act less like prey and a relationship is possible. This interaction creates the facilitative construct in which evidenced-based treatments are used by the clinician to challenge the human to think about their thoughts and behaviors, connecting the previous outcome of non-connection with the horse, and to adapt and be willing to employ newly taught methods of interacting. Participants are often shown how their habitual thinking patterns and behavioral reactions create barriers to relationship connection. When those thinking patterns and behavioral reactions change, connection is possible. This insight and newly

adapted behaviors, when transferred into human interactions, have similar positive effect.

Why rescue horses. I prefer to work with rescue horses with little to no natural horsemanship exposure for implementation of the VF-EFMH program. Prior to selection, I evaluate each horse by questioning the horse handlers and personally working with each in a ring. I rely on my experience as a horse trainer to evaluate and select each horse to be used. In my experience, rescue horses are more sensitive and raw in presentation and interact with humans in a more authentic, non-contrived way. A trained horse will have preexisting programmed responses to the actions of the human. And although the horse may still act like a prey animal if the human acts like a predator, a trained horse might be more resilient and desensitized to predator behaviors, thus not reacting in a way that will allow for as many or as rich therapeutic instances. Selecting horses, with more training, in my experience and from my perspective, diminishes the therapeutic experience because of that learned resilience.

Another reason I prefer to work with rescue horses is that they provide for utilization of analogy for purposes of deeper connection, interest and passion, and facilitate a deeper desire to create a relationship with the horses. When framing the introduction of the VF-EFMH program with veterans, I speak analogously about the rescue horses connecting their plight and circumstance to that of the veterans. The introduction dialogue might sound similar to:

These horses once had a purpose; all of them had jobs. They were respected and loved by their keepers, their families. Some were part of a loving family. A few were moneymaking racehorses. Others might have been used as a workhorse on a farm, or been a blue ribbon winning show

horse or pony. At one point in time, they all belonged. Many of the horses you will work with have been brought here from the tragic of circumstances. Some were abused and beaten. Many were left for dead in a barn or paddock, without care, water, or food. Some were let go into the wild to fend for themselves. A few were saved directly from a slaughter. Not all of the stories are tragedies, but many are. A few families surrendered their beloved horse for economic or health reason. But from this tragedy, they found their way here. To this Rescue; where they are cared for, loved, and now have a very large new heard of human and horse family members, including you. But some are still in transition into their new life, and they need help to adjust back to normal life and heal from their past. We are going to help them this weekend. We are going to be their heroes today.

This analogy fosters cause and passion in the veterans. Many are instantly able to connect the analogy to themselves. As the participants practice natural horsemanship with the rescue horses, it fosters and builds resilience and fosters relationship in and among human and horse.

Purpose of Study

The purpose of this study was to explore the effectiveness of VF-EFMH for treating veterans with depression and anxiety and to seek deeper insight into the value of VF-EFMH by using a mixed methods exploratory sequential design. The field of EFMH with veterans is emerging. It is my hope that this study will add value to the existing

literature and inform clinicians who are interested in or currently providing EFMH to the veteran population.

Methods and Findings

This study uses a mixed methods explanatory sequential design (Creswell, 2013). An explanatory sequential design uses qualitative data to explain, interpret, and better understand results of a quantitative analysis (Creswell, 2013). In this study 49 exit surveys from ten individual VF-EFMH program offerings that I facilitated between 2013 and 2017 were analyzed. Exit survey questions facilitated deeper inquiry into whether the VF-EFMH program helped lower depression and anxiety and if the VF-EFMH program was valuable for the participant. Descriptive and Chi square analysis was conducted on exit survey data. Results showed that the VF-EFMH program was effective for lowering depression and anxiety and that there were no significant differences between the ten EFMH programs or across demographic information. Structured interviews were conducted with a sample of six volunteers and transcripts were created to analyze the data (Creswell, 2013; Patton, 2015; Saldaña, 2016). These six interviewees had all participated in one of the studied VF-EFMH programs. Transcripts were analyzed using Saldaña's (2016) first, after first, and second cycle coding methods along with thematic analysis as described by Creswell and Plano Clark (2011) and Patton (2015).

Assumptions. This study assumes that both samples, respondents for the exit surveys and the interview participants, were honest and forthright with their responses, and that they did not alter their replies to please me or to control for their internal psychological or emotional state. This research also assumes responses were not bias from novelty or Halo effects. This study also assumes that I have taken every step to

control for my personal bias and that I have engaged in this research with objectivity and the best and purest of intent.

Limitations. This study may not be generalizable to ethnic minority veterans, as the sample is comprised of Caucasian males and females, nor may not be generalizable over the entire veteran population. Given the estimate of over 2.5 million veterans being deployed since 2001 with between 30% to 50% suffering with psychological issues (Elnitsky et al., 2017; Freytes et al., 2017; Howell & Wool, 2011) a generalizable sample using a confidence level of 95% with a 5% margin of error would require 385 participants for the exit survey analysis (Sullivan, 2010). Selection bias must be considered as a limitation. Kakhnovets (2011) states that help seeking might be more conducive to positive therapeutic outcomes. This may affect the results as the participants may differ in some way than those who did not seek treatment programs. Reactivity may threaten the results as the novelty of working with horses may engender positive outcomes in the short term. Participants may have attempted to please me as the researcher by answering favorably, or due to issues of self-esteem or stigmatization, may not answer correctly. Maturation may also be a threat to internal validity, as participants may have experienced life events that might have change their perspective from the time of participation to the time of interview. Recording interviews and creating verbatim transcripts controlled for descriptive validity; however, interpretation validity may be a limitation, as subjective interpretation of the transaction might construct varying meaning other than intended. Participants may have evolved over the time-frame between the VF-EFMH program and the interviews, causing differing perceptions. Researcher bias is a threat to validity, and is shared in the beginning of this chapter as a substantial

significance in this study. In order to address issues related to researcher biases my dissertation committee provided external expertise to both challenge assumptions and findings and guide the process (Creswell, 2013, 2015). Further, researcher reflexivity (Patton, 2015), methods triangulation (Creswell & Plano Clark, 2011; Patton, 2015; Rubin & Babbie, 2011; Saldaña, 2016), and descriptive writing (Patton, 2015) was utilized.

Conclusion

This dissertation study examined whether EFMH is effective for lowering depression and anxiety in veterans. It also explores whether EFMH has value for veterans. This study employs a mixed-methods explanatory sequential design examining 49 exit surveys and analyzing six individual interviews from veterans who participated in one of the EFMH programs I facilitated between 2013 and 2017. This study will add value to the field of EFMH and inform clinicians interested in or currently delivering EFMH programming. By its contextual and constructural nature, this study attempts to close some of the gaps in existing EFMH literature.

Chapter two of this study provides a literature review of veteran issues, current evidenced-based treatments for veterans, EFMH, and review of the theoretical underpinning that are the base for the EFMH program. Chapter three is a detailed look at the methods used in this study, and chapter four provides a comprehensive reporting of the findings. Chapter five is the conclusion of this study and as encouraged by my dissertation committee chair at Plymouth State University, is written for submission as a journal article to *Social Work*.

Chapter Two

Literature Review

A decade of war has had significant negative effects on United States military combat veterans. In the past eleven years, well over two million Americans have seen combat (Hoge, 2010; Hoge et al., 2014; Howell & Wool, 2011; VetPop, 2016). Eighty-three percent of these recent combat veterans have experienced a traumatic situation where their life was directly in jeopardy; further, an additional 83% know of someone who had been killed or seriously injured while serving in a combat zone (Hoge et al., 2014; Moore & Penk, 2011; Straits-Troster et al., 2011). Thirty-two percent of military combatants have been the cause of an injury or death and 52% have shot their weapon in the direction of another human (Litz et al., 2009). About 70% of America's combined forces that have seen combat will suffer from psychological related illness (Hines et al., 2014; Straits-Troster et al., 2011), and research (Moore & Penk, 2011; Sayer et al., 2009; Sharpless & Barber, 2011) suggests that veterans can go untreated an average of ten years before they will seek help, if they seek help at all. This will contribute to the escalating social problems that veterans experience, including: unemployment, homelessness, violent crime, suicide, domestic violence, poverty, and substance use (Elbogen, Johnson, Wagner, Newton, & Beckham, 2012; Hawryluk, Ridley-Kerr, & Henry, 2005; Hoge, 2010; Kaplan, McFarland, Huguet, & Valenstein, 2012; Moore & Penk, 2011; Tanielian & Jaycox, 2008; Teten et al., 2010).

The purpose of this dissertation study was to determine the effectiveness of a psychosocial intervention that utilizes the Veteran Focused Equine Facilitated Mental Health (VF-EFMH) program to deliver evidenced based psychological treatments to

veterans suffering with depression and anxiety, while also seeking deeper insight into the value the VF-EFMH program had for veterans. A previous pilot study (Ferruolo, 2016; Ferruolo & Sollars, 2013) indicates that VF-EFMH is effective at addressing mental illness and reintegration issues of returning war veterans. Research on Equine Facilitated Mental Health (EFMH) (Bachi, 2012; Ferruolo, 2016; Holmes, Goodwin, Redhead, & Goymour, 2012; Klontz, Bivens, Leinart, & Klontz, 2007; Knapp, 2013; Lee, Dakin, & McLure, 2016; Meinersmann, Bradberry, & Roberts, 2008; P. N. Schultz, Remick-Barlow, & Robbins, 2007) supports the assertion that EFMH is effective at treating psychological issues, including anxiety and depression. This body of research is promising; however, there are gaps in the literature and more studies are needed to address these limitations (Anestis, Anestis, Zawilinski, Hopkins, & Lilienfeld, 2014; Bachi, 2012; Lee et al., 2016). This study closes a few of the gaps in current literature through the evaluation of a specific VF-EFMH program with multiple and consistent deliveries over a four-year time-frame.

To rationalize and give support to this study, this literature review starts by reviewing the various social problems experienced by veterans. Psychological issues of depression, anxiety, posttraumatic stress disorder (PTSD), and moral injury will be addressed, as well as reintegration issues. A comprehensive overview of current evidenced-based treatments for veterans will also be presented. Current literature regarding EFMH will be highlighted, and this review will continue with an overview of the pilot VF-EFMH study (Ferruolo, 2016) and the theoretical underpinnings of that program. This review will close with a discussion about limitation and directions of VF-EFMH research.

Commonly Experienced Social Problems

Violence to self and others.

Violent crime. Criminality among combat veterans is a growing concern (Elbogen et al., 2012). Rape, murder, and sexual assault have been on the rise among post 9/11 combat veterans (Howell & Wool, 2011). Howell and Wool (2011) stated this might be due to the fact that war veterans may bring the violence back home with them. Siegle and Belmont (2008) stated that exposure to violence and death may inoculate people to violence and predispose them to act more violently. Combat veterans who have killed and witnessed death firsthand are at risk of exhibiting antisocial and violent behaviors that can lead to criminal arrest (Elbogen et al., 2012). These researchers (Elbogen et al., 2012) stated that untreated veterans who are ill tempered, easily angered, and who suffer from PTSD run the highest risk of this group. Elbogen et al. (2012) reported that there are over 200,000 veterans incarcerated, with 50% for violent crime.

Suicide. Five thousand American veterans take their own life by suicide every year (Kaplan et al., 2012). Post 9/11 male veterans have a higher rate of suicide than male non-veterans, according to Kaplan et al (2012). This is alarming, as military suicide rates have been lower than the civilian population until the post 9/11 era (Howell & Wool, 2011; Kaplan et al., 2012). Tripp, McDevitt-Murphy, and Henschel (2016) state that combat duty that resulted in firing a weapon at another human is a determinant of suicidal ideation and killing was a high predictor of suicidal thinking. The lack of adequate care is a key factor in the poor psychological health of post 9/11 veterans (Elbogen, Johnson, Newton, et al., 2012; Elbogen, Johnson, Wagner, et al., 2012; Hawryluk et al., 2005; Hoge, 2010; Howell & Wool, 2011; Kaplan et al., 2012).

Intimate partner violence. Intimate partner violence in the households of veterans is another rising social concern. Combat veterans suffering from psychological illness are up to three times more likely to engage in domestic violence than psychologically sound veterans or the non-military (Elbogen, Johnson, Newton, et al., 2012; Teten et al., 2010). Despite pressure from Congress the military has not been willing or able to control the situation (Howell & Wool, 2011). Violence within families may lead to divorce (Brygger, 1990). Divorce may contribute to the decline into poverty for both spouses and any children they may have (Hardesty et al., 2012). Children may also be at risk (Hardesty et al., 2012). Literature (Barlow & Durand, 2009; Siegle & Belmont, 2008) suggests that children may not only adapt violent behaviors from their parents, but may themselves suffer serious psychological consequences. Teaching veterans prosocial coping skills is imperative for the functioning of the family.

Below poverty level living. *Underemployment and unemployment.* Statistics about veteran unemployment and underemployment can be confusing. According to the U.S. Bureau of Labor Statistics (2017) the unemployment rates for combat veterans, although inching down, is higher than the civilian cohort. This study stated that, in 2016, there were 450,000 unemployed veterans in the United States. Further, Hawryluk and Ridley-Kerr (2012) stated that nearly one million veterans lived below the poverty line in 2010. Looking deeper, Ted Daywalt, CEO of VetJobs.com, unearthed some of the confusion and myths of veteran unemployment in an article in the Huffington Post. Daywalt (2013) stated that, historically, veterans have always had a lower unemployment rate than the civilian cohort, because the military teaches valuable sought after job skills. This is still true today, with veterans of the Army, Navy, Marines, and Air Force having a

lower unemployment rate in 2016, dropping to 5.6% from 12.1% in 2011 (Daywalt, 2013; Gross, 2017). The Daywalt (2013) article suggests that most of the statistic of high veteran unemployment is from the reserves and the National Guard because employers have a hard time retaining those service members that get called to action, thus terminating employment. This begins the cycle of unemployment and underemployment. Veterans that can't hold full time jobs might resort to unskilled labor jobs that they can easily leave and return to if deployed, but the pay is in the lower income strata (Gross, 2017). Daywalt (2013) also suggested that veterans lag behind the civilian population in accrued civilian sector job skills, taking them longer to learn the needed skills for employment success; however, veterans typically acquire needed skills quickly and become employed. Veterans who are not in the reserves or National Guard typically find and keep jobs, thus making their unemployment rate lower. The difficult cohort, as stated by Daywalt (2013), are those reserve members and National Guard members that get called to full time service. Reserves and National Guard often do not have the training, supports, and resources to successfully engage in combat and deal with the psychological aftermath; they have the most difficulty finding steady, gainful employment (Daywalt, 2013; Gross, 2017).

Regardless of what branch of the armed services a person served, self-damaging behaviors as a result of poor mental health may greatly contribute to the unemployment of this population (Elbogen, Johnson, Wagner, et al., 2012; Howell & Wool, 2011). Elbogen, Johnson and Wagner, et al., (2012) state that financial hardship contributes to homelessness and suicide, and financial stability is a predictor of adjustment and overall well-being. However, these researchers also point out that post-deployment mental health

issues are a major contributor to lack of stability and the ability to engage in gainful employment. This research enlightens the circuitous pathways of how mental health affects financial stability and how financial instability effects mental health. The cycle of underemployment and unemployment can lead to substance use and homelessness, which might enlighten why veterans have higher homelessness rates and substance use disorders than civilians (Smelson, 2017; U.S. Department of Veterans Affairs, 2015).

Substance use. Veterans have a higher occurrence of substance use disorders than the civilian population, with nearly 13% of post 2001 veterans, one in 15, experiencing problems with use of alcohol or drugs (“National Survey on Drug Use and Health,” 2015; U.S. Department of Veterans Affairs, 2015). According to the U.S. Department of Veterans Affairs, combat exposure and PTSD will significantly increase the likelihood of substance use in veterans. Of veterans with PTSD, over 20% have a substance use disorder, and many tend to be binge drinkers (U.S. Department of Veterans Affairs, 2015).

Homelessness. Veterans are disproportionately homeless compared to other groups in the U.S., with between 40,000 and 50,000 homeless veterans (Shane, 2017; Smelson, 2017). Shane (2017) reported that the number of homeless veterans has risen in the two years after a decade of decline. Mental illness, substance use, and co-occurring mental health and substance use disorders are major factors for veteran homelessness, with up to 80% of homeless veterans suffering from one or more psychological conditions (Howell & Wool, 2011; Montgomery, Dichter, Thomasson, Roberts, & Byrne, 2015; Smelson, 2017). Montgomery et al., (2015) stated that homeless veterans have a higher rate of psychological and medical issues than the general population, and they also experience

greater barriers to care. According to Montgomery et al., (2015), identifying these veterans who are experiencing mental health and substance use issues and linking them to the help they need is critical in mitigating the issue of veteran homelessness.

Mental health diagnosis of veterans have seen a marked increase since *the war on terror* commenced in 2001, increasing 65% (Cornish, Thys, Vogel, & Wade, 2014), and as Montgomery et al., (2015) stated, mental illness is not just a risk factor for veteran homelessness, it is a determinant. Visiting the Veterans Administration (VA) website will reveal that veterans have access to treatment and a variety of services; however, as Hoge et al., (2014) suggested, many suffering veterans never present to a VA hospital or clinic for treatment.

Combat Related Psychosocial Issues

Reintegration Issues. Transitioning out of the military and reintegrating back into civilian society can be difficult for military members. Elnitsky, Blevins, Fisher and Magruder, (2017) reported that one-third of the returning 2.5 million veterans who have been deployed since 2001 will experience these reintegration issues. Elnitsky et al., (2017) reviewed over a decade of research and provides the following working definition of reintegration:

Reintegration [is] both a process and outcome of resuming roles in family, community, and workplace that may be influenced at different levels of an ecological system... The integration is dynamic, personal, culturally bound... psychological in nature, involving interaction between the individual and the environment (Elnitsky et al., 2017).

Although many veterans can reenter society without major issues, 30% to 50% of transitioning United States service members will experience reintegration issues (Freytes, LeLaurin, Zickmund, Resende, & Uphold, 2017; Tanielian & Jaycox, 2008). Identity Crisis has been identified as an overarching reintegration concern, with transitioning service members experiencing marked difficulty reconciling the outer conflict of balancing military culture and civilian culture and the inner dissonance between their opposing military and civilian identities (Cornish et al., 2014; Elnitsky et al., 2017; Freytes et al., 2017; McCormack & Ell, 2017; Orazem et al., 2017). McCormack and Ell (2017) state that the ingrained military mindset and warrior identity can significantly clash with civilian cultural norms, causing the veteran to question their self-worth, which leads to a destabilization of character and confidence. The warrior identity is inclusive of the actions and events a service member might be involved with or see in a combat zone. The atrocities of war and the military mission, which can include killing and witnessing death, can lead to moral injury (Currier, McCormick, & Drescher, 2015; Elnitsky et al., 2017; Litz et al., 2009; McCormack & Ell, 2017). McCormack and Ell (2017) and Elnitsky et al., (2017) suggest that moral injury is a reintegration issue that contributes to the identity crisis. This identity crisis can cause veterans to experience significant inner turmoil as they lose their sense of self which causes them to isolate and feel they do not belong (McCormack & Ell, 2017; Orazem et al., 2017). Veterans often have a sense of detachment and disconnection with people and society which makes them feel out of place and misunderstood; they feel disenfranchised with civilian society and often lack a sense of meaning and purpose (Elnitsky et al., 2017; McCormack & Ell, 2017; Orazem et al., 2017).

Veterans that experience reintegration issues statistically have a higher rate of mental illness, including PTSD and depression (Cornish et al., 2014; Freytes et al., 2017; McCormack & Ell, 2017). Mental illness can lead to significant distress and impairment and diminished functioning in social, familial, and occupational domains (American Psychiatric Association, 2013; Barlow & Durand, 2009; Ciccarelli & White, 2015). Veterans suffering with the issues of reintegration have higher instances of relational problems, leading to breakdowns, issues within families; more difficulty engaging in and maintaining employment, which further exacerbates distress and impairments. Reintegration is a far-reaching social problem that contributes to the already existing plethora of issues that transitioning military service members face (Elbogen, Johnson, Newton, et al., 2012; Elnitsky et al., 2017; Freytes et al., 2017; Hoge et al., 2004; Kaplan et al., 2012; McCormack & Ell, 2017; Moore & Penk, 2011; Orazem et al., 2017; Teten et al., 2010).

Depression. Karstoft, Nielsen, and Nielsen (2017) state that depression is the most diagnosed mental illness in returning veterans, and not PTSD. Major depressive disorder (Table 1) currently accounts for 18% of all mental health diagnoses in the VA system, which equals to over 1 million veterans suffering from this mental illness (Abraham et al., 2016).

This statistic does not account for all the veterans living in the United States; only the ones currently receiving VA services. There are approximately 20 million veterans living in the U.S. (Boakye et al., 2017; Howell & Wool, 2011; “Veterans 2011-2015,” 2016), with up to 34% (6.8-million) experiencing the symptoms of depression at least once in their lifetime and 16.5% (3.3-million) suffering with long-term, life-long, chronic

depression (Boakye et al., 2017). Depression can be chronic, and if not treated can lead to significant emotional and psychological distress, impairment in functioning across

Table 1

DSM 5 criteria for major depressive disorder

Criterion A	<p>Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either:</p> <ol style="list-style-type: none"> (1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). Note: In children and adolescents, can be irritable mood. (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others) (3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day. Note: In children, consider failure to make expected weight gains. (4) Insomnia or Hypersomnia nearly every day (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down) (6) fatigue or loss of energy nearly every day (7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick) (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others) (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide <p>Note: Do not include symptoms that are clearly due to a general medical condition, or mood-incongruent delusions or hallucinations.</p>
Criterion B	The symptoms do not meet criteria for a Mixed Episode.
Criterion C	The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
Criterion D	The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
Criterion E	The symptoms are not better accounted for by , i.e., after the loss of a loved one, the symptoms persist for longer than 2 months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation.

(American Psychiatric Association, 2013)

multiple domains, and in severe cases, suicide (American Psychiatric Association, 2013; Barlow & Durand, 2009; Ciccarelli & White, 2015). Depression in veterans typically co-occurs with PTSD and Alcohol Use Disorder (AUD) (Hoge et al., 2004; Karstoft, Nielsen, & Nielsen, 2017; Waltz et al., 2014) and significantly contributes to a lower quality of life (Abraham et al., 2016). Waltz et al., (2014) reports that 25% of veterans who present to VA clinics with depression prefer not engage in any treatment, and Abraham et al., (2016) state that many veterans do not respond to treatment or after treatment ends they relapse.

Anxiety. Anxiety disorders include Generalized Anxiety Disorder (GAD), Panic Disorder, and Social Anxiety Disorder. The common theme across the anxiety spectrum is disproportionate worry or fear to imagined, non-life threatening, threats in which a person has an exaggerated and irrational emotional and physical response (American Psychiatric Association, 2013; Barlow & Durand, 2009; Ciccarelli & White, 2015). Generalized Anxiety Disorder is characterized by excessive worry about multiple issues that consumes the thoughts, an inability to control or stop worry, and an inability to relax or sleep; Panic Disorder is characterized by unexpected, recurrent panic attacks, fear of having a panic attack, irrational, unexplained fear or terror, and fear and avoidance of places and situations that might trigger an attack. A person suffering with Social Anxiety Disorder typically has an irrational fear of being negatively evaluated, being humiliated or embarrassed, and being extremely self conscious (American Psychiatric Association, 2013; Barlow & Durand, 2009; Ciccarelli & White, 2015). The Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013) states that GAD,

Panic Disorder, and Social Anxiety Disorder can contribute to significant impairment in social and occupational settings and may cause marked emotional and psychological distress.

Veterans are not immune to anxiety disorders. According to research (Espejo et al., 2016), 18% of veterans presenting to VA health clinics meet the specific criteria to be diagnosed with an anxiety disorder, and an overwhelming 75% reported symptoms of anxiety. Like with depression, many veterans that present with anxiety also meet the criteria for PTSD (Hoge et al., 2004; Moore & Penk, 2011) with 47.3% being diagnosed with both disorders (Espejo et al., 2016). Gould, Beaudreau, Gullickson, Tenover and Bauer, (2016) report that in the primary care setting, 20% of veterans that seek care meet the diagnostic criteria for anxiety. One in three Vietnam era veterans suffer with anxiety (Gould et al., 2016) and Espejo et al., (2016) report that 28.3% veterans of Operation Enduring Freedom and Operation Iraq Freedom have diagnosable anxiety.

Anxiety is a serious mental illness that can be enduring and cause significant and multiple social, relational, and financial struggles, and can lead to hopelessness and suicide (Barlow & Durand, 2009; Elbogen, Johnson, Wagner, et al., 2012; Elnitsky et al., 2017; Espejo et al., 2016; Gould et al., 2016; Kaplan et al., 2012).

Moral injury. Another area of concern with returning combat veterans is their reaction to the atrocities of war. Beyond the clinical criteria and suffering caused by depression, anxiety, and PTSD, an untold number of veterans are wrestling with inner moral and ethical turmoil due to experiencing the horrors of combat. These moral and ethical dilemmas are termed *moral injury*, where atrocious actions done or witnessed transgress the foundation of a person's morality, causing significant biopsychosocial

distress (Currier et al., 2015; Litz et al., 2009; Maguen & Lietz, 2012). Hoge et al., (2004) reports that over 50% of combatants shot in the direction of or shot at and hit a human, and over 30% stated they caused the death of a person, while Litz et al., (2009) reports that 65% of combat veterans saw human remains and dead bodies, 31% handled dead bodies, and 60% were unable to assist wounded children and women. Currier et al., (2015) goes on to report that 90% of a clinical sample of combat veterans either participated in or witnessed inhumane transgressions that were outside the scope of military action and served of no strategic benefit. Taking part in or witnessing the brutalities of war can lead to moral injury and a decompensating psychological state (Currier et al., 2015; Litz et al., 2009).

According to Litz et al., (2009) these “acts that transgress deeply held moral beliefs and expectations may be deleterious to the long-term, emotional, psychological, behavioral, spiritual, and [social]” wellbeing of combat veterans (p. 1). Further, Maguen and Lietz (2012) report that “harmful beliefs and attributions” about what one has done or witnessed in combat situations leads to underlying, long-term “guilt, shame, and self-condemnation” (p. 2) that can lead to significant psychological distress and suicide attempts. These researchers agree that moral injury is an important construct to study and understand, and that more must be done to address moral injury with evidenced-based treatments and better training of clinicians.

It is important to understand this construct when working with veterans, as moral injury differs significantly from clinical PTSD, even though the etiology is similar. Posttraumatic stress disorder and moral injury are not mutually inclusive or exclusive. Moral injury is a predictor of the re-experiencing criteria B and the avoidance criteria C

of PTSD, but those alone do not meet criteria for diagnosable PTSD (American Psychiatric Association, 2013; Litz et al., 2009). The root of PTSD is a traumatic event in which life was in jeopardy (American Psychiatric Association, 2013), while moral injury is about the inability to come to terms with the atrocities of war (Maguen & Litz, 2012). Moral injury, although not a diagnosable mental disorder, can cause significant distress and impairment in combat veterans, leading to inability to function across many domains (Currier et al., 2015; Litz et al., 2009; Maguen & Litz, 2012). The inability to successfully function, if not treated, can further deteriorate psychological states and lead to a variety of social problems (Barlow & Durand, 2009; Ciccarelli & White, 2015).

Posttraumatic stress disorder. Posttraumatic stress disorder has a clear-cut etiology that starts with exposure to a life-threatening traumatic event (Hines et al., 2014; Hoge et al., 2004; Litz et al., 2009; Straits-Troster et al., 2011). Combat exposure significantly increases these life-threatening instances, leading to higher rates of PTSD in exposed populations (Peterson, Luethcke, Borah, Borah, & Young-McCaughan, 2011; Sharpless & Barber, 2011). Peterson et al., (2011) states that “exposure to the grotesque and mutilating injuries of war” (p. 166) is thought to be one of the foremost causal factors for those military members and veterans suffering with combat related PTSD.

The Diagnostic and Statistical Manual of Mental Disorders (APA, 2013) outlines the eight criteria for a diagnosis of PTSD (see Table 2).

The American Psychiatric Association (2013) reports on research that suggests as high as 45% of combat exposed veterans meet the diagnostic criteria for PTSD. The DSM 5 criteria for PTSD provides a clear rubric for developing a diagnosis but also provides a clear pathway to understanding the experience of combat veterans. As Moore

& Penk (2011), point out, it is important for clinicians to know these criteria and be appropriately trained in evidenced-based practices.

Table 2

DSM 5 criteria for PTSD diagnosis

Criterion A	A direct actual or threatened exposure to death, serious bodily injury, or sexual violence via direct personal exposure, witnessing, vicarious exposure, or indirect exposure while carrying out professional duties. An intense response to fear, horror, or helplessness.
Criterion B	Unwanted and intrusive cognitive and physiological re-experiencing of the event in the form of nightmares, flashbacks, unpleasant thought, emotional dysregulation, and physical reactivity.
Criterion C	Avoidance and changes in behaviors to avoid unwanted thoughts, feelings, and reminders.
Criterion D	Two of the following are required for diagnosis: Memory loss in regards to the specific trauma; negative self-evaluation; exaggerated blame; blunted affect; feelings of loneliness, hopelessness and isolation; anhedonia; difficulty seeing positives.
Criterion E	Two of the following are required for diagnosis: hypervigilance; elevated startle response; aggression or irritability; destructive and risky behaviors; cognitive impairments; sleep difficulties.
Criterion F	Symptoms have to be present for more than one month
Criterion G	Symptoms cause significant personal distress or marked impairment in social, occupational, familial, or other important areas of functioning.
Criterion H	Symptoms cannot be due to other illness, prescribed medication or illegal substance use.

(American Psychiatric Association, 2013)

Evidenced-Based Treatments

Moore and Penk (2011) reached out to leading researchers and clinicians and compiled a clinical handbook for treating veterans with PTSD. This clinical handbook included overviews of the following evidenced-based treatments (EBT): prolonged exposure therapy; cognitive processing therapy; eye movement desensitization and reprocessing; virtual reality exposure therapy; psychosocial rehabilitation. These evidenced-based treatments are recommended for veterans suffering with PTSD with the

majority of these therapies grounded in Cognitive Behavioral Therapy (CBT) (Moore & Penk, 2011). Mindfulness based interventions are also recommended evidenced-based treatments for veterans (Moore & Penk, 2011; Peterson et al., 2011) and many of the treatments outlined in Moore and Penk (2011) incorporate mindfulness skills into the treatment regime.

Cognitive behavioral therapy. Cognitive behavioral therapy (CBT) is the most widely used evidenced based practice for anxiety and depressive disorders (Fiore, 2014; Landrum, 2016; Possemato et al., 2016). Cognitive behavioral therapy targets and seeks to assist a person change negative cognitions and undesirable behavioral patterns that contribute to and support psychological disorders. Literature (Beck & Beck, 2011; Ciccarelli & White, 2015; Corcoran, 2006) suggests that CBT is effective for treating depression, PTSD, and anxiety. Anxiety and depressive disorders are, in part, generated by negative and unrealistic cognitive distortions and supported by harmful behavior patterns. Cognitive behavioral therapy targets those negative beliefs and unconstructive thinking patterns and provokes people to think more realistically and clearly regarding those thoughts and beliefs, while simultaneously identifying undesirable habits and helping to redirect to more prosocial actions (Brown et al., 2016; Cucciare et al., 2016; Garcia, Kelley, Rentz, & Lee, 2011). Beck and Beck (2011) state that more accurate perceptual cognitive appraisals and positive changes in behavioral habits pave the way to mitigation of psychological symptoms that cause distress and impairment.

Mindfulness. Beck and Beck (2011) and Corcoran (2006) postulate that mindfulness activities help reduce the habituated affective processing of depression, anxiety, and PTSD. These researchers suggest that being in a deliberate, attentive,

focused state can activate neuropathways in the brain that cease negative ruminations. Mindfulness is purposely paying attention to present experiences in an openhearted, relaxed, accepting way (Farb, Anderson, & Segal, 2012). According to Kabat-Zinn (2013), these practices have existed as a way to alleviate suffering for 2500 years. Current research (Kabat-Zinn, 2013) outlines the mechanism of action in which mindfulness training works. Beyond the theoretical and clinical perspective these authors addressed, they also revealed the neurobiological perspective and how mindfulness training actually changes brain patterns and functioning. This suggests that mindfulness training shows promise and that it may be effective for treating anxiety and depression (Begley, 2007; Farb et al., 2012; Germer, Siegel, & Fulton, 2013). Mindfulness based treatments are becoming more popular and have primarily shown effectiveness at treating anxiety and PTSD in the veteran population (Germer et al., 2013).

Prolonged exposure therapy. Prolonged exposure therapy (PE) combines the frameworks of cognitive processing therapy and exposure therapy (Fiore, 2014; Landrum, 2016; Possemato et al., 2016). Peterson, Foa, and Riggs (2011) overview the process stating that PE is ten to twelve 90-minute sessions during which the patient is repeatedly exposed to the traumatic event, verbally and with visualization. During these sessions, the clinician will teach the patient mindfulness, deep breathing, and relaxation techniques while addressing the patient's negative thinking patterns. The clinician will also use cognitive behavioral therapy techniques to restructure and reframe distorted thoughts that lead to and support PTSD symptoms. During PE sessions, psychoeducation is given to the patient about PTSD signs, symptoms, and coping skills.

Cognitive processing therapy. Cognitive processing therapy (CP) is considered

a first-line treatment for military personnel and veterans suffering with PTSD within the military and the Veterans Administration (Peterson, Foa, & Riggs, 2011). This evidenced-based treatment is well researched and there is a step-by-step manual for implementation for military and VA clinicians. Williams et al., (2011) state that CP is highly effective in military, veteran, and civilian populations. The focus of CP is on worldviews and how people perceive the world, most importantly is the fact that how people perceive what happens to them is more important than actually what happened (Corcoran, 2006; Williams et al., 2011). Helping patients suffering with PTSD to change their relationship to and the meanings and the perception of the triggering event(s) is at the core of PE (Williams et al., 2011).

Eye movement desensitization and reprocessing. Eye Movement

Desensitization and Reprocessing (EMDR) posits that external bilateral stimulation while identifying and discussing traumatic events with a patient will target the negative cognitive affective processing within the brain that supports PTSD symptoms (Marich-Merkin, 2011; Russell, Lipke, & Figley, 2011). With military and veterans suffering with PTSD, Russell, Lipke, & Figley (2011) state that minimal research has been done with this population and that those results are inconclusive. However regardless of the credibility, Russell, Lipke, & Figley (2011) endorse the treatment of PTSD with EMDR. Marich-Merkin (2011) states that EMDR is a simple therapeutic tool, easy to implement and very effective for treating trauma, and Russell, Lipke, & Figley (2011) state EMDR is practical, flexible, and efficient, while also aligning with military ethos. The Veterans Administration and the Department of Defense have endorsed EMDE as an EBT for veterans experiencing PTSD (Russell, Lipke, & Figley, 2011).

Virtual reality exposure therapy. Virtual reality exposure therapy (VRET) is based in cognitive behavioral therapy and focuses on integrating cognitive processing, emotional processing, and exposure therapy (Marich-Merkin, 2011; Russell, Lipke, & Figley, 2011). Although the structural elements are similar to CP and PE, explains Reger & Holloway (2011), instead of vocal reenactment or a closed-eye visualization, the patient is linked to a virtual computer simulation of the combat events similar to their experience while they tell a detailed story of the event itself. These researchers went on to state that this treatment directly targets and mitigates the fear-based cognitive processing supporting PTSD, leading to symptom relief. Reger & Holloway (2011) report on the supporting research that shows VRET effective, but allude that equipment expense, clinical access and training is a barrier.

Psychosocial rehabilitation. Reger & Holloway (2011) discuss the integration issues returning Vietnam veterans faced and how the Department of Defense (DOD) has now implemented a reacclimation program that is standardized across the military branches. According to Penk, Little, & Ainspan (2011), this cooling down period is when returning soldiers get “rest training” and learn important prosocial activities and skills that will be of benefit at home and in the civilian world (p. 174). This helps address the reintegration issues commonly faced by veterans of war. The program allows returning military personnel to attend workshops and seminars to receive psychoeducation on a variety of topics like: signs and symptoms of PTSD; relationship building; communication; health maintenance; and career and life planning (Penk, Little & Ainspan, 2011). Penk, Little, and Ainspan (2011) state one major drawback of the

psychosocial program is that it does not incorporate any mental health or trauma counseling.

These evidenced-based treatments, however effective, do have their limitations. Researchers (Moore & Penk, 2011; Penk et al., 2011; Peterson et al., 2011; Reger & Holloway, 2011; Russell et al., 2011; Williams et al., 2011) point out the limitations of treating veterans, including: stigma and Machoism; ambivalence about diagnosis and treatment; lack of commitment of patient to complete a full course of treatment; lack of experience, training, and knowledge of the treating clinician. Moral injury is another subject in itself, where it is not a diagnosable mental disorder, nor is it a sub-category of any diagnosable mental disorder; however, moral injury should be considered when treating combat veterans (Currier et al., 2015; Litz et al., 2009). Moore and Penk (2011) state the urgency and vital need for further research into treatments that will be effective and accessible for the veteran population.

Many veterans are actively seeking alternative therapies that might better assist their road to recovery from reintegration issues and psychological illness (Currier et al., 2015; Litz et al., 2009), as routine office therapy is either unappealing or proving ineffective for a segment of veterans (Phillips & Wang, 2014). Equine Facilitated Mental Health is an emerging therapeutic modality that targets depression, anxiety, and PTSD, as well as elevating self-confidence, self-esteem, self-concept and overall wellbeing (Ferruolo, 2016; Holmes et al., 2012; Klontz et al., 2007; P. N. Schultz et al., 2007; Smith-Osborne, 2012).

Equine Facilitated Mental Health

Throughout history animals have been used for the psychological wellbeing of humankind (Holmes et al., 2012; Klontz et al., 2007; Schultz et al., 2007; Smith-Osborne, 2012). Ernst (2014) suggested this started with the belief in the supernatural healing powers of animals and animal spirits. One of the first documented modern time references of animals as an adjunct for therapy came from the York Retreat England, where Quakers incorporated animals to assist with child therapy (Palley, Rourke, & Niemi, 2010). Mason and Hagan (1999) and Risley-Curtiss (2010) report that in 1965 Heiman wrote about the benefits of dogs on human well-being, and in 1969 Boris Levinson worked with animals to facilitate a deeper therapeutic bond between patient and clinician. He published his finding in *Pet-Oriented Psychotherapy*. Ernst (2014), Mason and Hagan (1999) and Risley-Curtiss (2010) state that both Florence Nightingale and Sigmund Freud incorporated animals in treatment because they both believed in the therapeutic effect of the human-animal interaction.

In the United States, academic research began on animal assisted therapies in the 1960s (Mason & Hagan, 1999; Risley-Curtiss, 2010). Mason and Hagan (1999) and Risley-Curtiss (2010) outlined a history of animal assisted interventions, stating that therapeutic relationships between humans and animals can be dated back 12,000 years, where people and pets were found buried together in Northern Israel. Morrison (2007) reported that in the 1800s, animals were recommended for use in mental institutions in England and in Germany horses were used to assist with the treatment of epileptics. Recent medical research (Morrison, 2007) suggested that pets are beneficial in many ways, including: decreasing loneliness in the elderly; lowering blood pressure; assisting

patients in recovery from illness and medical procedures; decreasing anxiety and depression; improvement of patient morale; decreasing agitated behaviors; increasing sociability; increasing physical and mental well-being. The psychotherapeutic value of using horses, specifically, has also recently been considered and is an emerging approach with assisting in the treatment of psychological issues (Mason & Hagan, 1999; Morrison, 2007; Risley-Curtiss, 2010; Wells, 2009).

EFMH literature. Klontz, Bivens, Leinart, and Klontz (2007) conducted a clinical trial with 66 men and women between the ages of 23 and 70. The purpose of their study was to describe the equine program and report the results. Each participant underwent eight consecutive EFMH treatments over an eight-month time frame. Measures consisted of the Brief Symptoms Inventory (BSI) and the Personal Orientation Inventory (POI). Participants were tested prior to EFMH treatment. Measures were also given on the final day, and the final measure was mailed 6-months after the conclusion of EFMH treatment. Data was compiled from the 31 participants who completed all three measures. Results of the BSI showed a statistically significant decrease in symptom severity from pretest to posttest, but no significant changes from posttest to the 6-month follow-up. Similar to the BSI, data from the POI suggested a statistically significant increase in psychological wellbeing from pretest to posttest, but no difference from posttest to the 6-month follow-up.

This study used a treatment model that was based in experiential therapy, employing the component of horses to provide the experiential experience. The model of EFMH enabled participants to be able to work through past, unfinished business and help them to become more emotionally present (Klontz, Bivens, Leinart & Klontz, 2007).

Therapists used the horses as “metaphor and therapist” and relied on the natural human propensity transference to uncover unresolved issues to be targeted for resolution (Klontz et al., 2007, p. 259). This program incorporated a model that included licensed therapists and trained horse handlers. All therapists involved in the program had certification from the American Society of Experiential Therapists and all had experience with facilitating experiential equine programs. This study is relevant because it implies that EFMH reduced psychological symptoms for participants. Also, this study used the theoretical underpinning of experiential education similar to the VF-EFMH program being studied in this dissertation. It supports incorporating an embedded experiential education model within the construct of EFMH and VF-EFMH.

Another 2007 study involved five incarcerated youths who participated in EFMH (Kakacek, 2007). This qualitative study overviewed the importance of metaphor utilization within the construct of EFMH and through the implementation of semi-structured activities. Kakacek (2007) stressed the importance of metaphor utilization to provide for transference and use of learned information. Kakacek (2007) concluded through her investigation that EFMH fostered (1) effective relational skills, (2) increased self-awareness, (3) empathy, (4) transference, (5) learning to overcome obstacles, and (6) commitment and patience. Licensed clinicians and horse handlers were integral in delivering the program. Kakacek’s study was helpful in the creation of the pilot VF-EFMH program and subsequent VF-EFMH programs as it showed that EFMH can help build effective relational skills and foster deeper introspection. This study is also congruent with the VF-EFMH program as both included semi-structured, guided activities and use of metaphor.

In yet another 2007 study, Schultz, Remick-Barlow, and Robbins (2007), studied 63 children between the ages of four and sixteen over an 18-month timeframe utilizing a mean of nineteen sessions of EFMH. Participants were assessed using the Children's Global Assessment of Functioning (GAF) scale, with pre and post treatment tests given and a GAF evaluation every three months. The Diagnostic and Statistical Manual of Mental Disorders (DSM) diagnosis of the participants included mood disorders, PTSD, adjustment disorders, ADHD, and disruptive behavior disorders. The first thing the researchers noted was a noticeable, quick response to equine activities among participants, evidenced by lower anxiety and less exhibited behaviors of DSM disorders. The final results showed a statistically significant correlation between the number of EFMH treatments and improved GAF scores. The researchers (Schultz, Remick-Barlow, & Robbins, 2007) concluded that EFMH "appeared to be effective" (p. 270) in mitigating DSM diagnosed illness and improving GAF scores. This study helped inform this dissertation study as it shows a decrease in depression and anxiety. These researchers (Schultz, Remick-Barlow, & Robbins, 2007) also discussed how typical office-based therapy, primary talk therapy using cognitive behavioral therapy, may not work with populations that have seen significant trauma. Schultz et al., (2007) also discuss briefly the predator-prey relationship and how it is conducive to a therapeutic process. These aspects are similar to and support the relevance of the VF-EFMH.

Meinersmann et al., (2008) conducted a qualitative study of five adult female survivors of abuse who underwent EFMH. Participants were between the ages of 27 and 49-years-old, all Caucasian. The researchers used the women's stories to extrapolate anecdotal accounts that supported the idea that EFMH is an effective therapeutic

modality. Several themes emerged in the research: (1) that the women could feel empowered, (2) the kinesthetic value of the hands on experience, (3) horses are exceptional co-therapists, and (4) EFMH helped turn the women's lives around (Meinersmann et al., 2008). This qualitative study (Meinersmann et al., 2008) is similar to findings reported in this dissertation study as it reports on the value of the horse in the EFMH construct. I found this study relevant as it comes from the field of nursing and is congruent to social work and psychological results pointing to the effectiveness of EFMH for addressing psychological issues. This shows that across disciplines EFMH can be effective. What is also relevant about this study is that it did not look at outcomes of one particular EFMH program, but recruited a diverse sample of participants from across the country who participated in different EFMH program modalities.

In an exploratory study of eleven 12 to 14 year-old adolescents with emotional and behavioral issues, Holmes, Goodwin, Redhead, and Goymour (2012), report on the benefits of EFMH. Participants worked with two retired racehorses over four separate 3-hour long EFMH sessions. The researchers employed the Spence Children's Anxiety Scale (SCAS), and the Rosenberg Self-Esteem Scale (SES) to measure pre/post trait anxiety and self-esteem. The results revealed a statistically significant change in trait anxiety, with participants showing less anxiety after each sequential session. Measures of self-esteem showed a statistically significant improvement in participants after the first session; however, self-esteem measures remained stable and no significant changes in self-esteem occurred over the remaining sessions.

This research is relevant and congruent to this study as it supports the idea that EFMH is effective for reducing anxiety and that simply interacting with the horses can

produce these results. This study did not use therapists nor did it incorporate psychotherapy. Participants interacted with live and plastic model horses learning ground skills. This study is important as it implies that interacting with horses can lower anxiety. Farb et al., (2012) discuss the mindful pathway and its importance in emotional regulation. The mindfulness aspect of being in the presence of a horse may be due to the activation of the mindful pathway as described by Farb et al., (2012).

Earles, Vernon, and Yetz (2015) state that EAMH can be useful in treating PTSD, despite the varying results in many EFMH research. Earles et al., (2015) ran a study with 16 participants who met the clinical criteria for PTSD. Volunteers participated in a six-week equine assisted program called *Equine Partnering Naturally*. Participants came once a week for 2-hours. Participants were measured with pre and posttests for anxiety, PTSD, depression, substance use, and mindfulness. Results showed a statistically significant decrease in anxiety, depression, PTSD and alcohol use and an increase in mindfulness coping skills. This study is relevant as it supports EFMH as an option effective for reducing depression and anxiety and speaks to the fact that mindfulness and interaction with the horse are beneficial. Mindfulness is an aspect of the VF-EFMH program being studied in this dissertation. As speculated with the research by Holmes, Goodwin, Redhead, and Goymour (2012), a mindful component that is core to EFMH programming might be critical to success with lowering anxiety.

Using qualitative methods, Carlsson, Ranta, and Traeen (2014) conducted research on the meaning of equine assisted social work for clients and staff of a residential treatment facility. This study was of interest because it examined equine work through the perception of two differing populations, residents in treatment and the staff.

Of note were the perceptions of the horse and how participants viewed the horse as having the ability to sense and mirror emotion and that a horse can provide instance feedback. This is part of the curriculum of the studied dissertation VF-EFMH program; helping participants be more authentic in presentation and addressing incongruence in mood and affect. The Carlsson, Ranta, and Traeen (2014) research also reveals from the participant perspective that working with horses helps lower anxiety, which is one of the constructs examined in this dissertation study. This study (Carlsson et al., 2014) also point to participant perceptions of the interactions with horses helping with introspection and learning about self and others. This is congruent with the underpinning of the VF-EFMH program studied in this dissertation, as internal processing as result of participation is vital to participant's individual success. Of note with this research (Carlsson et al., 2014) is the overarching theme of relation and relationship, which is core to the curriculum of the VF-EFMH program.

Mayfield (2015) completed a doctorate dissertation titled *Equine Facilitated Psychotherapy for Veterans Survivors with Full or Partial PTSD*. Mayfield researched the lived experiences of the veterans to understand the effectiveness of EFMH from the participant's viewpoint. Mayfield's sample included three veterans who had participated in an EFMH program. His phenomenological research uncovered two overarching themes: *relational connection* and *here and now* processing. Further, this research reported that participants benefited from EFMH in several ways, including: finding EFMH safe and relaxing; ability to learn communication, coping and mindfulness skills; an overall sense of elevated well-being and the ability to transfer the learned skills and knowledge to their lives. This research is congruent as it shows EFMH is effective with a

veteran population. Mayfield's (2015) research revealed that *relational connection* and *here and now processing* were vital aspects of the program success. This is relevant as directly relates to the VF-EFMH program design and curriculum where there is an intent to create community and social connection. This also corresponds with assertions that individuals learn and grow through internal processing of what they reflect of as part of group participation (Shulman, 2012).

Knapp (2013) in her book *More than a Mirror: Horses, Humans, and Therapeutic Practices*, delivered pertinent information to inform EFMH practice. Knapp, along with contributing mental health and equine professionals, contribute to this work and explained in depth the construct of EFMH, with its varying deliveries with diverse population. In her book, Knapp (2013) explains about horse psychology and how the predator-prey relationship and natural horsemanship works well when treating people with psychological issues. Knapp (2013) describes how she uses Parelli natural horsemanship and Parelli trained rescued horses to deliver equine assisted learning (EAL) to her clients. Knapp and I were introduced by Pam McPhee and Paul Smith, when McPhee discovered that Knapp's EAL program and the VF-EFMH program I was working on were comparable in philosophy and design. Knapp, an adjunct professor at Prescott College in the equine assisted learning masters of education program, had been delivering EAL with success to civilians and veterans. Jaworski (2011) and Maxwell (2011) suggest that collaboration with professional peers can lead to better outcomes. The information in *More than a Mirror* (Knapp, 2013) and the collaboration between Knapp and myself helped to inform development of the VF-EFMH program.

Trotter (2012), building on her doctorate dissertation (Trotter, 2006) wrote *Equine*

Assisted Counseling: Adding Animal Assisted Therapy to Your Practice, as a guide for clinicians wanting to include EFMH in their practice. In her dissertation she conducted a control study comparing group equine counseling to school-based group counseling with 164 children and adolescents identified as at risk of academic and social failure. Each group participated in 12 weeks of either the equine group counseling or the school-based group counseling. Trotter used the Behavioral Assessment System for Children and the Animal Assisted Therapy-Psychosocial Form as pre and posttests. Paired sample *t*-tests and ANCOVAs revealed that the equine assisted counseling group had statistically significant improvement in 17 behavioral domains over the school-based counseling group with improvement in five behavioral domains.

Harnessing the Power of Equine Assisted Counseling (Trotter, 2012) was relevant to the formation of the VF-EFMH program as it offered insight into the underpinnings, theory, design and delivery of EFMH. Trotter (2012) offered her own insights and also provided chapters from clinicians in the field. Of note are the foundational theoretical frames that Trotter builds her work. Trotter (2012) highlights brief therapy, Gestalt therapy, reality therapy, and Adlerian therapy as the theoretical bases of her equine counseling. These theories align with the social work theory and evidenced-based practice, experiential educational theory and practice, constructivist theory, all of which are underpinnings of the VF-EFMH program.

Pilot Study: Ferruolo (2016). In 2013, I developed an EFMH program specifically designed to implement with veterans. This Veteran Focused Equine Facilitated Mental Health (VF-EFMH) program was developed to address depression and anxiety as well as reintegration issues. I started to create the VF-EFMH program while at

the University of New Hampshire in a master of social work graduate program. The pilot program was delivered in April of 2013 with myself, Pam McPhee of University of New Hampshire and Paul Smith from Prescott College as facilitators.

The pilot VF-EFMH program was a two-day program. Exit surveys were collected at the end of the program. The study (Ferruolo, 2016) on the pilot program was a secondary analysis of exit surveys, examining the quantitative and qualitative data. Participant self-report data from the exit survey revealed the following: that EFMH helped them with their current life issues, that the experience revealed aspects of personal behaviors that they were not aware of, and that EFMH lowered their levels of depression and anxiety, and elevated their self-confidence and ability to communicate while improving social skills (Ferruolo & Sollars, 2013; Ferruolo, 2016). Of the eight respondents, 100% rated the usefulness of the content as excellent and reported the program was valuable for meeting their current psychosocial needs as well as decreasing symptoms of depression and anxiety. The overarching theme from the qualitative analysis was the theme of *learning about self*, as participants reported that this learning about self helped with the process of change.

This pilot program was vital as its success was the starting point for continued evaluation via dissemination of exit surveys; albeit, these surveys were not intended to be part of a doctorate study, but rather to continue to explore the effectiveness of each individually delivered VF-EFMH program. Findings from the pilot VF-EFMH study (Ferruolo, 2016) correspond with supporting research (Carlsson et al., 2014; Earles et al., 2015; Holmes et al., 2012; Mayfield, 2016) that EFMH assists with the lowering of depression and anxiety. The pilot program study (Ferruolo, 2016) also links to the

Mayfield (2016) Carlsson et al., (2014) and Kakacek (2007) finding that EFMH fosters introspection, learning about self, and the internal processes that lead to change.

Theoretical Underpinnings of VF-EFMH

The curriculum of the VF-EFMH program derives from multiple theoretical underpinnings and disciplines including constructivism and social learning theory, experiential education with an embedded learner centered teaching philosophy, current evidenced-based social work practices, horse psychology, and the predator-prey relationship. It is important to understand the interplay of these theories and disciplines to better understand the VF-EFMH program.

Constructivists believe, that to understand human beings, we must look at them not only through a social and cognitive lens, but also from a cultural viewpoint (Ferrari, Robinson, & Yasnitsky, 2010; John-Stern & Mahn, 1996). Constructivism hypothesizes that humans learn and make developmental advances through a triadic collaboration of cultural and social contexts and cognitive processes (Berger, 2010; Feldman, 2001; Papalia, Olds, Feldman, & Gross, 2001). Culture and methods of thinking and behaving are an interwoven tapestry, each thread contributing to the wholeness of a person's world-views and perceptions. According to social learning theory, people learn by observing others and weighing the reinforcements that are received (Bandura, 1977). Schultz and Schultz (2008) state that these learned behaviors are not just stimulus response behaviors, as suggested by B.F. Skinner. Learning theory (Bandura, 1977) posits: 1) people can learn vicariously by watching the outcomes of other's behaviors and weighing for themselves the costs and benefits; 2) cognitive process has a part in the co-creation of what people will choose to model. Bandura's (1977) learning theory also

suggests that environment plays a part on behavior formation. Another core assumption is that of triadic reciprocity, meaning that people can choose their behaviors via cognitive process, however the social environment has a great deal of influence over behavioral outcomes (Bandura, 1977; Schultz & Schultz, 2009). Learning theory assumes choice and control over behaviors and gives us the notion of personal agency; that people possess, “intentionality, forethought, self-reactiveness and self-reflectiveness” (Ferrari, Robinson, Yasnitsky, 2010. p. 109). These theories suggest that learning is a dynamic process, not stagnant, and leads to the assumption that people can learn and change. The ability of our brain to change with learning and experience is called neuroplasticity, or plasticity (Perry & Szalavitz, 2006). Advances in neurobiology reveal that the brain is wired to change when presented with stimuli that is both patterned and repetitive (Perry, Pollard, Blakley, & Baker, 1995). These changes become use-dependent, or dominant. The brain works very similar to the muscles in the body. Simply, the more we use it, the more efficient it becomes, and if we stop using it, efficiency lessens.

Constructivist based social psychologists posit that the manner in which a person judges a stimuli will dictate what mood and affect will follow (Schultz & Schultz, 2009). The field of neurophysiology expands on how this happens. Farb et al., (2012) explain that in a psychologically healthy person, this appraisal process is regulated via the prefrontal cortex—the thinking part of our brains. They further suggest that if the cognitive areas of the brain are being used to process and make sense of the world, perceptual appraisal will be healthier, keeping a person from perseverating and diving into depression and anxiety. Further, if the psychological affect of the trauma is not dealt

with in this positive way, then thought patterns of fear and helplessness can resurface and continually replay in the mind (Perry & Pollard, 1998). This can lead to severe impairment of a person's life and cause negative psychological affect, because the victim psychologically perpetuates a dependent state of fear-based arousal and detachment (Perry & Szalavitz, 2006). Farb et al., (2012) state that the brain can operate through one of these pathways at a time, either positive appraisal through use of the prefrontal cortex, or via the limbic system through the fight or flight system.

For people suffering with depression and anxiety, it follows that if a clinician can help the person reappraise their thoughts in a positive way, then the negative psychological affect will subside. Cognitive behavioral therapy is used to help a patient identify their distorted negative thoughts and be more optimistic, thus lessening depressive and anxious symptomology (Corcoran, 2006). Farb, Anderson, and Segal (2012) state that some people suffering with more severe and chronic depression and anxiety may not be able to reappraise their emotions, as the brain circuits these patients use in an attempt to reappraise are habitually hard wired through the limbic system. Unfortunately, due to plasticity of the brain, continued use of neural pathways will strengthen and fortify that pathway (Begley, 2007), possibly further entrenching the negative mood and affect and perpetuating the negative rumination (Corcoran, 2006). The evidenced-based practice of mindfulness combined with experiential education wisdom may have an answer. Farb et al. (2012) postulate that mindfulness activities might help reduce habituated affective processing. These researchers (Farb et al., 2012) suggest that being in a deliberate, attentive, focused state can activate neuropathways in the brain that cease negative ruminations. Experiential education research (Dewey, 1938;

Kolb, 1984) suggests that when people are outside of their routine environment where their habitual patterns of behaving do not work, they are forced to step back, reflect, and through the process of praxis, learn new behaviors to meet presenting challenges. Being in the ring with a horse is one such environment in which, with the guidance of a skilled facilitator, both mindfulness and praxis can occur.

Both constructivists and learning theorists believe that for people to learn, certain components have to come into play. There is a collaborative balance, a reciprocity, between the social, the cultural, and the cognitive and that all three constructs must come into play when learning. Constructivists state that to activate the process of learning and to motivate the learner, the task has to be guided and it must be challenging enough to incite learning but not so simple that boredom sets in (Ferrari et al., 2010; John-Stern & Mahn, 1996). The learning theorists agree that learning is a process of direct observation or vicarious learning (Schultz & Schultz, 2009). This is where the concept of a *More Knowledgeable Other* (MKO) comes into play. Constructivism postulates that to learn, a person needs to be guided by someone or something with more knowledge and experience, and through this collaborative social interaction, a person is able to understand and internalize the mechanisms needed for full comprehension (Ferrari et al., 2010; Papalia et al., 2001). Further, in the case of addressing veterans' issues, elements of experiential education and evidenced-based social work practice must intermingle. Creating an engaging, challenging environment so that praxis occurs (Kolb, 1984) while identifying therapeutic instances and employing an evidenced-based treatment like CBT (Beck & Beck, 2011) so that the process of reflecting, processing, and learning is directed in a positive, pro-social direction is vital. This process is contingent on the facilitator, his

ability, skill, and acumen delivering VF-EFMH. Constructively speaking, the facilitator is the MKO, a model, a teacher, a mentor, and a guide. This is an important concept within the construct of the VF-EFMH program. As a veteran and the facilitator of the program, I become the MKO; further, I foster social cohesion by facilitating the use of peers as MKO.

As stated, learning must not be too hard or too easy. This is the core component of Vygotsky's *Zone of Proximal Development* (ZPD). Papalia et al. (2001) defined the ZPD as "the difference between what a child can do alone and what the child can do with help" (p. 44), while Feldman (2001) stated that the ZPD is the zone in which a person can just about accomplish something without help, but not quite. Both Papalia et al., (2001) and Feldman (2001), along with other authors (Berger, 2010; Ferrari et al., 2010; John-Stern & Mahn, 1996) all state that to expand beyond the ZPD and to have learning and development occur, the learner needs to be guided by use of *scaffolding*. Scaffolding is defined as the process of helping a learner meet the just out-of-reach learning objective by offering assistance that will support each level of skill and knowledge required to reach the desired outcome (John-Stern & Mahn, 1996; Papalia et al., 2001).

I also use Doyle's (2008) teaching philosophy of creating a learner centered environment within the VF-EFMH program. This philosophy interlaces well with VF-EFMH as its underpinnings are constructivist and experiential. Doyle (2008) asserts that a less directive, less teacher centric way of delivering curriculum is more conducive to better outcomes for the student. Doyle (2008) calls this *learner-centered*, by creating a collaborative learning environment and inspiring investigation and learning through choice. Within VF-EFMH, this is done by allowing freedom within the activities for

participants to interact with the horses in their own way. Participants are *invited* to interact *if they are willing*, and they are encouraged to be *curious* and to *investigate and explore* the horse and the relationship. In this learner-centered environment participants have choice and creative freedom and learn about the subject from the experience, their peers, and themselves (Doyle, 2008).

The horse must not be discounted, as the horse is the primary catalyst for how these underpinnings are connected and work. Taking into consideration experiential learning theory (Kolb, 1984) and mindfulness activation of the present moment pathway (Farb et al., 2012), we can see how a horse can facilitate learning when facilitated in a constructivist and social learning (Ferrari et al., 2010) and learner centered way (Doyle, 2008). The horse works well because of its size and because it is a prey animal. The size of the horse demands attention to keep a person physically safe. This interaction of human-horse is conducive to the activation of the present moment pathway (Farb et al., 2012) where the participant is in the moment, aware, and has full concentration on what is happening. A person cannot be simultaneously in the moment, using appropriate cognitive appraisals while also ruminating in a state of depression or anxiety (Farb et al., 2012). This emotional affect is different from in the moment fear-based anxiety of being with a horse for the first time. Even though the person is *in the moment*, he may still feel fear and anxiety. This is the time for a facilitator for teach and review mindfulness. Keeping in mind the philosophy of a learner centered environment (Doyle, 2008), the participant is encouraged, only if willing, to continue with his investigation of the horse and the situation. As the evolution unfolds and the participant gets more comfortable with the horse and being in the presence of the horse, the facilitator again encourages, if

willing, the participant to complete a task with the horse. Again, because of the size of the horse the participant may first rely on previous ways of thinking and behaving, typically creating frustration because those old patterned habits might not work well with a horse. This is where horse psychology and the human-animal interaction comes into play.

Horses are prey animals. They are very sensitive to predator behaviors, not necessarily the predator per se, but how a human predator acts may create a reaction in them (Miller, 2007; Parelli, 2004). Horses also have differing needs than people. The horse hierarchy of needs includes: safety; interacting and being with the herd; comfort and play; and food and water while also needing leadership and safety within the herd dynamic (Miller, 2007; Parelli, 2004). If a human is angry because the human's goal is not being met when working with a horse, then the horse will sense this anger and react accordingly, most likely keeping its distance and shying away from the human. The horse needs safety and is hypersensitive to unsafe situations. Overt anger might elicit a flight response and nervousness from the horse, as it attempts to stay away from the perceived threat. If a participant is anxious and frustrated and then disconnects from the horse, perhaps rerunning her cognitive and behavioral habitual script of helplessness, the horse might react with indifference. However, the horse still might sense this frustration, and keep a safe distance, but the presentation of human helplessness may not incite a flight response or nervousness on part of the horse. The horse might just keep its distance and quietly ignore the human. In both these situations, the participant's previous ways of interacting with the world do not work. By nature of this experiential experience, the person is forced to step back, reflect, find insight, create new in the moment ways of

thinking and doing and move forward in the process, with the process being of most importance (Kolb, 1984). This praxis is at the core of experiential learning.

Within this complex construct of VF-EFMH the facilitator is cognizant of those emerging therapeutic instances to which an evidenced-based treatment is used (Ferruolo, 2016). With participants who use force, fear and intimidation or passivity and helplessness as the default behavioral habituations, the facilitator might use CBT (Beck & Beck, 2011) to help the participant to identify those cognitive and behavioral patterns, uncover the underlying triggers to those pattern, assist the participant to reality test and reframe, and look for more mature ways of coping and behaving that will create better outcomes. This therapeutic change process simultaneously occurs with the experiential unfolding of praxis.

Limitations and Directions of EFMH Research.

Although the review of literature on EFMH studies shows promise with treating the veteran population, Bachi (2012) and Lee et al. (2016) highlight the limitations of EFMH studies and the need for more rigorous EFMH research. These researchers agree that existing EFMH studies are fraught with weak methodological issues and lack of rigor, including: (1) no control group; (2) No control groups; (3) not grounding interpretations of outcomes in the actual research data; (4) ambiguity and misuse of terms, constructs, and concepts; (5) reporting personal doctrine and not actual theory; (6) small sample size; (7) low response rates; (8) lack of personal disclosure of relevant researcher bias and background to establish trustworthiness; (9) perceived difference in outcomes and importance among a diverse sample of EFMH professional

Despite the limitations in the research, both Lee et al., (2016) and Bachi (2012)

agree that EFMH is an emerging and effective modality of treatment for psychological issues and that there is a need for additional research to further study EFMH's effectiveness and validity. In order to begin to address the identified limitations, Lee et al., (2016) suggests that future studies about EFMH concentrate on one clinical population and targeted issues. Also, Lee et al., (2016) discussed the interdisciplinary nature of EFMH and that most EFMH research has been conducted by mental health practitioners. Subsequently, they further recommend that future EFMH research include both mental health practitioners and equine experts to respectively present diverse perspectives. This study satisfies both sets of recommendations through a clear focus on veterans suffering with depression and anxiety and a program that is delivered by a licensed clinical social worker who is an experienced, trained horseman, and a veteran.

Conclusion

Issues of veteran unemployment, homelessness, violent crime, suicide, domestic violence, poverty, and substance use exacerbate and are prolonged by untreated mental health; however, timely and relevant treatment can lead to remission of symptoms and increased well-being (Cornish et al., 2014; Elbogen, Johnson, Wagner, et al., 2012; Hawryluk et al., 2005; Hoge, 2010; Kaplan et al., 2012; Litz et al., 2009; Moore & Penk, 2011, 2011; Tanielian & Jaycox, 2008; Teten et al., 2010). Nearly half of returning combat veterans will suffer from mental illness (Cornish et al., 2014; Elbogen, Johnson, Wagner, et al., 2012; Hawryluk et al., 2005; Hoge, 2010; Kaplan et al., 2012; Litz et al., 2009; Moore & Penk, 2011, 2011; Tanielian & Jaycox, 2008; Teten et al., 2010), many also suffering with moral injury (Cesur, Sabia, & Tekin, 2013). Poor and declining mental illness can have significant effects, leading to declining psychosocial

circumstances (Litz et al., 2009). The review of literature provided in this chapter suggests that EFMH is effective at treating the psychological issues of veterans. The theoretical underpinnings of the VF-EFMH program studied in this dissertation were informed by current EFMH literature (i.g. Knapp, 2013; Trotter, 2012) and is rooted in constructivism (i.g. Papalia et al., 2001), social learning theory (Bandura, 1977), learner-centered teaching (Doyle, 2008), experiential education (Dewey, 1938; Kolb, 1984; Priest & Gass, 1993), horse psychology (Miller, 2007; Parelli, 2004), current evidenced based practices for treating psychological disorders, while also being attentive of veterans issues (Hoge, 2010; Moore & Penk, 2011).

Veteran issues are considerable and more efforts must be taken to address the problems these men and women face. Current evidenced based practices are available and have proven value, but more pathways to healing have to be created and more widely offered. Working with horses has many benefits and the VF-EFMH program as shown preliminarily efficacy (Ferruolo, 2016). This literature review provides a backdrop of veterans' issues, offers a framework for VF-EFMH programming, and provides a conceptual framework for the current study.

Chapter 3

Methods Section

The purpose of this study was to explore the effectiveness of Veteran Focused Equine Facilitated Mental Health (VF-EFMH) as a treatment modality for veterans suffering with depression and anxiety, while also seeking deeper insight into the value the program had for participants. The constructural and contextual nature of this study also closes some of the current gaps and limitations in EFMH literature. Equine facilitated mental health has shown promise with treating veterans (i.g. Ferruolo, 2016; Lanning & Krennek, 2013). Lee, Dakin, and McLure (2016) and Bachi (2012) outlined some of the gaps and limitations of the current EFMH literature. Limitations of existing EFMH research included a focus on different one-time programs, with these programs having different agendas, varying curriculum, different treatment modalities, and different facilitators with varying degrees of expertise (Bachi, 2012; Lee et al., 2016). These limitations offer rationale for the research being reported in this dissertation. Extending the research base through a focus on ten separate offerings of a consistently delivered program and the inclusion of data from 49 participants, this study is unique in the literature. Although the VF-EFMH program from which the data was collected was delivered at multiple locations and at different times and years, I personally facilitated the program and followed the same curriculum design and schedule, used the same treatment modalities within the construct of EFMH, and targeted the same population. Further, I am a former Navy SEAL and a licensed clinical social worker (LCSW), and a master licensed alcohol and drug counselor (MLADC). I have clinical and educational education, experience and expertise in delivering treatments for mental health, substance

use, and co-occurring disorders while also possessing experience and expertise delivering EFMH. I have a background as a horseman, with education and experience as an owner, rider, and natural horsemanship trainer. These factors ground the rationalization and reliability for this study, as no prior published EFMH research has had these factors present within a single study; subsequently, this study has the potential to extend the EFMH literature in a substantial way.

Methodology

This investigation utilized an explanatory sequential mixed methods design to answer the primary research question of: *is VF-EFMH effective and valuable for veterans with anxiety and depression*. This question guided both the quantitative and qualitative segments of this study. This type of research design uses in-depth qualitative data to help better explain, interpret, and support the quantitative results (Creswell, 2013, 2015; Patton, 2015).

The first segment of this explanatory sequential mixed methods study was a secondary analysis of existing survey data from VF-EFMH programs, which occurred between 2013 and 2017. This analysis examined whether VF-EFMH was effective and valuable for veterans suffering with depression and anxiety. Forty-nine surveys from ten programs spanning five-years comprised those data (Table 3).

The second phase of this study helped to clarify and expand on the results from the secondary analysis by employing a follow-up qualitative investigation with a purposive sample of former participants of these VF-EFMH programs. This investigative segment focused on participants' perspective of the VF-EFMH program. Each sample frame had participated in one of the programs studied in phase one and outlined in Table

3. Participants were interviewed regarding their perceptions of the VF-EFMH program’s effectiveness, with the main focus on whether the VF-EFMH program helped the participant to lower symptoms of anxiety and depression and to explore the perceived value of the VF-EFMH program from the participants’ perspective. Value based questions explored: whether there were any social skills learned or developed; if there were any beneficial changes in the participants’ life as a result of the experience of the VF-EFMH program; whether having a veteran as qualified facilitator was influential; and perceptions on the importance of using horses.

Table 3

Year, Number of Retreats, Entity, and Number of Surveys

<i>Data Set (ds)</i>	<i>Year</i>	<i>Number of Retreats</i>	<i>Number of Surveys</i>
ds 1, 2	2013	2	17
ds 3, 4	2014	2	10
ds 5, 6	2015	2	9
ds 7, 8	2016	2	11
ds 9, 10	2017	2	2
Totals		10	49

Quantitative Segment

Research hypothesis. The VF-EFMH program: a) is effective for reducing depressive and anxious symptoms; b) is of value. *Null hypothesis.* The VF-EFMH program: a) is not effective for reducing depressive and anxious symptoms; b) is not of value.

The initial section of the study was a secondary analysis of preexisting program data, examining survey data from the ten VF-EFMH program groups. Rubin and Babbie (2011) state that secondary analysis is an unobtrusive evidenced-based research method

that can answer different research questions by analyzing variables differently or using diverse statistical tests. I examined participant responses, looking specifically at questions about depression and anxiety as well as perceived value between the data sets.

Secondary data analysis was done with Chi Square testing. The Chi Square is a nonparametric test in which tests of independence are done on categorical variables using a bivariate table (Patten, 2017; Rubin & Babbie, 2011). This test was used to see if there were any significant differences in participant responses between the program data sets, examining the ten data sets against participant responses about depression, anxiety, and value. Chi Square was also selected to test if there was a significant relationship across data sets using demographic characteristics.

Qualitative Segment

According to Creswell and Plano Clark (2011), Patton (2015), Rubin and Babbie (2011), qualitative questions should focus on explaining in more depth, interpreting, and supporting the quantitative results while also extrapolating on ambiguous constructs. Interview questions (Appendix A) were used to develop a deeper understanding of exit survey data and focused on identifying whether specific aspects of the program had an effect on depression and anxiety and if so, why. The questions also investigated whether the VF-EFMH program had value for the participant, looking at if there were any beneficial changes to the participant's life from participation, whether having a veteran facilitator was influential, and perceptions of using horses. The questions were multistage, being both probing and interventional intending to unearth data that better explains, helps interpret, and supports the quantitative results (Creswell, 2015; Grinnell,

Gaber, & Unrau, 2015; Patton, 2015), while also gaining a better understating of what aspects of the EFMH program are effective for participants (Grinnell et al., 2015).

After Institutional Review Board IRB approval, an invitation message (Appendix B) was sent to prior participants of the VF-EFMH program offerings asking for volunteers. This message was sent via email and also posted in private Facebook groups. Private email contact information for participants had been collected and saved by the organizations that hosted the VF-EFMH program. All entities had agreed to send out the emails on my behalf. Private Facebook groups were created by one of the sponsoring agencies for each separate program and individual participants in those programs are members. That organization agreed to post the invitation message in the aforementioned Facebook groups. Initially, eleven people responded to the first invitation for participation.

After the final sample was identified and recruited and the informed consent (Appendix C) was obtained from respondents, I scheduled interviews to meet participant needs and schedules. This was done by sending an email to the participant with a list of days and times for them to choose from. Two interviews were conducted in-person at a private conference room at a community primary care facility. This meeting site was selected to ensure privacy and confidentiality. I also conducted three video conferencing interviews from a private office at this same community primary care center. One interview was done via cell phone. Initial emails were sent out within three days of IRB approval. All interviews were completed within 45 days of IRB approval.

Sample. Patton (2015) writes about the ambiguity of choosing a qualitative sample size, discussing the debate between breadth and depth and cautioning about

relying on probability sampling recommendations for qualitative work. The qualitative researcher must be good working with ambiguity, because “there are no rules for sample size in qualitative inquiry” (Patton, 2015, p. 311). Patton (2015) does not give any hard numbers but implies that a sample of four might be too small to capture the diversity and depth of information needed and that ten or more might provide diversity but limit depth. The chosen sample size should be practical and purposeful and fit the frame and logistics of the study and the researcher (Patton, 2015). The sample size chosen for this dissertation was six. The first considerations were the coding methods and the timeframe for this study. Interview time length, transcribing time, and time to code were considered. It was speculated it would take between ten and twelve hours per interviewee to complete (Creswell & Plano-Clark, 2011; Patton, 2015; Saldaña, 2016). With this in mind I originally chose four participants, with the reasoning that is was viable in the time allotted to complete this study. I then reviewed literature on EFMH and found that Kakacek (2007) and Meinersmann et al. (2008) both interviewed five participants, Carlsson et al. (2014) selected a sample of 17, Mayfield had a sample of three, and I had a sample of eight in the pilot program. Given the EFMH literature and Patton’s (2015) wisdom on sampling for qualitative inquiry, I selected six as my final sample. This was supported by my dissertation committee and approved by the IRB.

In order to identify the six individuals to be interviewed, a purposive sample was sought. Purposive samples are handpicked based on certain criteria and characteristics that lend to the most diverse sample in the sampling frame (Grinnell et al., 2015). First, each sampling unit had to have participated in one of the VF-EFMH program offerings I facilitated during the 2013-2017 time span. Each individual needed to have completed an

exit survey at the end of their VF-EFMH program experience. Thereafter, goals of sampling were to identify the most diverse group of participants. I established the following criteria for identifying the sample: gender, service type, and ethnicity (Table 4), with the goal of the final sample being representative of the total population that participated in program offerings.

Table 4

Sample Criteria

<i>Criteria Name</i>	<i>Criterion</i>
Participation Exit survey	A sample unit had to have participated in a VF-EFMH offering between 2013-2017
Gender	A sample unit had to complete an exit survey The sample will consist of male and female participants
Service type	The sample will represent at least four of the six services (Army, Navy, Air Force, Marines, National Guard, Coast Guard).
Ethnicity	The final sample will be represented by at least two differing ethnicities.

Of the initial eleven respondents, all had participated in one of the VF-EFMH offerings and filled out an exit survey. There were five male respondents and six female respondents that represented the Army, Navy, Marines, Air Force, and National Guard. There was no ethnic diversity among the sample, with all respondents being Caucasian. The names were sorted by first name alphabetically. Invitations for participation were sent to the first six sample units on the alphabetical list. Four invitees responded; three female and one male. Over the following few weeks, invitations were sent out to the remaining five people on the list, however no one responded. Snowballing was then used during the structured interviews to find more willing sample units. During the first interview, that interviewee offered to personally reach out to a male veteran. That male

veteran agreed to participate, which made the sample three women and two men. These initial five interviews were completed in the latter part of March 2018. During the last days of March 2018, a male veteran who had been invited in the original email responded and offered to participate. This final sample unit was accepted for participation, met the inclusion criteria, and the interview was conducted April 3rd, 2018. This made the final interviewed sample three females and three men, representing the Army, Marines, and Air Force.

Exclusion criteria. A sample unit was excluded if the represented service was only in the reserves without any deployments. A reservist that went on at least one deployment to a war zone was considered for selection. If, at the time of interview, a sample unit was impaired to the point that he or she could not participate in the interview process, than that person was excluded. Such impairments were: under the influence of a substance; cognitive impairment; severe psychological impairment. Assessment of participant ability to participate was gauged at time of interview. One participant, as previously discussed, was excluded due to her cognitive impairment at time of interview. A female participant that had been invited during the second round of emails reached out via email and offered to participate. Unfortunately during the interview, this participant was cognitively impaired. She was vague, tangential, and circumstantial with loose associations. This process of thought made it impossible to extract pertinent information that was viable to the research. This participant was excluded from participation based on presenting cognitive impairments.

Interview protocol. Creswell (2014) suggests an interview protocol (Appendix D) that consists of: the heading, the instructions, the preliminary interview questions,

probes for more detail, and a final thank you. That format was followed during the interview process.

Participants had a choice to meet in person, or use either DOXY video calling or phone, with in person or video interviewing through DOXY preferred. DOXY (doxy.me) is an online platform for delivering Televideo mental health counseling that is HIPPA compliant and HITECH certified. Using DOXY better insured the privacy, security, and confidentiality of respondents. DOXY can be used with a computer, tablet, or smartphone. If respondents preferred to use a tablet or smart phone, the DOXY application would have had to be downloaded and used. Patton (2015) stated that it is important to be able to read facial expressions and body language during the interview process. For this reason, in person or video interviewing was preferred. The interviews were scheduled for one-hour sessions. Each interview was audio recorded using two devices for redundancy. The speakerphone option was used to conduct one phone interview. A MacBook and an iPad were used and QuickTime player was used on each device to audio record the interviews. Of the six interviewees that were selected for analysis, two interviews were conducted in person, three using Doxy, and one via phone.

There was no payment or any other consideration for participation. No coercion or deceit was used. Participants were able to withdraw from participation at any time and for any reason without any negative consequences.

Analysis. Transcripts. Transcripts were created for all interviews. To thoroughly immerse myself in the data and to gain deep insight (Patton, 2015), I personally transcribed the interviews. Patton (2015) stated, “qualitative analysis transforms data into findings” (p. 521) and that having accurate verbatim transcriptions are “the essential

raw data for qualitative analysis” (p. 525). Methods should be taken to ensure validity (Creswell & Plano-Clark, 2011; Patton, 2015; Rubin & Babbie, 2011; Saldaña, 2016), thus I used a two-part process. I first transcribed each interview into a table matrix (Appendix E) with the primary investigator (PI) and respondent volunteer (RV) clearly identified by shaded and non-shaded cells. This table also helped in the coding process. Patton (2015) suggests listening to the interview and reading the completed transcript to check for accuracy and further immerse into the data. After the transcriptions were complete, I then double-checked for accuracy by listening to the recordings while reading transcripts. I then sent the transcripts out to each individual for member checking. Three of the participants responded. There were no changes or negotiations. After the coding process, I again sent to the participants a copy of the transcript with the identified themes. The intent was to collaborate with the participant regarding the nature of the findings; however, none of the respondents replied to my offer of negotiation. Creswell (2013) stresses the importance of qualitative validity. Member checking is one method of controlling for validity by inviting participants to check the accuracy of the transcription and what was said (Creswell, 2013; Saldaña, 2016). Again, three participants acknowledged accuracy of the transcripts without changes but none of the participants responded to the offer to negotiate themes. Because of other strategies being employed to ensure trustworthiness of findings (see Trustworthiness Procedures) this was not viewed as providing a further limitation.

Coding. Data coding followed the process outlined by Saldaña (2016), which included: first-cycle, after first-cycle, and second cycle coding. Thematic coding (Creswell & Plano-Clark, 2011; Patton, 2015) was also done in conjunction with first

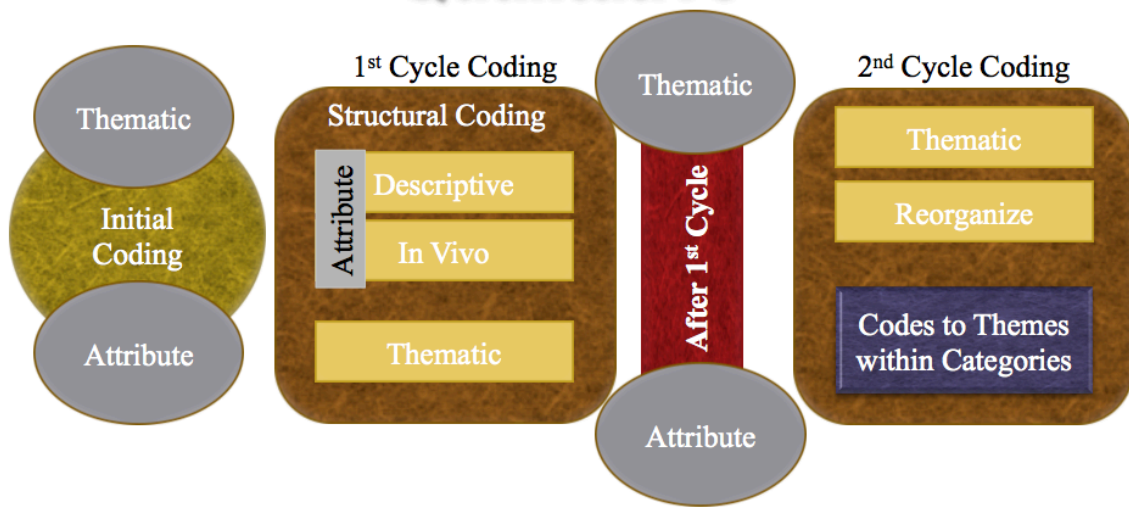
cycle and after first cycle coding. Saldaña (2016) states that coding is a flexible and interpretative process and the individual researcher must decide which methods and processes are best suited for the specific research design and questions. Grammatical and elemental methods (Saldaña, 2016) were best suited for this study and used, along with thematic coding (Creswell & Plano-Clark, 2011; Patten, 2017), during the first-cycle coding process. First cycle coding included the following steps: attribute coding from the grammatical; from the elemental methods, I used structural, descriptive and in vivo coding (Saldaña, 2016) along with thematic analysis (Creswell & Plano-Clark, 2011; Patten, 2017). Descriptive statistics were used to support the attribute and structural coding (Rubin & Babbie, 2011; Saldaña, 2016). *Coding*. Data coding followed the process outlined by Saldaña (2016), which included: first-cycle, after first-cycle, and second cycle coding. Thematic coding (Creswell & Plano-Clark, 2011; Patton, 2015) was also done in conjunction with first cycle and after first cycle coding. Saldaña (2016) stated that coding is a flexible and interpretative process and the individual researcher must decide which methods and processes are best suited for the specific research design and questions. Grammatical and elemental methods (Saldaña, 2016) were best suited for this study and used, along with thematic coding (Creswell & Plano-Clark, 2011; Patten, 2017), during the first-cycle coding process. First cycle coding included the following steps: attribute coding from the grammatical; from the elemental methods, I used structural, descriptive and in vivo coding (Saldaña, 2016) along with thematic analysis (Creswell & Plano-Clark, 2011; Patten, 2017).

Coding process (Figure 2). The coding process was a rigorous and complex synthesis of best coding practices along with what prominent qualitative researchers

(Creswell & Plano-Clark, 2011; Patton, 2015; Saldaña, 2016) good critical thinking (Figure 1).

Figure 2:

Qualitative Coding Methods



First cycle coding started with a read-through of the six individual transcripts, extrapolating those pertinent datum for initial attribute coding and initial thematic code consideration (Creswell & Plano-Clark, 2011; Patton, 2015; Saldaña, 2016). Notations were entered in the transcript table. Then, data codes were analyzed to provide ideas for initial overarching themes. This aligns with Saldaña’s (2016) suggestion of a first run through of transcripts, initially analyzing datum then identifying preliminary codes based on the analysis, then codes to themes. I then created a coding matrix (Appendix F). Based on Saldaña’s (2016) structural coding philosophy, each transcript was analyzed and entered into the matrix.

I used the qualitative questions as the structure base for categories, based on Saldana’s (2016) structural coding strategy (see Appendix F). Those questions became the headings of the matrix sections and each transcript was individually analyzed and

data entered into the corresponding section. I first analyzed each individual transcript for structural and in vivo data (Saldaña, 2016) and entered that information, along with the preliminary data from the first run through into the matrix in the appropriate question category. Once that process was finished, I moved to after first cycle coding where I engaged in the process of regrouping, rethinking, and reanalyzing first-cycle data outputs in order to more strategically move into second-cycle coding (Saldaña, 2016). During this process, I analyzed the coding matrix, triangulating, using multiple approaches to ensure validity (Patton, 2015; Rubin & Babbie, 2011; Saldaña, 2016), including Saldaña's (2016) grammatical and elemental methods and thematic coding as suggested by Patton (2015) and Creswell and Plano Clark, (2011). Saldaña (2016) quotes qualitative researcher Robert Stake: "Good research is not about good methods as much as it is about good thinking" (p. 212). Reexamining the coded data offered me the opportunity to think more critically, deeply and clearly about the first-cycle analysis, the time for rethinking and reanalyzing, and then to make more informed decisions about that process and about which methods of second-cycle coding to use (Saldaña, 2016).

One of the issues when analyzing the transcripts, and in the process of initial and first cycle coding, was the fact that the participants answered questions in not-specific ways and often provided content that was either not related to the questions or related to a previous question or had a relation to a question not yet asked. This was addressed in the after first cycle coding process. A secondary recoding matrix (see Appendix G) was created to sift through the original structure categories and move relevant information into the aligning appropriate categories. This process entailed reexamining the transcripts alongside of the coding matrix then reorganizing the information and entering those

existing data into the appropriate category. The secondary recoding matrix was then analyzed using structural, in vivo, and attribute coding, along with thematic coding (Creswell, 2013; Patton, 2015; Saldaña, 2016). I then analyzed the coding matrix and the secondary recoding matrix and created a list of primary themes that aligned with the structural categories.

Second cycle coding consisted of an eclectic mix of techniques to continue to probe deeper and ensure validity (Patton, 2015; Saldaña, 2016).

Table 6

Evidence of Themes

Theme	How evidence is identified
Social Connection	Vernacular that showed, was indicative of, or was related to aspects of social connecting. This includes words or phrases that point to how being with other people, connecting with other people, talking, bonding, interaction with other people was effective for reducing depression and anxiety or of value based on the interview question asked.
Internal processing	Vernacular that showed, was indicative of, or was related to internal processing of information that lead to new or revised schema, thinking patterns or behavioral habits/reactions based on the interview question asked. These are words or phrases with the context of the questioning that linked introspection and thinking about one's self to an outcome of change, either cognitive or behavioral.
The horse	Vernacular that showed, was indicative of, or was related to how interacting with or being in the presence of horses assisted or facilitated lowering of depression and anxiety or provided value based on the interview question asked.

Pattern Coding (Saldaña, 2016), which can assist in identifying themes and with transitioning first-cycle codes into more meaningful data for analysis was used, along with a thorough reanalyzing of initial, in vivo, and structural codes, and another in-depth look using thematic coding. This process utilized the six individual transcripts, the coding

matrix, and the secondary coding matrix to complete the qualitative analysis. Table 6 overviews the identified themes and how evidence was identified.

It is important to note, that themes were determined from coding and theming within a structural analysis construct, which predisposed the category by using the questions asked as category of inquiry. Therefore, connecting the theme to a category of inquiry was pre-implied by nature of the question being asked and the method of analysis being structural (Saldaña, 2016) in nature. This rigorous triangulated methodology gives deeper credibility to the emergent themes (Creswell & Plano-Clark, 2011; Patton, 2015; Rubin & Babbie, 2011; Saldaña, 2016).

Risks of Participation

There were minimal risks associated with this investigation. One risk was that discussing the program and past participant issues might evoke strong emotions that a participant may not be ready to cope with (Patton, 2015). Patton (2015) states that an interview is an intervention; a reflective process that might open old wounds and have a profound effect on participants. Such issues may cause situational psychological distress. Several participants did experience strong emotions during the interview, however, I did not perceive those emotions as negative and no interventions were needed during the interview. My experience as a Licensed Independent Clinical Social Worker (LICSW) and a Master Licensed Drug and Alcohol Counselor (MLDAC) assisted me with minimizing this potential risk and any adverse outcome. Brief supportive counseling was used when emotions ran high; but, there was no need for any participant to stop the interview or to be advised to seek professional assistance. Brief supportive counseling consisted of normalizing and validating a participant's thoughts and feelings and

providing and encouraging the time and space for the participant to regain a balanced, regulated emotional state and continue with the interview. This brief supportive counseling was not seen as a confounding factor for this study and did not appear to impact or influence the interview.

Ethical Considerations

The main ethical consideration is the multiple roles filled by this investigator. This investigator is the developer and facilitator of the program under study, the lead researcher, and the person who will collect study data and disseminate the information. Herein lies the possibility of researcher bias and loss of objectivity. In order to address these concerns, as well as those related to researcher bias, strict procedures to ensure trustworthiness were implemented.

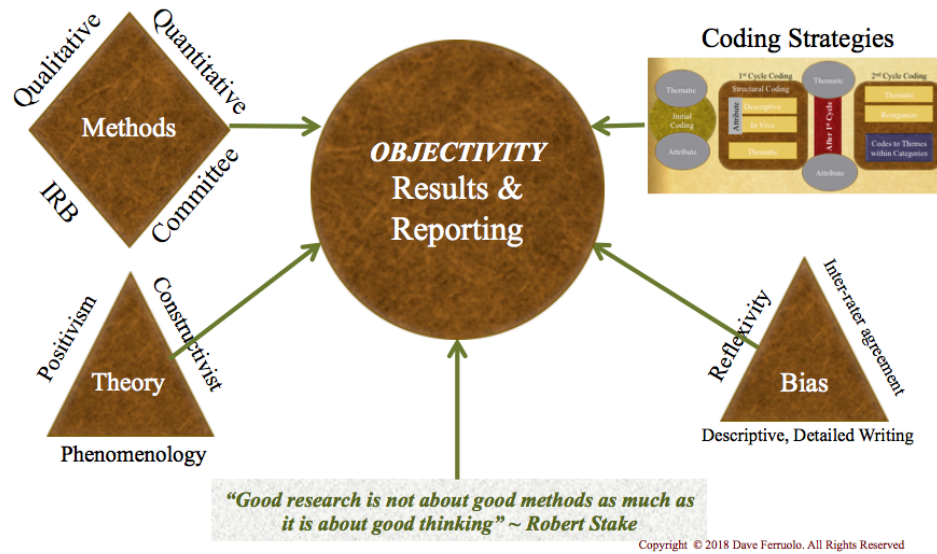
Trustworthiness Procedures

The question of trustworthiness in qualitative research is a positivist stance that questions how validity and credibility can be maintained within a construct of naturalistic inquiry (Patton, 2015; Rubin & Babbie, 2011). Patton (2015) and Rubin and Babbie (2011) discuss the constructivist view on trustworthiness, highlighting that constructivists are more concerned with uncovering the multiple subjective realities of participants than the positivists' pursuit of one singular quantifiable objective reality. Although this study is seeking to objectively determine the effectiveness of this EFMH program, in doing so, it must seek the individual perceptive realities of participants in order to actually explain, interpret, or support the quantitative results. However, as it is important to establish credibility in the quantitative analysis of this study, it is also imperative to establish trustworthiness during the qualitative segment.

Several of Creswell (2014) and Patton’s (2015) suggestions were used to increase trustworthiness, specifically addressing credibility, transferability, and dependability (Figure 3).

Figure 3:

Trustworthiness Procedures



Trustworthiness Procedures include: (a) method and theory triangulation (Patton, 2015) increases reliability of a study by using multiple methods and theories as cross verification of findings. Triangulation in this study was an important aspect of the mixed-methods design and the rigorous methodology employed to analyze all data, in particular the qualitative responses to interview questions; (b) inter-rater agreement (Patton, 2015; Rubin & Babbie, 2011) by using committee members as reviewers is an important aspect of this dissertation and increases reliability by having consensus among the dissertation committee member readers regarding the methodology and findings of this study; (c) researcher reflexivity (Patton, 2015) contributes to the trustworthiness of this study as continued personal introspection and systematic attending to all aspects of this research

supports objectivity and served to decrease the effects of bias. By remaining aware of my connection to this research and through the process of continual content analysis I strived to remain objective; (d) using highly descriptive writing, constantly comparing, and keeping analysis focused and congruent with the research questions is suggested by Patton (2015) as a way to reduce subjectivity and bias. There is an assumption in qualitative research that bias will emerge. This style of writing aids trustworthiness through a synthesizing writing process of summarizing and correlating the literature, theories, methods, and contextual aspects within this study in order to better explain, support, understand and validate findings (Patton, 2015; Saldaña, 2016).

Further, as a qualitative researcher, I am my own instrument of reliability and credibility, beyond the methods, the analysis, and the outcomes of the study (Patton, 2015) and subsequently to own and be mindful of my personal experiences and the biases they introduce to the study. Through my writing, I seek to show that I am a researcher with integrity and good intentions, making the credibility of my research will be organic and confidence in subsequent findings can be reached.

Researcher-as-Instrument. I am not only the primary investigator of this study, I am also the developer and facilitator at the center of this program. I have ownership of all aspects of the process and have a stake in the outcome of the research. I know, however, that I am objective and that I am able to stay objective because of my intense desire for knowledge and betterment. Staying objective and reflecting on any potential bias helps to uncover that which can be made better. I am passionate about helping veterans, I am passionate about research and writing, and I am passionate about making both better. I also have a very personal interest in this work, being that I am passionate about horses

and their well-being and I am also a veteran, who through relationships with horses, was able to heal myself and integrate myself fully back into the civilian world. Each program I run, every study, the papers that I write, perpetuate and further solidify my journey of healing as well as helping both veterans and horses. This all leads to a rather large concern regarding conflict of interest and ethical concerns in my research and the dissemination of this research. However, it is my belief that any concerns by readers of this study are also the same things that strengthen me as a researcher, writer, and practitioner.

My inner drive is to do something that is meaningful, that makes a difference. Although some might see it as idealistic, it is definitely not self-serving, per se, although the altruistic nature is self-motivating and self-confirming.

Conclusion

The purpose of this study was to provide additional information to the field on the potential for EFMH as treatment modality for veterans while also closing some of the current gaps and limitations in EFMH literature. This explanatory sequential mix methods design explored the effectiveness of a Veteran Focused Equine Facilitated Mental Health program for veterans suffering with anxiety, depression, and reintegration issues. The quantitative segment of the study was a secondary analysis of 49 exit surveys from participants that have attended one of ten VF-EFMH programs that I have delivered between the years of 2013-2017. The second segment of the study was a qualitative segment with six individual interviews. Data from the interviews was used to more fully understand the meaning of quantitative results.

Chapter 4

Analysis and Findings

This mixed methods study was conducted to explore the therapeutic modality of Equine Facilitated Mental Health (EFMH) as a treatment modality for veterans suffering with depression and anxiety, while also exploring the perceived value the program had for participants. This study also closes some of the gaps in EFMH literature. This explanatory sequential mixed methods design started with a quantitative analysis of VF-EFMH program exit surveys from one VF-EFMH program delivered ten individual times between 2013 and 2017. The qualitative analysis helped to better explain, interpret, and support the quantitative results (Creswell, 2013, 2015; Patton, 2015). Further, the qualitative portion of this study offered the opportunity to delve deeper into the construct of VF-EFMH and explored what aspects of the program were effective and beneficial for participants. This study provides information that will be helpful for practitioners engaging with veterans using EFMH.

The overarching research question of, is VF-EFMH effective for treating veterans with anxiety and depression and what was the value the program had for veterans, guided the development of the methodology and provides a framework for analysis of collected data. Quantitative data was gathered from 49 VF-EFMH program exit surveys and was analyzed through the use of SPSS software using descriptive and Chi Square analysis. Qualitative data was gathered from a sample frame of six veterans that had completed one of the VF-EFMH program implementations from 2013 through 2017 and had completed an exit survey. Data was collected using semi-structured interviews. Analysis of qualitative data was conducted using a triangulated approach, employing Saldana's

(2016) coding methods, along with thematic analysis as suggested by Creswell and Plano Clark (2011) and Patton (2015). Analysis has been provided in three sections in this chapter. The first provides demographic information related to both the quantitative and qualitative sources of data. The next, provides an analysis of the quantitative and qualitative data relative to depression and anxiety. The final section provides analysis of the perceived value of the VF-EFMH program.

Data Analysis and Findings

Demographics

Table 7 represents the characteristics and demographics of exit survey respondents from the 2013-2017 VF-EFMH programs. Although the total number of exit surveys is 49, eight exit surveys did not have the demographic section of the questionnaire completed. All respondents (N=49) answered all the other exit survey questions related to anxiety and depression and did report the branch of the armed forces they served; however, characteristics and demographics data was only collected from 41 surveys. Further, some participants did not answer all the characteristics and demographics questions, which is noted in table 7 as *missing variable*.

Programs exit surveys from the years 2013 through 2016 were represented approximately equally, with two respondents from a 2017 program. Seventeen (41%) exit surveys were collected from programs run at Ironstone Farm in Andover, MA from 2013 and 2014; Two (5%) were from a 2014 program conducted at a private farm in Gilford, New Hampshire (NH), and the rest of the surveys (54%; $n=22$) were from programs run at Live and Let Live Farm in Chichester, NH from 2015 through 2017. Nearly 70% ($n=28$) of respondents were male with just shy of 30% ($n=12$) female.

Table 7

Characteristics of Exit Survey Respondents: 2013-2017 VF-EFMH programs (N=49)

Characteristic	%	<i>n</i>
Gender (<i>n</i> =41)		
Male	68.3	28
Female	29.3	12
Missing variable	2.4	1
Education (<i>n</i> =41)		
GED	9.8	4
High school graduate	51.2	21
College graduate	31.7	13
Trade/vocational/technical training	2.4	1
Missing variable	4.9	2
Branch of service (<i>n</i> =49)		
Army	46.9	23
Marines	10.2	5
Navy	18.4	9
Air Force	14.3	7
National guard	4.1	2
Missing variable	6.1	3
Length of service (<i>n</i> =41)		
Less than 2 years	2.4	1
2–3 years	12.2	5
4–6 years	39	16
7–9 years	17.1	7
10–15 years	9.8	4
16 or more years	14.6	6
Missing variable	4.9	2
Marital status (<i>n</i> =41)		
Single, never married	19.5	8
Married	26.8	11
Widowed	0.0	0
Divorced	26.8	11
Separated	17.1	7
Missing variable	9.8	4
Year of participation (<i>n</i> =41)		
2013 (IF)	22	9
2014 (8,IF; 2,PF)	24.4	10
2015 (LLLF)	22	9
2016 (LLLF)	26.8	11
2017 (LLLF)	4.9	2

Note: % and *n* is the total percent and the total count of the exit survey sample population of responded.

IF = Ironstone Farm; PF = Private Farm; LLLR = Live and Let Live Farm

Fifty one percent (*n*=21) reported high school as their highest educational level and 31%

(*n*=13) have college degrees. The majority of respondents were in the Army (46.9%;

n=23), while 10% (*n*=5) reported serving in the Marines, 18% (*n*=9) Navy, and the Air

Force was represented by 14% ($n=7$). Thirty nine percent ($n=16$) served between four and six years. Twenty seven percent were married ($n=11$), 27% ($n=11$) divorced, while 37% ($n=16$) reported being single or separated.

Table 8

Characteristics of Qualitative Interview Respondents ($n=6$)

Characteristic	%	<i>n</i>
Gender		
Male	50	3
Female	50	3
Age		
25-34	33.3	2
35-44	33.3	2
55-64	16.6	1
65-74	16.6	1
Education		
High school graduate	6.7	4
College graduate	33.3	2
Branch of service		
Army	33.3	2
Marines	33.3	2
Air Force	33.3	2
Length of service		
Less than 2 years	16.7	1
4–6 years	50	3
10–15 years	33.3	2
Marital status		
Single, never married	16.7	1
Married	66.7	4
Widowed	0.0	
Divorced	16.7	1
Year of participation		
2014 (PF)	16.7	1
2015 (LLLF)	16.7	1
2016 (LLLF)	50	3
2017 (LLLF)	16.7	1
Type of program		
2-day VF-EFMH program	100	6

Note: % and *n* is the total percent and the total count of the exit survey sample population of responded.
 IF = Ironstone Farm; PF = Private Farm; LLLR = Live and Let Live Farm

Table 8 outlines the characteristics and demographics of the interview respondents ($n=6$) of the qualitative segment of the study. Of note, 50% ($n=3$) were

female and 50% ($n=3$) were male. Ages were recorded in ranges with a minimum reporting age of 25 and a maximum reported age of 74. Three of services were represented: Army 33.3% ($n=2$); Marines 33.3% ($n=2$) and Air Force 33.3% ($n=2$). Respondents participated in programs from four separate years during the 2014-2017 time frame. One (16.7%) participated at a program offering in 2014 that took place at a private farm in Gilford, NH. The remainder of respondents participated in program offerings conducted at Live and Let Live Farm (LLLLF), Chichester, NH: 16.7% ($n=1$) from 2015; 50% ($n=3$) 2016; 16.7% ($n=1$) from 2017. Although various sites were used to deliver the programs, the same format and curriculum was used at each site and during each of the program offerings. The VF-EFMH program was specifically designed with the intent of delivery at various locations. The variety of sites is not considered to be a confounding variable but rather part of the program design.

Interview Respondents. *Interview respondent one (IR1).* Interview respondent one is a female veteran who served in both the active Army and the reserves. She spent two years on active duty and three years in the reserves. She is divorced, Caucasian, and between 35 and 44 years old. She is retired and has completed an Associates degree. Sonya, as we will call her, participated in a 2016 program offerings at Live and Let Live Farm.

Interview respondent two (IR2). Reanne, as we will call her, is a 55 to 64 year old married Caucasian female. She has a Masters degree and served four years in the Army and another 16 in the reserves. She works part-time. Reanne attended a 2015 VF-EFMH program offering at Live and Let Live Farm.

Interview respondent three (IR3). Interview respondent three, who we will call Mac, is a 25 to 34 year old Caucasian male veteran who is married. He spent four years active duty in the Marines and is retired with a full medical discharge from service. Mac is a high school graduate and he attended a 2016 VF-EFMH program offering at Live and Let Live Farm.

Interview respondent four (IR4). IR4 will be referred to as Alisha. Alisha spent ten years in the Air Force and currently works part time as she pursues her educational goals full-time. She is a 25-34 year old female who participated in a 2016 VF-EFMH program at Live and Let Live Farm. Alisha is Caucasian, married, has a Bachelors degree and is in school perusing a Masters degree in education. Alisha owns horses and provides equine assisted learning programs to families and children. Her intent was to come to this program as part of her professional development; however, Alisha took part in all activities and group processing as a participant.

Interview respondent five (IR5). Referred to in this study as Patrick, IR5 is a Caucasian, unmarried male between the ages of 35-44. He spent five years in the Air Force and another eight years in the National Guard. He is retired on full disability. Patrick participated in the 2014 VF-EFMH program offering at the private Gilford, NH farm.

Interview respondent six (IR6). This respondent, who we will call Joe, is a 65-74 year old Caucasian male who served in the Marines for four years and in the reserves for 24 years. He is married, a high school graduate, and he is retired from service. Joe participated in a 2017 VF-EFMH program offering at Live and Let Live Farm.

Depression Analysis and Findings

Quantitative Analysis. A quantitative analysis of 49 self-report exit surveys from the 2013-2017 VF-EFMH programs, including the 2013 pilot program was conducted using SPSS software. The surveys from across the ten programs asked questions about depression in different ways and used deferent terms within the Likert scales. Across the ten separate programs offerings, there were three differing surveys. Because of this, the data was broken down into three data sets to align with the three distinct iterations of exit surveys. Data set one consists of the pilot program from 2013; data sets two through four are programs from 2013 and 2014. The pilot program and programs representing data sets two thorough four were conducted at Ironstone Farm. Data set five was the 2015 program conducted at a private farm, and Data sets six through ten were between 2015 and 2017 and conducted at Live and Let Live Farm.

Table 9 shows the breakdown of data sets and the associated responses with both the binary responses and the answers associated with the corresponding Likert scale. Recoding was done on data sets two through ten to extrapolate binary responses from the Likert scales. This was done so that data sets one through ten could be analyzed, as data set one only asked about depression and anxiety with yes, no, not sure, not applicable choices. Recoding data sets two through ten to match data set one enabled full analysis across all data sets. Data sets two through four were recoded to make all data congruent with *yes, no, not sure, does not apply* responses. The Likert scale responses of *extremely, moderately, and a little* were coded as *yes*; *not at all* was coded as *no*; and *not applicable* was coded as *does not apply*. Responses from data sets five through ten were recoded

similarly: *Strongly agree* and *agree* responses were recoded as *yes*; *neutral* responses were coded as *not sure*; *disagree* and *strongly disagree* responses were recoded as *no*.

TABLE 9

Exit Survey Responses on Effect on Symptoms of Depression (N= 49)

Did program lower depression	%	n	p
Data set 1 (2013) Yes/No Responses (n=8)			.999
Survey Question: <i>Do you feel working with horses helped lessen depression?</i>			
Yes	100	8	
No	0.0	0	
Not Sure	0.0	0	
Does not apply	0.0	0	
Data sets 2-4 (2013-2014) Likert Responses (n=19)			.250
Survey Question: <i>Do you feel this experience helped lessen depression?</i>			
Extremely	57.9	11	
Moderately	42.1	8	
A Little	0.0	0	
Not at all	0.0	0	
Not Applicable	0.0	0	
Data sets 2-4 (2013-2014) Yes/No Recoded Responses (n=19)			.999
Yes	100	19	
No	0.0	0	
Not Sure (neutral)	0.0	0	
Does not apply (not applicable)	0.0	0	
Data sets 5-10 (2015-2017) Likert Responses (n=22)			.567
Survey Question: <i>Working with horses helped lower depression?</i>			
Strongly agree	72.7	16	
Agree	18.2	4	
Neutral	4.5	1	
Disagree	4.5	1	
Strongly Disagree	0.0	0	
Data sets 5-10 (2015-2017) Yes/No Recoded Responses (n=22)			.928
Yes	90.9	20	
No	4.5	1	

Not Sure (neutral)	4.5	1	
Does not apply	0.0	0	
Data sets 1-10 (2013-2017) Yes/No Responses/Recoded Responses (<i>n</i> =49)			.836
Yes	96	47	
No	2	1	
Not Sure	2	1	
Does not apply	0.0	0	

Table 9 details the descriptive statistic associated with responses about depression across the ten data sets. Overall, 47 of 49 (96%) reported that they believed participation in the program helped mitigate symptoms of depression. One respondent (2%) answered they did not believe the program helped mitigate depression and one respondent (2%) answered with a neutral response. As reported in an earlier publication about the pilot program (Ferruolo, 2016), 100% (*n*=8) of respondents (data set 1) reported they believed the program helped lower depression. Across data sets two through four (*n*=19) from program offerings that ran during the years 2013-2014, 100% (*n*=19) reported they believed that program participation helped lowered depression, with 57.9% (*n*=11) of those reporting the program was extremely effective and 42.1% (*n*=8) answering it was moderately effective for helping to lower depressive symptoms. Chi square analysis was not run on data set one or the recoded data sets two through four because responses were constant; that is all respondents in those data sets reported a lowering of symptoms of depression. No statistical difference was found across data sets two through four Likert scale responses ($\chi^2=2.77$; $df=2$; $p=.250$). Outcomes from data sets five through ten (*n*=22) from the 2015-2017 program years revealed that the VF-EFMH program was successful at lowering symptoms of depression with 90.9% (*n*=20) answering to the affirmative. One respondent (4.5%) reported participation did not lower depression and one respondent (4.5%) reported a neutral response. The exit surveys did not specifically ask if

the participant was experiencing depression at the time of the program; however, all veterans were referred from a Veterans Administration facility, a primary care physician, or a mental health clinician; each was in treatment for psychological issues. As reported by Abraham et al., (2016), depressive disorders account for 18% of diagnosis in the VA system. Chi square analysis revealed no significant difference between the Likert scale data sets five through ten ($\chi^2=13.45$; $df=15$; $p=.567$) or the recoded data sets five through ten responses ($\chi^2=4.4$; $df=10$; $p=.928$). No significant differences were found between data sets one through ten ($\chi^2=12.213$; $df=18$; $p=.836$). These results support the hypothesis that VF-EFMH was effective for lowering depression for participants in each of the ten studies programs.

Chi square analysis was conducted across demographic characteristic to see if there was a difference in responses about the perceived effect of the program on symptoms of depression. There was no statistical difference between male and female responses ($\chi^2=3.362$; $df=2$; $p=.186$); branch of service responses ($\chi^2=6.675$; $df=8$; $p=.572$); marital status responses ($\chi^2=4.815$; $df=8$; $p=.777$); educational level ($\chi^2=21.98$; $df=32$; $p=.908$); or service time responses ($\chi^2=58.6$; $df=48$; $p=.140$)

Qualitative analysis. Semi structured interviews were conducted with six participants. Interviewees were asked the following questions about depression: *If you were experiencing depression at the time, did the VF-EFMH program help facilitate lowering symptoms of depression?; What about the VF-EFMH program facilitated this?; Help me understand why you think these things helped?*

Interviews were scheduled for one-hour sessions and each of the six participants completed one session (Appendix D). Sonya (IR1) and Reanne (IR2) met me at a private

office at a community health center in Laconia, NH for in person interviews; Mac (IR3), Alisha (IR4), and Patrick (IR5) opted to use online video conferencing. Video conferencing was conducted using DOXY (doxy.me), which is a HIPPA and HITEC compliant encrypted videoconference medium developed for counseling. Joe (IR6) opted to conduct the interview using cell phones, without video. The interviews were audio recorded using QuickTime Player then transcribed into a transcription table.

Analysis and coding was done through use of the created transcript tables. To ensure reliability, method triangulation (Creswell & Plano-Clark, 2011; Patton, 2015) was employed by use of two coding strategies. As suggested by Saldaña (2016) and Patton (2015), an initial run through of the transcripts was done and initial codes, themes, and sub-themes were noted. Then, using the qualitative questions (Appendix A) as the categories, structural coding (Saldaña, 2016) was used to first organize data within a coding matrix (Appendix F). This was done by organizing the data using the interview questions as the structural categories. Attribute and in-vivo coding (Saldaña, 2016) were used within the construct of the structural coding. Thereafter, a secondary recoding matrix was developed (Appendix G) where thematic analysis (Creswell & Plano-Clark, 2011; Patton, 2015) and second cycle pattern coding (Saldaña, 2016) was done. This triangulated methodology was instrumental in developing reliable themes and enhancing internal validity of findings.

Utilizing Saldana's (2016) model of structural coding, qualitative data gathered from a subset of the total population that participated in VF-EFMH programs was analyzed. Analysis of their responses revealed that 83.3% ($n=5$) of the interview group, presented to the VF-EFMH program with symptoms of depression. Of the five that

reported depressive symptoms at the time of the program, all (100%; $n=5$) stated during the interview that they believed the program helped mitigate his or her depression (See Table 10).

TABLE 10

Depression Statistics form Interview Respondents ($n=6$)

Responses about depression	%	<i>n</i>
Had depression at time of program		
Yes	83.3	5
No	16.7	1
Of those with Depression; Reported lower depression		
Yes	100	5
No	0.0	0

Depression themes. Five of six interviewees responded to the question: *what about the VF-EFMH program facilitated lowering symptoms of depression?* One respondent did not have depression at the time of the VF-EFMH program and did not answer this question. From the analysis (Creswell, 2015; Patton, 2015; Saldaña, 2016) of the five responses, the following themes emerged: social connection, internal processing, and the horse.

Social connection. The social connections created by the VF-EFMH program emerged as a theme across four (80%) of the interviewees. Participants identified the sense of social connection they experienced during the program as contributing to decreasing symptoms of depression. This was evidenced when Sonya stated, “It was nice to connect with other veterans. Especially the female veterans...And I realized I was not the only one with problems.” She continued; “I really enjoyed being with the male veterans. That is something that I definitely shied away from” (personal communication, March 17, 2018). Reanne was discussing how being in a small group with other veterans

helped with her depression, stating: "...the group was smaller, more intimate. We bonded. That helped. Bonding with other veterans. That was good. I've made some friends" (personal communication, March 17, 2018). Patrick added further support to the theme of social connection when he stated,

The connection. The connection I had with the animals. I do a lot of meditation. Tai chi. I do a lot of gardening. So I really enjoyed the environment, God's gift to us, our environment. Being out there, doing it, in the garden, or working with the horse, its connection. It strengthens it for me. It's a connection with the world, you know. (Patrick, personal communication, March 24, 2018)

Joe also provided evidence that social connections during the VF-EFMH program helped lower depression symptoms. At one point, Joe was talking about some education he received at LLLF on assignment of new horses to paddocks and that they always try to find newly arrived rescued horses a compatible paddock mate. Joe found this interesting and said:

This makes perfect sense. It makes perfect sense. It would make perfect sense to do this in the military also. Now I know when it comes to cold weather training you never do anything alone, because people get so depressed from the cold if you don't have a buddy right there with you, bad things can happen. I know the military is a lot more sensitive to these things now. Like after a battle. Everyone will sit down and discuss it, and go over it. Get the feelings out. But also to get out what people are mad about. Get it all out in the open. So two weeks later when you get another

firefight you won't be mad at anyone (personal communication, April 3, 2018).

When asked specifically about what aspects of the program helped lower depression, he shared, “the rap sessions at the end were nice; getting a sense of how everyone else was getting along with their problems and relating myself to them” (personal communication, April 3, 2018).

Together these respondents support the importance of the increased sense of social connection and community at the VF-EFMH program for lowering their symptoms of depression. Social support is a indicator of lower post deployment distress that can be indicative of decreased severity of depressive and anxious symptoms and (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Smith, Benight, & Cieslak, 2013).

Internal processing. The theme of internal processing emerged when discussing aspects of the program that participants believed helped lower depression. Interviewees were questioned about what aspects of the VF-EFMH program helped with his or her depression, what facilitated lowering of depression, and if there was anything in particular that was done or that happened during the experience that assisted with lowering depression. Three of the five interviewees (60%) mentioned that learning about aspects of themselves, that they were not aware of, brought about healing processes that led to lowered depression. Supporting this theme is Sonya’s comments:

The systematic way to approach a horse and the foreground that you gave us before we went in the ring. [It] was about how horses react and how similar it is to how people approach each other. What our personal space issues are. I think all of those things. It made me realize that there are

ways for entering a room, joining a crowd, speaking to somebody; that I can watch, be more cognizant of their body language and adjust myself for what I'm sensing.

Reanne's comments provide additional evidence that learning about self had an impact. During the interview, I asked her what about the program really helped lower her symptoms. Reanne responded with:

It wasn't till after you made the comment, you told us, horses are prey animals. And I have spent my life since getting out of the military acting like a prey animal. Always on guard. Always running. Constantly moving. Not committing to anything. And when you go to the equine retreat, when you get around animals, you just relate to them. The ones that your program uses are rescues. I'm a rescue animal, you know (laughed). It had a huge, huge impact (personal communication, March 17, 2018).

When discussing what helped Mac lower his depression, he stated: "I was in a place in my life where I just needed that little extra kick in my recovery from PTSD and such, and it helped guide my thought process in dealing with people" (personal communication, March 17, 2018). I then continued to probe deeper and asked Mac if he could talk about that further. Mac continued with:

I am awful in social situations, as most veterans are. I was uncomfortable and I didn't know how to treat people and I couldn't figure out why people didn't like me. That really helped...As you pointed out in the program, what worked for me was force, fear, and intimidation, and I had been

doing everything like that. It wasn't getting me anywhere" (personal communication, March 17, 2018).

Internal processing that facilitates mitigation of psychological symptoms is an important aspect of therapeutic groups (Shulman, 2012). Participant responses support that the VF-EFMH program facilitated introspection and that learning about themselves helped lower depression.

The horse. The connection and time with the horses was reported by 60% ($n=3$) to mitigate depression. Reanne was asked what about the program helped lower her depression and her quote supports that being around the horses helped her feel good.

Those of us with PTSD; MST, are already on guard against other people. You know, on guard, hypervigilant, always wondering what the other person's agenda is. When I got around animals; around the horses, you drop that guard because the animals, you know, they have no agenda against you. You can open yourself up to feel what you're experiencing and open to the connection more, and when you connect you get that good feeling (personal communication, March 17, 2018).

When asked to talk more about what helped lower depression, Patrick simply stated, "The connection. The connection I had with the animals" (personal communication, March 24, 2018). Joe responded that it was "relaxing" being with the horses and stated,

I never actually had gotten close to a horse, for instance. We've had cats, we've had dogs, chickens, geese; but, being with a totally different animal to me was just close to reverence, if nothing else. Just to be able to look

them in the eye... Touch them, pat them, and so on. Was something quite different for me (personal communication, April 3, 2018).

Reanne, Patrick, and Joe all discussed their belief that being with and interacting with the horses lowered their depression. In particular, there was a perception that connection with the horse appears to be the event that acts as the catalyst to lowering depression.

Anxiety Analysis and Findings

The analysis on the effect of the program on symptoms of anxiety followed the same procedures as that for the analysis for effect on symptoms of depression. The 49 self-report exit surveys from the 2013-2017 VF-EFMH programs, including the 2013 pilot program were analyzed using SPSS software. A follow-up interview was conducted with the same six veterans that were discussed in the previous section. Transcripts were created from the interviews, and these transcripts were analyzed to find common themes that help better explain, support and understand the results from the analysis of the exit surveys.

Quantitative Analysis. Table 11 represents the results of analysis of the VF-EFMH program exit surveys from 2013 through 2017, including the 2013 pilot program ($n=49$). Table 11 shows the corresponding data sets, years of program delivery, and both the yes and no responses and corresponding Likert scale questions across the data sets and the associated responses. Recoding was done on data sets two through ten to extrapolate yes and no responses from the Likert scales. This was done so that data sets one through ten could be analyzed, as data set one only asked about depression with yes, no, not sure, not applicable choices. Recoding enabled full analysis of all data sets.

TABLE 11

Exit Survey Responses on Effect on Symptoms of Anxiety (N=49)

Did program lower Anxiety	%	n	p
Data set 1 (2013) Yes/No Responses (n=8)			
Survey Question: <i>Do you feel working with horses helped lessen anxiety?</i>			.999
Yes	100	8	
No	0.0	0	
Not Sure	0.0	0	
Does Not Apply			
Data sets 2-4 (2013-2014) Likert Responses (n=19)			
Survey Question: <i>Do you feel this experience helped lessen anxiety?</i>			.511
Extremely	47.4	9	
Moderately	47.4	9	
A little	5.3	1	
Not at all	0.0	0	
Not applicable	0.0	0	
Data sets 2-4 (2013-2014) Yes/No Responses (n=19)			
Yes	100	19	.999
No	0.0	0	
Not sure	0.0	0	
Does not apply	0.0	0	
Data sets 5-10 (2015-2017) Likert Responses (n=22)			
Survey Question: <i>Working with horses helped lower anxiety?</i>			.105
Strongly agree	72.7	16	
Agree	9.1	2	
Neutral	13.6	3	
Disagree	4.5	1	
Strongly disagree	0.0	0	
Data sets 5-10 (2015-2017) Yes/No Responses (n=22)			
Yes	81.8	18	.080
No	4.5	1	
Not sure	13.6	3	
Does not apply	0.0	0	
Data sets 1-10 (2013-2017) Yes/No Responses (n=49)			
Yes	91.8	45	.002*
No	2	1	
Not Sure	6.1	3	
Does not apply	0.0	0	

Note: * $p < .01$

Overall, 91.8% (n=45) reported yes to the survey question about whether they felt the VF-EFMH program helped to reduce anxiety. The pilot program (Ferruolo, 2016),

which represents data set number one, shows that all of the participants (100%; $n=8$) reported lower anxiety levels as a result of the program (Chi square was not computed as data set and responses were constant). Nineteen respondents (100%) from data sets two through four from years 2013 through 2014 reported the VF-EFMH program helped lower anxiety levels, with 47.4% ($n=9$) reporting it was extremely effective, 47.4% ($n=9$) reporting a moderate effectiveness, and 5.3% ($n=1$) reporting it helped lower anxiety a little.

A high percent (81.8%; $n=18$) of respondents from data sets five through ten ($n=22$) reported lower anxiety after the program, with 72.2% ($n=16$) strongly agreeing that the VF-EFMH program lowered anxiety. Chi square analysis revealed no significant difference between data sets five through ten Likert responses ($\chi^2=22.09$; $df=15$; $p=.105$) or the recoded yes/no responses ($\chi^2=16.762$; $df=10$; $p=.080$). Statistical difference was found when analyzing recoded data sets one through ten on yes/no response ($\chi^2=40$; $df=18$; $p=.002$). When observing data sets one through four ($n=27$) yes/no recoded responses, one participant (2% of $N=49$) responded with an answer other than yes. Data sets five through ten ($n=22$) had four respondents that did not reply with a yes (12% of $N=49$). Further, data sets nine and ten had only one exit survey each, with both respondents providing a response other than yes. These factors account for the statistical difference across the ten data sets. When analyzing for anxiety across data sets one through eight, there were no statistical differences found ($\chi^2=12.08$; $df=14$; $p=.599$). Table 12 represents analysis across demographics and characteristics of respondents.

TABLE 12

Anxiety Statistics Across Demographics (N=49)

Did program lower Anxiety	%	n	p
Male Female Responses (n=48)			
			.039*
Male (n=36)			
Yes	94.4	34	
No	0	0	
Neutral	5.6	2	
Female (n=12)			
Yes	75	9	
No	16.7	2	
Neutral	8.3	1	
Branch of Service Responses (n=46)			
			.067
Army (n=23)			
Yes	87	20	
No	0	0	
Neutral	13	3	
Air force (n=7)			
Yes	71.4	5	
No	28.6	2	
Neutral	0	0	
Marines (n=5)			
Yes	100	5	
No	0.0	0	
Neutral	0.0	0	
Navy (n=9)			
Yes	100	9	
No	0.0	0	
Neutral	0.0	0	
National Guard (n=2)			
Yes	100	2	
No	0.0	0	
Neutral	0.0	0	
Marital Status (n=44)			
			.649
Single Never Married (n=9)			
Yes	100	9	
No	0.0	0	
Neutral	0.0	0	
Married (n=11)			
Yes	81.8	11	
No	0	0	
Neutral	18.2	2	

Widowed (<i>n</i> =1)		
Yes	100	1
No	0.0	0
Neutral	0.0	0
Divorced (<i>n</i> =15)		
Yes	87.5	14
No	6.3	1
Neutral	6.3	1
Separated (<i>n</i> =7)		
Yes	85.7	6
No	14.3	1
Neutral	0.0	0

Note: **p*<.05

Chi square analysis showed a statistical difference between male and female responses in regard to lowered anxiety ($\chi^2=6.491$; *df*=2; *p*=.039). There were no statistical differences in branch of service ($\chi^2=14.613$; *df*=8; *p*=.067) or marital status ($\chi^2=5.98$; *df*=8; *p*=.649). These survey responses suggest that VF-EFMH may be more effective for men than women.

Qualitative analysis. During the semi-structured interviews, participants were asked the following questions about the potential effect of the program on their anxiety:

- If you were experiencing anxiety at the time, did the VF-EFMH program help facilitate lowering symptoms of anxiety?
- What about the VF-EFMH program facilitated this?
- Help me understand why you think these things helped?

Structural coding (Table 13) identified that 100% (*n*=6) presented to the respective VF-EFMH program with anxiety and of those experiencing anxiety, 100% (*n*=6) perceived that anxiety levels were lowered as a result of the program.

Anxiety themes. Coding and theming analysis (Creswell, 2015; Patton, 2015; Saldaña, 2016) revealed the following three themes associated with lowering of anxiety:

social connection (50%; $n=3$); internal processing (50%; $n=3$); the horse (83.3%; $n=5$).

These themes emerged from structural analysis of responses regarding what about the program respondents’ thought helped lower anxiety. These themes are congruent with the depression themes.

TABLE 13

Anxiety Statistics for Qualitative Respondents ($n=6$)

Responses about anxiety	%	<i>n</i>
Had anxiety at time of program		
Yes	100	6
No	0.0	0
Of those with anxiety; reported lower anxiety		
Yes	100	6
No	0.0	0

Social connection. Social connection was a theme that emerged during the interviews in regard to what aspects of the VF-EFMH program respondents think facilitated lowered anxiety. Three (50%) of the respondents mentioned being in a group setting with other veterans. I was discussing with Reanne the aspects of the program that helped lowered her anxiety. Her statement of: “Sharing the experience with other veterans” (personal communication, March 17, 2018) supports the theme of social connection. I asked Mac if he thought the program helped facilitate lowering of his existing anxiety. He discussed how some of the social interactions were facilitative of learning some things about himself, stating:

It did. Substantially, actually. Because I had been a little disappointed with some of the other members of the retreat and people I thought were being unappreciative. Just the things I did my whole life, judging people. And that free-floating anxiety that I always had, especially after I got out.

When those people confronted me and I was forced to deal with it head-on, I had to think of how to interact and not talk behind people's back and it really just lowered my stress; my anxiety just went to zero. (Mac, personal communication, March 17, 2018).

Mac's quote spans both the social interaction and the following theme of introspection and learning. Mac and I had continued dialog about what helped him lower anxiety during the program and he said, "I got to know some people and I really enjoyed that" (personal communication, March 17, 2018). Patrick and I were conversing about what in the VF-EFMH program might have facilitated lowering his anxiety. Patrick discussed several aspects of the VF-EFMH program he thought helped lower anxiety and said, "But always my PTSD, my stuff comes back. But it helped because I was there. I was with you guys" (personal communication, March 24, 2018). Patrick's quote supports the social connection theme for contributing to lowered anxiety. During Joes's interview I told him I was glad he was able to have this experience. He stated, "Me too. It was a long time coming" and continued with:

One of the things I really enjoyed about the camp especially was just being in the groups. Just wrapping, talking to each other; going over each other's feelings and what they get out of it in particular. And to me, that was nice. Something that would've never happened in Vietnam. Just never happened (personal communication, April 3, 2018).

As with the findings that social connecting reduced symptoms of depression, respondent responses about anxiety credit the importance of the

increased sense of social connection and community at the VF-EFMH program for lowering their symptoms of anxiety.

Internal processing. Fifty percent ($n=3$) of interview respondents discussed internal processing as an aspect of the program they thought helped lower anxiety. Sonya discussed some of her issues dealing with anxiety and reflected on aspects of the program she thought helped lower her anxiety. She discussed how admitting her trauma and learning she did not suffer alone helped her learn about herself. This was supported by the facilitated social connection the VF-EFMH program provided. When asked if the program helped lower her anxiety, she shared:

I think yes, but not as much as the depression. Once I admitted, acknowledged, my trauma... There was a lot of things going on during that time where it all just kind of came to a head. I just broke down. And I didn't leave my house for almost two years. So I had a lot of, a huge amount of anxiety towards going out on my own. I did not feel safe. Didn't know what I was going to do. If I go to meet people that I knew. Some people. So, it was a pretty significant part of my mental health issues at that time, anxiety. So, although I think I learned a lot about coming out of myself, my approach and stuff, through recognizing that I'm not the only one (Sonya, personal communication, March 17, 2018).

Supporting the theme of internal processing and how it helped lower her anxiety, Reanne circled back to an earlier conversation we had about her feeling like prey, saying:

I do remember your speech about being a prey animal and that was huge. The light goes off and you say, *wow, yea, that's how I lived my life.* Had

lived my life. Feeling like prey. I do not feel like a prey animal anymore, and I truly constitute that to the retreat (Reanne, personal communication, March 17, 2018).

In the previous discussion about the social interactions as related to depression and anxiety, Mac had discussed how facing people helped him learn about how he responded and how to interact. For Mac, this learning helped him lower his anxiety:

When those people confronted me and I was forced to deal with it head-on, I had to think of how to interact and not talk behind people's back and it really just lowered my stress; my anxiety just went to zero (personal communication, March 17, 2018).

These participants reported that insight into their own minds helped reduce anxiety. Their responses support that symptoms of anxiety, as like with depression, may be mitigated while at the VF-EFMH program by facilitating and encouraging participants' ability to introspect.

The horse. Interaction with the horse was mentioned by 83.3% ($n=5$) as a factor of the program that helped lower anxiety. Reanne (2018) stated:

I remember that one horse; he just kept following me. It was just acceptance. When I got in there, we just connected; I could pet it. It was affectionate. Not feeling judged. I think it was mostly about the acceptance. He just followed me around in circles. When I turn [sic] directions he kept following me. It just made me feel good. It was a good feeling (personal communication, March 17, 2018).

Mac stated that what helped lower his anxiety “was interacting with the [horses] and having a good time” (personal communication, March 17, 2018). When asked if the program helped lower her anxiety, Alicia stated, “when I was with the horses, yes. If I was not interacting with the horses, no” (personal communication, March 24, 2018). Alicia was asked to talk more about that. She replied, “Being able to concentrate on something other than my anxiety. Having something that I was doing that I was completely focused on” (personal communication, March 24, 2018). I probed further and asked her to help me understand further why this helped. She stated, “Part of it is distraction. Part of it I guess is that mindfulness. So instead of thinking about my anxiety or what’s causing it, I’m more focused on what I am thinking in the moment (personal communication, March 24, 2018). During Patrick's interview we were talking about what helped lower his anxiety. He was talking about how working with the horses helped lower his anxiety and added support to the sense of mindfulness when interacting with horses:

I was in the moment. It was very powerful working with horses. So like we were busy. We were engaged. I was enjoying myself. I wasn’t really under any anxiety. But when we stopped for a second, my mind goes. Like as soon as we stop working with the horses, I go to the sidelines (personal communication, March 24, 2018).

He continued talking about how working with horses helped lower his anxiety, stating, “it did really help my anxiety. It gave me a reason to enjoy myself” (personal communication, March 24, 2018).

Joe also shared that the interaction with the horses helped lower his anxiety during the program. He stated, “I really lost the anxiety completely and got to being friends with the horses” (personal communication, April 3, 2018). He continued to discuss the program and what helped lower his anxiety saying, “I fell in love with that one little horse” (personal communication, April 3, 2018). I asked Joe to tell me more about that interaction, and he replied:

When we were, the very first day, we were in the white barn. Over in the corner was this tiny little white horse. For an hour it never moved, never looked up, just stood there motionless in the corner. And when I had a few minutes, I went over to it and started to pat it and it wouldn't even look at me. So I started humming and singing to it. And it didn't respond for almost 10 minutes then finally it looked at me. And I burst into tears, which I'm doing now. What really got me was that when I finally got up and went to leave the gate to rejoin everyone, it walked over and blocked the gate. That was the first time it had moved. So I spent about 15 minutes every morning and afternoon just sitting with it, just sitting there, talking to him, singing to him. (Joe, personal communication, April 3, 2018).

After a moment of silence, Joe reflected, “I have never been touched like that before” (personal communication, April 3, 2018).

Being engaged with and working with the horses in the VF-EFMH program was cited by participants to be a factor with reducing symptoms of anxiety.

Analysis of findings on depression and anxiety. Of the exit survey population surveys (N=49), 96% (*n*=47) reported that the program lowered symptoms of depression

while one (2%) reported the VF-EFMH program did not lower depression with a disagree and one (2%) responding with *neutral/not sure*. It is undetermined if these two exit survey respondents (4%) that reported other than a positive response for lowered depression as a result of the VF-EFMH program were: not symptomatic, did not have depression, or if the program did not mitigate depressive symptoms. Of the six participants that were interviewed regarding depression, five respondents (83.3%) reported having depression at the time of equine facilitated mental health program, while one (16.6%) reported that he did not have depression at that time.

A Chi square test was conducted to see if there was a statistical difference between the proportion of the exit survey group and the interview group regarding the effectiveness of the program for lowering depression. Forty-seven of 49 (96%) of the exit survey group answered in the affirmative that VF-EFMH helped reduce depression and all ($n=6$; 100%). The results are not statistically significant ($\chi^2=.254$; $DF=1$; $p=.614$).

Nearly 92% ($n=45$) of exit survey respondents reported lowered anxiety with three (6.1%) answering with a neutral response and one (2%) answering it did not lower anxiety. As with depression exit survey responses, it is undetermined if those three (8%) who did not respond with an affirmative that the VF-EFMH program lowered anxiety were symptomatic with anxiety at the time of the program or if the program did not affect their anxiety. Of the interview group, all respondents (100%; $n=6$) reported that they had anxiety at the time of the VF-EFMH program and that the program facilitated lowering of those symptoms. Chi square analysis showed no statistically significant difference between the exit survey group and the interview group on whether the VF-EFMH program lowered anxiety ($\chi^2=.528$; $DF=1$; $p=.467$).

Examining the interview data helped to gain a better understanding about what aspects of the VF-EFMH program were critical in helping lower depression and anxiety. Social connection emerged as a theme when exploring what aspects of the program respondents thought helped reduce depression and anxiety. Eighty percent ($n=4$; 4 of 5) of participants with depression and 50% ($n=3$) of those with anxiety mentioned connecting, bonding, interacting, and sharing information with other veterans as an important aspect of the VF-EFMH program that facilitated lowering of depression and anxiety. Three of the five (60%) that reported symptoms of depression and three of six (50%) of those that reported anxiety discussed that the program facilitated the ability for them to be introspective. This introspection led to diminishing symptoms of depression. Connection with the horses is another aspect of the VF- VF-EFMH program that was reported as being important for lowering symptoms. Sixty percent ($n=3$) of the five respondents with depression and 83.3% ($n=5$) of the six with anxiety reported this effect. Thus this analysis provides support that a VF-EFMH program design that includes supporting the development of a sense of social connection, internal processing, and interaction with horses may be a viable alternative treatment for veterans suffering from symptoms of depression and/or anxiety.

Quantitative findings in this study support that EFMH may be effective for reducing depression and anxiety with the veteran population and supports existing literature (Earles, Vernon, & Yetz, 2015; Ferruolo, 2016; Holmes, Goodwin, Redhead, & Goymour, 2012; Kemp, Signal, Botros, Taylor, & Prentice, 2014; Mayfield, 2016; Schultz, Remick-Barlow, & Robbins, 2007). Qualitative findings are congruent with Mayfield's (2016) dissertation findings that *relational connection and here and now*

processing are core aspects of VF-EFMH that lead to mitigation of symptoms with the veteran population.

The findings of this current study suggest that the theoretical underpinnings of the VF-EFMH program are important for providing a facilitative context that is conducive to lowering symptoms of depression and anxiety. Analysis of exit surveys from all participants of the program between 2013 and 2017 as well as structural analysis of interviews with six members of that sub-set point to this effectiveness. Additionally, the qualitative analysis provided several themes that help better understand the perspective of veterans regarding effectiveness. Social connection, internal processing, and working with the horse are vital aspects reported by the veterans, while also foundational to the program design and intent.

Perceived Value

This study explored whether participants of the VF-EFMH program perceived the program as having value. Analysis was conducted on the 49 exit surveys and the transcripts from the qualitative interviews in order to more deeply explore the perceived value of the program by participants. During the qualitative interviews, participants were asked if the program had value for them and five follow-up questions were asked to more deeply explore the construct of value. Value based questions asked if there were any beneficial changes in the participant or if any social skills were learned or enhanced as a result of participation. Interviewees were also asked what, if anything, continues to help lower depression and anxiety. Value based questions continued by exploring two more topics: the perceived importance of using horses in the program, and participant

perceptions on whether my former military status (being a veteran) was an influential part of the VF-EFMH program and why.

Quantitative analysis. Analysis was conducted on the 49 exit surveys using SPSS software. Due to the congruence of the questions across exit surveys, this analysis separated the 49 exit surveys into two data sets instead of three: data set one through four, and data sets five through ten. Table 14 presents the breakdown of the data sets with corresponding program years, survey question, answer options, and participant responses. Exit surveys one through four ($n=27$) asked *did you find this experience valuable* and provided four options for response: *yes, no, not sure, does not apply*. All of the respondents (100%; $n=27$) across data sets one through four answered *yes*. Chi square analysis was not conducted on data sets one through four since the responses were the same across variables and demographics. Data sets five through ten ($n=22$) provided the statement: *I found this experience valuable*. Answer options were a Likert scale with four options for response (Table 14). Twenty-one (95.5%) answered with the *strongly agree* option and one (4.5%) chose the *agree* option. No statistical differences were found across data sets five through ten ($\chi^2=2.2$; $df=5$; $p=.814$). Responses from data sets five through ten were then recoded to make all data congruent with *yes, no, not sure, does not apply* responses. *Strongly agree* and *agree* responses were recoded as *yes*; *neutral* responses were coded as *not sure*; *disagree* and *strongly disagree* responses were recoded as *no*. The recoded findings show that all (100%; $n=49$) participants recorded a positive response and found the VF-EFMH program valuable. Chi square was not run as responses were constant.

TABLE 14

Exit Survey Responses on Value of the Program (N=49)

Value responses	%	n	p
Data sets 1-4 (2013-2014) Yes/No Responses (n=27)			.999
Survey Question: <i>Did you find this experience valuable?</i>			
Yes	100	27	
No	0.0	0	
Not Sure	0.0	0	
Does not apply	0.0	0	
Data sets 5-10 (2015-2017) Likert Responses (n=22)			.814
Survey Question: <i>I found this experience valuable.</i>			
Strongly agree	95.5	21	
Agree	4.5	1	
Neutral	0.0	0	
Disagree	0.0	0	
Strongly Disagree	0.0	0	
Data sets 5-10 (2015-2017) Yes/No Recoded Responses (n=22)			.999
Yes	100	22	
No	0.0	0	
Not Sure (neutral)	0.0	0	
Does not apply	0.0	0	
Data sets 1-10 (2013-2017) Yes/No Responses/Recoded Responses (n=49)			.999
Yes	100	49	
No	0.0	0	
Not Sure	0.0	0	
Does not apply	0.0	0	

Qualitative analysis. This analysis followed the same methodology as the depression and anxiety sections. First analysis was Saldaña's (2016) first and second cycle coding methods within a structural coding construct. Then, first and second cycle structural analysis was done across the three questions of:

- Tell me about the things you did and learned in the VF-EFMH program that continue to help mitigate those symptoms, if applicable?
- Were there any beneficial changes in yourself or your life from your participation in the VF-EFMH program? Please explain.
- If the VF-EFMH program helped you learn or improve on social skills, what were they and how did they help? If they helped, tell me more about how learning these social skills have helped you since the program?

Analysis revealed that participants answered these three questions in varying ways that were redundant or related to another question. Structural analysis alone did not provide a holistic overview or comprehensive understanding of the integral nature of the value construct. Therefore, thematic analysis was conducted holistically across these three questions. These three questions were entered into a recoding matrix for thematic analysis. Thematic analysis of the structural analysis revealed a richer, deeper understanding and helped make more concrete the construct of value. Saldaña's (2016) first and second cycle coding methods within a structural coding construct were used with the questions: *Was my prior military status influential and/or relevant to your experience with the VF-EFMH program? If so, How much? Please talk more about that?* and: *How important was the horse in your experience? Talk more about that. If I had used a different animal do you think it would have made a difference for you?*

Value. Analysis of the question, *Tell me about the value you think this program had for you and in your life, if any*, revealed the following data that supports that participants gained value from the VF-EFMH program. Six (100%) reported gaining value. Sonya stated:

I can't really quantify it, Dave. When you asked me to participate, I tried to remember, going back three years, what will he ask me, what will I remember. Now that I am kind of reliving it with you, I can say that it was huge. I think the whole experience from start to finish. If you recall I only signed up to go through Sunday. I was having such a good time I did not want to miss the rest of it. So I called my boss on a Sunday and I told her the program went through Monday and I wanted to see it through. If I was not learning something, I would not have stayed. I would've stuck to my original plan and left. Because that's the way I am. The value of it I think is immeasurable. For all the reasons I said already. How much I learned from it. It's tremendous, that I just avoided anything to do with the military when I got out. Now I'm telling people about retreats. Going with them. Making friends wherever I go. My husband has started to come on couples retreats with me (Sonya, personal communication, March 17, 2018).

Reanne provided further evidence to the idea of perceived value, stating,

I think it just encompasses everything that we talked about. Social skills; letting your guard down; empathy; sympathy; forgiveness of self was huge. Just the awareness; the consciousness of my own actions, behaviors, the overall feeling afterwards that I had this newfound hope. I went right home and signed up for some other retreats because it worked so well. It gave me hope and showed me that I did have feelings and emotions; that I could feel for somebody else (Reanne, personal communication, March 17, 2018).

Reanne and I continued to speak more about the value the program had in her life, and she ended the conversation with, “I think, what I have to say, the final line: it helped me love myself. It was the beginning” (personal communication, March 17, 2018). I asked Mac to tell me about the value he thought the program had for him and in his life. He responded, “It was very important. It started my transition from being semi retired, doing nothing to being more active. Horses are a big part of my life now. And it's going to continue to be” (personal communication, March 17, 2018). When I asked Mac to explain more about this statement, he said, “It set the standard for my relationships with everything. I even use that pressure analogy when I fix cars. I don't want to start off full-bore. I start off with a thoughtful approach instead of just jumping in” (personal communication, March 17, 2018). Alisha commented that the value question was difficult for her to answer because she has experience working with horses and people and owns horses. Alicia said, “I think that is a very hard question to answer, because I also do it. I think that if this wasn't my career path, I would have so much more profound things to say” (personal communication, March 24, 2018). Alisha continued discussing the value question, stating:

I think specifically with your program being able to see it with other people and experience it with other people that have similar [military] backgrounds as me; that was really cool. I like that. And the biggest take away for me was that I was really terrified to work with veterans before going. I just wanted to stick strictly to kids and families. And after doing that I feel much more comfortable working with veterans and would do it if someone would ask me to without hesitation. Whereas before I would've

been very nervous, anxious, hesitant. Now I do not have any of that. So that's the biggest take away I have. I can do that kind of program. I can interact with that population without fear (Alisha, personal communication, March 24, 2018).

Patrick stated, “it had a lot” when asked about the value the program had for him. He continued with:

Yes. Everything about it. The people. There are few that I made good friends with. Really, like I made good friends. That was cool. What we were doing. Where we were. Who we were with. The program worked well. For me.

(Patrick, personal communication, March 24, 2018)

Friendship was the value the VF-EFMH program had in Joe’s life. When asked if the program had any value for him Joe stated, “Yes, I do. And I would love to do it again” and he continued talking about this value saying:

This person from the last equine program. I have kept track of. That's the first time I have ever done that. Out of the last 40 years. That’s sort of new for me. I never kept track of anything. Basically, after I lost my best friend in Vietnam I never made any more friends. It was too difficult (Joe, personal communication, April 3, 2018).

Joe discussed another veteran he connected with in another veteran program, who he is still friends with. I responded to Joe with, *So one of the values that you got out of this was your chance to connect with another person, create a relationship or friendship*, and he replied: “Yes. Basically I do not have any friends. I'm friends with my wife's friends, but

they're not necessarily mine. But now these two people are also hers, and that has never happened before” (personal communication, April 3, 2018).

Structural analysis revealed that 100% ($n=6$) of respondents thought that the VF-EFMH program was of value for them and that they received value from participation. Table 15 illustrates structural analysis using the question as the category of analysis and employing Saldaña's (2016) in vivo, attribute, and pattern coding methods.

Table 15

Structural Categorical Data About Value Construct

Interview Question	Identified Theme	Respondent
Tell me about the things you did and learned in the VF-EFMH program that continue to help mitigate those symptoms, if applicable?	Social Connection	Sonya; Reanne; Alicia
	Introspection & Healing	Sonya; Reanne; Mac
Were there any beneficial changes in yourself or your life from your participation in the VF-EFMH program?	Social Connection	Sonya; Reanne; Alicia; Patrick; Joe
	Introspection & Healing	Sonya; Reanna; Mac; Joe
If the VF-EFMH program helped you learn or improve on social skills, what were they and how did they help?	Social Connection	Sonya; Reanne; Mac; Alicia; Patrick; Joe
	Introspection & Healing	Sonya; Reanne; Mac; Joe

Thematic analysis across the structural analysis of the questions in Table 15 allowed for a deeper exploration into participants' perceived value of the VF-EFMH program. The themes of social connection and internal processing were overarching. The sub theme of starting point was also identified in the investigation of perceived value.

Social connection. Thematic analysis across the corresponding value questions revealed that all the participants (100%; $n=6$) found social connection to be of value as an aspect of the VF-EFMH program. Sonya and I were talking about the aspect of the VF-EFMH program that might still be helping her. She stated, “Well again, it was the

connection with the other vets” (personal communication, March 17, 2018). She talked about another EFMH program she went to after completion of this one, stating, “I did not get anything out of it” and continued discussing this program saying:

The way you organized it. People stayed in the background. There wasn't a lot of "tell me how you feel about this." The natural environment, I think, really helped put in a context that you could relate it to dealing with people on it every day. It gave me a new appreciation for walking up to a dog, walking up to a horse, walking up to someone I do not know. So all of that was very valuable. And I guess those are more intrinsic. The external was, that I was able to connect with other people. It started me on my journey of being willing to go to other retreats. Hanging out with more people. I gravitated towards both men and women. Instead of female only. Commingled. Co-mingled retreats (Sonya, personal communication, March 17, 2018).

Building on what Sonya had just said, I asked her what beneficial changes might have come from all of this. She stated:

I realize that I'm just one of many. My experience is not unique. Although, you know, it's unique to me, but not unique. Everybody. I was really touched by some of the men's stories too. At the time I thought, they made my life hell... And now I don't feel that way (personal communication, March 17, 2018).

I asked Sonya what her biggest takeaway was and she said “I am not alone” and then joking stated, “I have issues, Dave; with my ego” (personal communication, March 17,

2018). I replied back saying, you and the rest of us, right. Sonya laughed a bit and closed this line of questioning with, “Yes [laughing], because nobody else could ever understand what I went through, right? And that’s just not true. I don’t have to carry the weight of the world on my shoulders anymore” (personal communication, March 17, 2018).

Reanne also discussed social connection as having value. I asked her to tell me about some of the things that she did or learned in the program that continue to help her today. “It definitely helps me be more social,” she stated and continued with. “With people, veterans, other veterans. Maintaining relationships” (personal communication, March 17, 2018). I asked her to tell me more, then Reanne talked a little about how introspection helped her with many social aspects and connected it back to social connection by stating she is now “able to have meaningful long-term relationships with other people” (personal communication, March 17, 2018).

Mac was discussing changes in himself and his life as a result of the VF-EFMH program. Mac stated, “It’s helped me” and continued with:

My in-laws and my wife want to open an equine retreat for veterans. Veterans with disabilities. It's really helped me with that aspect. Just dealing with people. Every day. Day in and day out. We have to deal with people. It really helped (personal communication, March 17, 2018).

I was asking Alisha if there were any specific process she found beneficial. She started by saying, “The horse stuff I already knew, so it was not out of the ordinary or unique,” then she stated:

But, being able to talk in the group discussions I think was helpful. It was hard. But it was helpful. And I still have a couple of other participants as

friends on Facebook. And I contact them every now and then. That's kind of nice. I think it did help one of them as well. Too kind of see how she has changed through Facebook. I know Facebook is not the most legit thing to tell if somebody has changed, but, I would say it was the community, being able to share. I think I was the youngest one there. Or the second youngest one. Everybody was pretty much older and they came from different services and different backgrounds and different conflicts. That was really cool to be able to connect with the different generations and the different experiences as opposed to just my generation (Alisha, personal communication, March 24, 2018).

Patrick's quote supported the value of social connection when he stated, "Just the fact that I was in mixed company. Actually to have conversations about life and stuff like that" (personal communication, April 24, 2018). I asked Patrick why having conversations helped his recovery and he said:

I have a significant brain injury. So socialization upon leaving the hospital... Any kind of brain injury, nerves do not heal the same way as the rest of the body. So everything was on a slow path. Never mind just standing up and walking. Just talking to people. Right off the bat, after the accident, trying to socialize and to be part of social life again, just saying words like "I like the color of your shirt." That simple sentence required so much mental energy and power and concentration. And I would even get the sentence right. A simple thing like, "you look very nice today." Something really simple like that was really difficult. Even now it's

difficult, but back then it was really worse. Talking was, it was really hard to have a long conversation. Just the fact that I was having a conversation with somebody (personal communication, April 24, 2018)

Joe's support of the value of the social connection theme came from dialogue when discussing his takeaways from the program.

I think now that I go to the VA (ref. Veteran's Administration Hospital), I go to the VA with the idea that it's okay if I meet somebody. It's okay if I have to carry on a conversation for five or 10 minutes. I don't usually do that. And I actually had a very short conversation with one of the nurses. And we got to talking about writing short stories because she does that also. And we got to talking about one of the ones that I'm working on now. And she said that she wants a copy of it. So I'm working on getting it printed out so I can bring her a copy. So that is new for me. I would not share my work with anyone. I would like to spend more time getting to some writing groups. Listening to what other people do, having them hear what I do (personal communication, March 24, 2018).

This investigation implies that from the participant perspective, facilitating social connection is a vital aspect of VF-EFMH programming. These quotes support that social connection is of value and beneficial to participants and is something that participants take with them that continues to be a positive aspect in their lives.

Internal processing. Sonya, Reanne, Mac, and Joe (66.6%) all discussed the value and importance of internal processing. Sonya was discussing how the VF-EFMH program helped her to learn how she interacted with people. Sonya was reflecting on a

previous job and former boss, saying: “I ended up leaving, but, almost like a forced retirement. And so he always told me because of my military background, my approach was off-putting. I needed to be kinder. I didn't need to argue all the time. I did not need to argue with people all the time” (personal communication, March 17, 2018). She went on to say:

The approach that you illustrated with the horses, was the very thing that I needed. To improve my social skills. Because at that point it was my biggest issues. I blamed myself for everything. Now I know that two people contributed to that relationship. And I can own my part now. Does not mean I would enjoy walking into him, but. The social skills were a very valuable lesson. I brought that to my new job. To the point where, I liked by my coworkers. I like them. I can make suggestions to my boss when I feel like I should. I know when to back off. When it's not my place to tell him or her how to run stuff. Because, I know I'm not in charge (personal communication, March 17, 2018).

The following statement by Reanne is supportive of the internal processing theme and how it was of value:

You have me reflecting back, I think it was the first day, the first time I got in the ring with that horse the first day. The horse at first would not come up to me. I had noticed it had gone up to somebody else. And it just kind of walked on by me... And I remember having the thought that, that is like classic me; I just ignore people; like when I'm on a plane, I won't even talk to the person next to me. It brings an awareness to yourself. I

kept saying: that is like classic me; and I was kind of hurt at first; that the horse just kind of ignored me. It brought a better awareness of how I interact, and I wondered maybe if that is how people feel about me, when I ignore them. It dropped my guard enough for me to open up to see more about my own feelings, my own reactions (Reanne, personal communication, March 17, 2018).

When discussing the questions about beneficial changes, social skills, and what is continuing to help in his life, Mac's comments evidence that internal processing facilitated by the VF-EFMH program was valuable. Mac began by saying, "It gave me some things to think about in retrospect. And when I reflect on it, it was very changing. I really don't know what to say about it" (Mac, personal communication, March 17, 2018). I asked Mac what he meant by that and if he could say more. He replied, "My attitude at life. I was always the glass is half empty, and now I look at it as always full" and stated that "Levels of pressure. That has really been important. Really important" (personal communication, March 17, 2018).

Joe's comments support that internal processing, learning things about himself, was valuable and led to a lasting change:

I think while we were sitting around the campfire, my wife came to pick me up. Before I left, you asked me what's going to be different tomorrow with you? And I think I remember telling you something about how I'm going to try to carry myself more like a horse. In a majestic sense. Keep my head up a little higher. Stand up little straighter. That sort of thing. Because to me, that's what the horses do when they're feeling good about

themselves. And some of the ones we dealt with were not really feeling good about themselves. So they did not stand that way. You could tell. But the ones that were, you could tell. Their heads were higher; they were straighter; their backs are straighter; they stood up straight... And to me that's what I noticed that I wanted to be my take away (Joe, personal communication, April 3, 2018).

Joe finished the interview with,

And I think also that it gave me the impression that maybe I ought to look a little better. Dress a little better. Shave more often. And so on. Sometimes I get lazy in that regard. Especially when all I do all day is work around the yard. When I have to go somewhere like every week to the VA, I actually take the time to get cleaned up, get nice cloths on, shave, look presentable. I used to go just looking like a bum. And now that I take a little better care of myself when I go, I think more people talk to me because I look more presentable. In my mind, that is why (Joe, personal communication, April 3, 2018).

This analysis supports that from the perspective of the participants of VF-EFMH programs, that social connection and internal processing are valuable aspects of the program that bring benefits and lasting changes into participants' lives.

Starting point. Structural and thematic analysis revealed that several respondents mentioned the theme of starting point. Starting point was identified as a theme if a participant mentioned that participation in the VF-EFMH program was the catalyst of starting something or starting something in motion. However, the starting point theme

was not a focus of conversation, but rather mentioned as the respondent discussed other main themes. When discussing the theme of social connection and enjoying being with other veterans, Sonya stated, "it started me on the path to feeling" and later in the interview wne continuing to discuss social connection she said, "it started me on my journey of being willing to go to other retreats" (personal communication, March 17, 2018). Alicia stated, "I learned I needed counseling" and "I was more motivated to get into it so and six months later I got into counseling" (personal communication, March 24, 2018). Patrick stated, "it brought me into the scene" of working with horses and going to equine retreats, when he was discussing the theme of the horse and the benefits he received (personal communication, March 24, 2018). Joe stated that he has been a "different person" since the VF-EFMH program, and how he has started to carry himself differently, more majestically (personal communication, April 3, 2018).

Value of facilitator military and veteran status. Structural analysis of participant interviews showed that 100% ($n=6$) of those interviewed stated that the military and veteran status of this researcher as facilitator of the VF-EFMH program was influential and relevant. Participants discussed that me being a veteran myself made me more credible and valid as a facilitator and that they saw me as having a greater understanding of them as veterans and their issues.

Sonya stated that I "had much more street cred" but was unsure how much that "affected the program" (Sonya, personal communication, March 17, 2018). Reanne started this conversation by saying, "This guy can understand," and continued with:

I think it's the military connection, you know. Your brothers and sisters that were in the service, that have been through the same thing, they've

been through basic, been through the conditioning, some of them have been through trauma, they get the nightmares. They just get it. And I think that right off the bat it builds trust. The foundation for trust. It was easy to open up. To share things. More retreats should have veterans who are therapists (Reanne, personal communication, March 17, 2018)

Mac answered the question whether my military status was influential or relevant by stating, “It was. Definitely. Being a SEAL, and I’m a Marine. It goes hand-in-hand. I was able to relate to some of your stories” (Mac, personal communication, March 17, 2018).

I then asked Mac why it was influential, and he said:

It would not have been as effective if it was a civilian. Because of your experience and point of view. It's hard for civilians to look at our point of view. You can only tell someone so much, but you have to have lived it, I think, to know what you're really talking about (Mac, personal communication, March 17, 2018).

When interviewing Alicia, I asked her opinion on how influential my being prior military and a veteran had for her. She replied with, “ I would not have done it if you didn’t have that background. It is crucial” (Alicia, personal communication, March 24, 2018). Alicia had a lot more to say about a veteran being a facilitator in regards to herself and from her conversations with other veterans during the VF-EFMH program she attended:

I don't know that it's necessarily the case for everyone. But I know for myself, it was. And even to this day, if there's somebody that wants to work with veterans, I try to figure out why. And why they think they're qualified to do that. And I know a lot of the participants, I think, they said

the same thing. For some, they said it didn't matter, but for most it did, and a couple were very adamant, like me, they said that was the only reason they agreed to it. Because they knew you were facilitating it. So I think for your tougher personalities, and you're more stubborn personalities, it is crucial. And sometimes those are the people that need it the most. And so for those who maybe don't have, this is such a generalized statement but I think that for the most part it is true, for those who do not have that much trauma, or that much feeling or anger attached to their job, it's easier to do a program that is not run by a veteran. Because sometimes it's just more fun, it's more like a social thing for them, whereas those of us that have a lot of junk attached to our stuff, we have to really be able to trust. And in order to build that reporter without meeting the person and say yes I'm going to do that without meeting the person, you have to have some common link and for most veterans that link, that first link, it will be that you served as well. So yeah, it is very important (Alicia, personal communication, March 24, 2018).

Patrick and I carried on a short dialogue in regards to how influential my military history and veteran status was for him. Patrick started this reply with, "It's my understanding that you were a SEAL? That helps. I have a little bit of an idea of what you went through in BUDs (Basic Underwater Demolition Seal School). More so than maybe most. It says a lot" (Patrick, personal communication, March 24, 2018). I probed deeper and asked how much he thought it was influential. His reply was, "You had credibility [that] otherwise you would not have had if you would've said like, *'I was in the Air Force, I was in the*

Navy, and I was a cook'. It was really big.” Patrick then said that the “conversations would be different” and I asked how so. He answered with:

People in the military, they know how to walk the walk. You know how to walk the walk and talk the talk. If you not the military you don't have that. It's fine and I can live with that. But the understanding and the quality of the conversation won't be the same. And when you're trying to deal with PTSD; trying to talk about an experience with somebody that has no idea what they're talking about. It can be a waste of my time. I'm not really going to say it's a waste of my time... But it's definitely not the best use of time (Patrick, personal communication, March 24, 2018).

During Joe's interview, I asked him if having somebody that was a veteran was influential or relevant to his VF-EFMH experience. Joe replied,

I think so. I appreciate that you are a veteran. I think that if this was done with somebody maybe just as good as you but not a veteran, it might've been different. It had a lot more validity to it because you knew where we were coming from. Most of us anyway; because that's why we were there (Joe, personal communication, April 3, 2018).

This analysis supports that veterans may be more open to programs that have veterans as facilitators. Due to fact that I was in the military and a veteran myself, I was perceived by the veteran participants as being more credible, more valid, and that I subsequently possessed an ability for deeper, more comprehensive understanding of their issues.

Value of horse. There was a general consensus among all participants (100%; $n=6$) that working with a horse to facilitate a therapeutic program was vitally important

and that if another animal were incorporated it would not have been as effective. The following quotes from participants exemplify their perceived importance of working with horses and points to the value of using horses in a therapeutic construct, such as VF-EFMH.

When asked how important the horse was for her experience, Sonya discussed what she liked about working with the horses:

I loved the dwarf horses. They were my speed. They were so gentle. Free. They did not have to be led back to their place. The fact that I gravitated toward those horses, you know, if you want to analyze that; maybe [giggling]. They were friendly. They were tolerant. I brushed them. I braided their manes. It seemed like I was more on their level. I knew I was safe with them. The fact that I could just let them go, and they just roamed the farm on their own, at their own will. I thought that was super. The bigger horses, I definitely shied away from. If I would have chosen one of the bigger horses, I would've done the same things. I do not think I would have felt as comfortable (Sonya, personal communication, March 17, 2018).

Sonya stated that she might attend a program using a “service animal” but “Nothing that was a rodent, for sure. No. If you had said sign up for a rat retreat, I don't know how many participants you'd get. I would not be one of them [laughing]” (personal communication, March 17, 2018).

Reanne answered the question about the importance of the horse by stating, “I think I answered that question, several times [laughing]. It was huge” (personal communication, March 17, 2018).

Sonya did not think it would have had the same effect if another animal was used. When asked she said, “I don’t think so. No.” She finished this discussion about the importance of the horse by saying:

I think the lower you go on the food chain it would not work out. But I think horses just have intelligence or some kind of innate ability. Almost like, empathic. Like an empath. I can be in a room full of people, and I can get vibes, that kind of connection. I think the horse has a very empathic ability to get your feelings, to know what you're going through. I don't know. It was definitely a very strong feeling being in the ring with a horse (Sonya, personal communication, March 17, 2018).

Mac stated, “It was essential. I don't think it could've been done with without it. And having such a cool and laid-back horse was great” when asked about the importance of the horse regarding his experience with the VF-EFMH program. Mac expanded on this when prompted and said, “it is so easy to see their reaction. If they don't like what you're saying they are going to tell you. And having a ton swinging around at you; your really got to find out quick” (Mac, personal communication, March 17, 2018). When asked if an animal other than a horse would have been used, Mac said, “It would not have been as important or as impactful. Because interactions with people are similar to interactions with the horse. I am able to link it better in my mind. I replied, how is that. Mac answered with:

Like with my daughter, I don't go in full bore at her because then she shuts down and does not respond correctly. Not as well as I'd like her too. And I don't get anywhere. Same thing with a horse. I don't want to go in full-blown and the horse will shut down and not respond well (Mac, personal communication, March 17, 2018).

Alicia's quote captures the essence of the importance of the use of horses to deliver therapy:

I think the horse is a really perfect mediator. They have no bias. They don't really care. They have the ability to provide a human feedback that I think they are more willing to listen to versus if it came from another human. And so I think because of that it's pretty important to have them. I don't think you could, well you can do therapy with dogs, but that does not provide you as much complexity and richness as doing it with a horse...I think that the horse has a very unique ability, a unique nature, of allowing us the time and the space to reflect on why...it provides a lot of self-reflection

I asked Patrick how important the horse was for his experience, and he replied, "It was everything. The horse did not know I was cripple. Maybe he did, but he did not care. Maybe he was more gentle" (Patrick, personal communication, March 24, 2018). I asked him if he thought the horse had insight or was perceptive. Patrick answered with, "The fact that I actually had to work with him and he was, I think on some level he knew I was in injured person. I felt the connection with the horse that I can't really explain" (personal

communication, March 24, 2018). When I asked if using another animal other than a horse would have made a difference, he said:

Probably. Because I know a little bit about horses. There's some kind of genetic... metaphysical... I don't know how to explain it. Or what to call it. The connection. The horse is really different with the relationship that we have. The history of us living with horses for so long. Part of history, before the car. We just have a connection. Something I can't really explain. It's a little above my pay grade, you know [chuckling] (Patrick, personal communication, March 24, 2018).

Joe was discussing the importance of the horse and his dialogue supports that using horses to deliver therapy was valuable. Joe said:

To me I compare it with getting close to a veteran, almost. That was my feeling. Getting close in the sense that I am afraid to get close to people. So to me it was a different experience because I hadn't gotten close to animals either, never mind veterans (Joe, personal communication, April 3, 2018).

I reflected back to Joe stating that it sounded like getting close to a horse helped him to get close to other veterans, and I asked him to talk more about that. He went on:

Yes, I think it has. I have been a lot better at just sitting down in the waiting room at the VA, for instance. Instead of being really uncomfortable when somebody says something, I will now fold up my book and engage them. Three years ago I would not have done that. I would keep reading like, 'take a hint buddy'. Whether it's on a bus or on

an airplane, anywhere, a book was always my excuse to ignore and not have a conversation. But now I can actually close the book and carry on. I've never been able to do that (Joe, personal communication, April 3, 2018).

This analysis into the importance of the horse supports the hypothesis that participants perceived working with horses to be valuable and crucial to the success and of VF-EFMH program.

Conclusion

This study explored the effectiveness and value of VF-EFMH with the veteran population, using a mixed-methods explanatory sequential design. This study closed some of the gaps in EFMH literature by studying one VF-EFMH program that was delivered on ten separate occasions, at different locations, with different participants, but with the same facilitator following the same curriculum and program design. Quantitative analysis on exit survey data suggests that EFMH is effective at lowering depression and anxiety in veterans suffering with those issues and also that the VF-EFMH program is of value for those veterans. Qualitative analysis supports the quantitative finding that VF-EFMH may be an effective alternative treatment modality for lowering depression and anxiety in veterans and that the VF-EFMH program has value beyond the time of participation. Further, it led to a better understanding of what aspects of the VF-EFMH program specifically helped lower depression and anxiety, while also unearthing the perceived value and benefits veterans received from participation. This study also suggests that due to the value-added quality of the VF-EFMH program, participants may experience lasting benefits in their lives in regard to social connections and internal

processing. These two emerged themes were reported as being an important aspect of the VF-EFMH program, that in conjunction with utilizing horses as a therapeutic medium lead to lowered depression and anxiety and sustained effect in the lives of participants. This study also pointed to the value of having a facilitator who is also a veteran, as veterans perceived another veteran having more credibility and a better ability to understand veterans issues. This value-added quality facilitated participants both in accessing the program offerings themselves and authentically engaging in the program once they arrived. These findings will be further discussed in chapter five. Written as a journal article submission to *Social Work*, publication of chapter five will add to the EFMH literature and further inform community of EFMH clinicians by providing a template for an effective VF-EFMH.

Chapter 5

Findings, Conclusions, and Recommendations

As encouraged by my dissertation committee chair at Plymouth State University, this chapter is written for submission as a journal article to *Social Work*.

Abstract

This article reports on an IRB approved doctorate dissertation study looking at the effectiveness of a veteran focused equine facilitated mental health (VF-EFMH) program using an explanatory sequential mixed methods design. Forty-nine exit surveys from one specific VF-EFMH program that was offered ten separate times between 2013 and 2017 were analyzed using SPSS software. Results from this analysis suggest that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Interviews were then conducted with six former participants of the program offerings. Results from analyses of interviews support the quantitative results that VF-EFMH is effective for reducing depression and anxiety and is of value for participants. Further analysis revealed the themes of social connection, internal processing, and the horse are vital to the success of this type of programming.

Keywords: veteran, equine, mental health, reintegration, treatment

Veteran Focused Equine Facilitated Mental Health

Transitioning out of the military and reintegrating back into civilian society can be difficult for military members. Many veterans have difficulty with reintegration (Elnitsky, Blevins, Fisher, & Magruder, 2017), moral injury (Litz et al., 2009), and mental illness, including substance use (Moore & Penk, 2011). Many returning veterans suffer with psychological issues as a result of their difficulty reconciling their military and civilian identities (Elnitsky, Blevins, Fisher and Magruder, 2017). The most common diagnosis of veterans in the Veterans Administration (VA) system is depression, with 18% meeting the clinical criteria and up to 34% experiencing depression sometime in their lives (Karstoft, Nielsen, & Nielsen, 2017). Espejo et al., (2016) reported that up to 75% of veterans presenting to a VA clinic have symptoms of anxiety and nearly 18% meet the clinical criteria for diagnosis. Posttraumatic stress disorder (PTSD) is another concern for returning veterans. Hoge et al., (2014) reported that slightly over 5% of all military personnel will suffer with PTSD and 13% of operational combat troops will meet criteria for a PTSD diagnosis.

There are many evidenced-based practices specifically addressing the veteran population including: prolonged exposure therapy (Peterson, Foa, & Riggs, 2011); cognitive processing therapy (Williams, Galovski, Kattar, & Resick, 2011); eye movement desensitization and reprocessing (Russell, Lipke, & Figley, 2011); virtual reality exposure therapy (Reger & Holloway, 2011); psychosocial rehabilitation (Moore & Penk, 2011). Cognitive behavioral therapy and mindfulness interventions are also evidenced-based practices indicated for treating depression and anxiety, as well as PTSD (Beck & Beck, 2011; Germer, Siegel, & Fulton, 2013). Moore & Penk (2011) state that

although these evidenced-based practices are effective, more alternative treatments are needed, as for some veterans routine office therapy is either unappealing or proves to be ineffective. Subsequently many veterans are actively seeking alternative therapies that might better assist their road to recovery from reintegration and psychological illness (Hoge et al., 2014; Phillips & Wang, 2014).

Equine Facilitated Mental Health (EFMH) is an emerging therapeutic modality that targets depression, anxiety, and PTSD, as well as elevating self-confidence, self-esteem, self-concept and overall wellbeing (Ferruolo, 2016; Holmes et al., 2012; Klontz et al., 2007; Schultz et al., 2007; Smith-Osborne, 2012). The purpose of the current study was to determine the effectiveness of a psychosocial intervention that utilizes a Veteran Focused Equine Facilitated Mental Health (VF-EFMH) program, an adaptation of EFMH, to deliver evidenced based psychological treatments to veterans suffering with depression and anxiety. Veteran focused equine facilitated mental health offers a framework for an alternative treatment modality that integrates more traditional therapies with EFMH. Additionally, this inquiry sought to develop a deeper understanding of the perceived value the VF-EFMH program has for veterans. An earlier pilot study (Ferruolo, 2016) indicated that VF-EFMH is effective at addressing mental illness and reintegration issues of returning war veterans. Equine Facilitated Mental Health literature (Bachi, 2012; Holmes et al., 2012; Klontz et al., 2007; Knapp, 2013; Lee, Dakin, & McLure, 2016; Meinersmann, Bradberry, & Roberts, 2008; Schultz et al., 2007) supports the assertion that EFMH is effective at treating psychological issues, including anxiety and depression.

Underpinnings of VF-EFMH Program

The foundation of the VF-EFMH program is based on the following theoretical frameworks: outdoor education research with a focus on process and praxis (Dewey, 1938; Kolb, 1984) alongside social constructivism and learning theories (Bandura, 1977; Ferrari, Robinson, & Yasnitsky, 2010; Grusec, 1992; John-Stern & Mahn, 1996; Van Wormer, 2011) to inform and ground the development of experiential activities; existing literature and theory on animal and equine assisted therapies (Chandler, 2011; Knapp, 2013; P. Smith, 2012; Trotter, 2012) to inform and rationalize the VF-EFMH program and processes; current evidenced-based treatments for depression, anxiety and PTSD, while also considering the reintegration issues (i.g. McCormack & Ell, 2017) of veterans, using a cognitive and behavioral frame along with mindfulness and transpersonal interventions, within a person-in-environment, person centered, strengths perspective (Beck & Beck, 2011; Dillon, 2003; Germer et al., 2013; Shulman, 2012; Van Wormer & Besthorn, 2011; Walsh, 1999). The complexity of these diverse theoretical underpinnings combines to create the framework for implementation of the VF-EFMH program.

Methods

The purpose of this study was to explore the effectiveness of VF-EFMH as an alternative treatment modality for veterans experiencing reintegration issues related to symptoms of depression and anxiety, while also seeking deeper insight into the value the program has for participants. The investigation utilized an explanatory sequential mixed methods design to answer the primary research question of: *is VF-EFMH effective and valuable for veterans with anxiety and depression*. Qualitative data was utilized to help

better explain, interpret, and support quantitative results (Creswell, 2013, 2015; Patton, 2015). A single VF-EFMH program was investigated. Forty-nine exit surveys that were collected between 2013 and 2017 from ten separate offerings of that VF-EFMH program were analyzed (Table 3). In the spring of 2018 a purposive sample of six veterans that participated in one of the offerings of the VF-EFMH and had filled out an exit survey were interviewed about the effect and value the program had for them for addressing issues related to symptoms of depression and anxiety.

Quantitative Segment

The first segment of the study was a secondary analysis of the preexisting exit survey data using SPSS software. There were three differing surveys across the ten program offerings. Surveys differed in terms of how questions were asked about symptoms of depression and anxiety and terms used in the Likert scales. Surveys were re-coded into order to be able extrapolate yes and no answers from responses and enable full analysis of all data sets (Patten, 2017; Saldaña, 2016). Chi square testing (Rubin & Babbie, 2011) was used to see if there were any significant differences in participant responses between the program data sets, using the ten data sets against participant responses about depression, anxiety, and value. Chi Square was also used to test if there was a significant relationship across data sets using demographic characteristics. Notably, the exit survey sample consisted of a Caucasian mix of about 70% male and 30% female, with almost 50% serving in the army. The Air force represented 14%; Navy, 18%; Marines 10%. Twenty-seven percent of the exit survey sample was married while another 27% was divorced. Just under 40% was single or separated. Fifty-one percent had a high school diploma, while 32% had a college degree.

Qualitative Segment

Sample. A purposive sample of six participants was selected, with a goal of identifying the most diverse group (Creswell & Plano Clark, 2011; Rubin & Babbie, 2011). Each participant must have participated in one of the VF-EFMH program offerings that occurred during the 2013-2017 timeframe, and have filled out an exit survey. The criterion for identifying the sample was: gender, service type, and ethnicity. Within the criteria of service type, additional consideration for inclusion was that the sample unit had been deployed to a combat zone as part of the enlistment. The final sample consisted of three men and three women, ranging in age from 25 to 74 years old that participated in programs between 2013 and 2017. The Army, Marines, and Air force was represented with two participants each.

Interviews. Interview questions were created to support the development of a deeper understanding of exit survey data. The questions were multistage and both probing and interventional (Patton, 2015). The intention being to unearth data that better explained, helped interpret, and supported the quantitative results (Creswell, 2015; Grinnell et al., 2015; Patton, 2015), while also gaining a better understating of what aspects of the VF-EFMH program are effective and of value for participants (Grinnell et al., 2015). Participants were given a choice of interview medium and were assessed at the time of interview to ensure ability to participate. Two interviews were conducted in person, four using HIPPA compliant Doxy (doxy.us) online video conferencing, and one via phone. All interviews were audio recorded.

Analysis. Procedures were taken to ensure validity (Creswell & Plano-Clark, 2011; Patton, 2015; Rubin & Babbie, 2011; Saldaña, 2016), thus a two-part process was

used, first transcribing each interview into a table matrix then checking for accuracy by listening to the recordings and reading the transcripts. Transcripts were emailed to interviewees for member checking (Patton, 2015). Three responded and no changes were made.

Data coding followed the process outlined by Saldaña (2016), which included: first-cycle, after first-cycle, and second cycle coding. Thematic coding (Creswell & Plano-Clark, 2011; Patton, 2015) was also done in conjunction with first cycle and after first cycle coding. Grammatical and elemental methods (Saldaña, 2016) were used, along with thematic coding (Creswell & Plano-Clark, 2011; Patten, 2017), during the first-cycle coding process. First cycle coding included: attribute, structural, descriptive and in vivo coding (Saldaña, 2016) along with thematic analysis (Creswell & Plano-Clark, 2011; Patten, 2017). A coding obstacle in first cycle coding was that participants routinely answered questions in non-specific ways. This was addressed in the after first cycle coding process (Saldaña, 2016), by creating a secondary recoding matrix to reanalyze the original structure categories and move relevant information into the aligning, appropriate categories.

Study Limitations

The main limitation of this study comes from the investigator himself. As the primary investigator of the study, a veteran that served as a Navy SEAL, the developer and facilitator of the program, and the person who will disseminate the information there is an acknowledgment for the potential for researcher bias and the potential loss of objectivity. In order to address these concerns, strict procedures to ensure trustworthiness were implemented.

Trustworthiness Procedures

In order to address concerns of researcher bias and potential subjectivity, several strategies were used to increase trustworthiness. These strategies were selected specifically for addressing credibility, transferability, and dependability. Specifically, method and theory triangulation (Patton, 2015); researcher reflexivity (Patton, 2015); using highly descriptive writing, constantly comparing, and keeping analysis focused and congruent with the research questions (Paton, 2015) were used. Additionally, since this study was conducted as part of the requirements for a doctoral degree, inter-rater agreement was met (Patton, 2015; Rubin & Babbie, 2011) among researcher and dissertation committee members.

Findings

Quantitative Segment

Depression. Chi square analysis was conducted across demographic characteristics to see if there was a difference in responses about the perceived effect of the program on symptoms of depression (Table 16). There was no statistical difference between male and female responses ($\chi^2=3.362$; $df=2$; $p=.186$); branch of service responses ($\chi^2=6.675$; $df=8$; $p=.572$); marital status responses ($\chi^2=4.815$; $df=8$; $p=.777$); educational level ($\chi^2=21.98$; $df=32$; $p=.908$); or service time responses ($\chi^2=58.6$; $df=48$; $p=.140$). No statistical difference was found across data sets two through four Likert scale responses ($\chi^2=2.77$; $df=2$; $p=.250$) and no significant difference between the Likert scale data sets five through ten ($\chi^2=13.45$; $df=15$; $p=.567$) or the recoded data sets five through ten responses ($\chi^2=4.4$; $df=10$; $p=.928$).

TABLE 16

Exit Survey Responses on Effect on Symptoms of Depression (N= 49)

Did program lower depression	%	n	p
Data set 1 (2013) Yes/No Responses (n=8)			.999
Survey Question: <i>Do you feel working with horses helped lessen depression?</i>			
Yes	100	8	
No	0.0	0	
Not Sure	0.0	0	
Does not apply	0.0	0	
Data sets 2-4 (2013-2014) Likert Responses (n=19)			.250
Survey Question: <i>Do you feel this experience helped lessen depression?</i>			
Extremely	57.9	11	
Moderately	42.1	8	
A Little	0.0	0	
Not at all	0.0	0	
Not Applicable			
Data sets 2-4 (2013-2014) Yes/No Recoded Responses (n=19)			.999
Yes	100	19	
No	0.0	0	
Not Sure	0.0	0	
Does not apply (not applicable)			
Data sets 5-10 (2015-2017) Likert Responses (n=22)			
Survey Question: <i>Working with horses helped lower depression?</i>			.567
Strongly agree	72.7	16	
Agree	18.2	4	
Neutral	4.5	1	
Disagree	4.5	1	
Strongly Disagree	0.0	0	
Data sets 5-10 (2015-2017) Yes/No Recoded Responses (n=22)			.928
Yes	90.9	20	
No	4.5	1	
Not Sure (neutral)	4.5	1	
Does not apply	0.0	0	
Data sets 1-10 (2013-2017) Yes/No Responses/Recoded Responses (n=49)			.836

Yes	96	47
No	2	1
Not Sure	2	1
Does not apply	0.0	0

No significant differences were found between data sets one through ten ($\chi^2=12.213$; $df=18$; $p=.836$). These results support that participants believe that VF-EFMH is effective for lowering depression

Anxiety. Chi square analysis (Table 17) revealed no significant difference between data sets five through ten Likert responses ($\chi^2=22.09$; $df=15$; $p=.105$) or the recoded yes/no responses ($\chi^2=16.762$; $df=10$; $p=.080$). Statistical difference was found when analyzing recoded data sets one through ten on yes/no response ($\chi^2=40$; $df=18$; $p=.002$). The following factors were identified as accounting for the statistical difference across the ten data sets. When observing data sets one through four ($n=27$) yes/no recoded responses, one participant (2% of $N=49$) responded with an answer other than yes. Data sets five through ten ($n=22$) had four respondents that did not reply with a yes (12% of $N=49$). Further, data sets nine and ten had only one exit survey each, with both respondents providing a response other than yes. When analyzing for anxiety across data sets one through eight, there were no statistical differences found ($\chi^2=12.08$; $df=14$; $p=.599$). Chi square analysis showed a statistical difference between male and female responses in regards to lowered anxiety ($\chi^2=6.491$; $df=2$; $p=.039$). There were no statistical differences in branch of service ($\chi^2=14.613$; $df=8$; $p=.067$) or marital status ($\chi^2=5.98$; $df=8$; $p=.649$). These survey responses suggest that VF-EFMH may be more effective for men than women.

TABLE 17

Exit Survey Responses on Effect on Symptoms of Anxiety (N=49)

Did program lower Anxiety	%	n	p
Data set 1 (2013) Yes/No Responses (n=8)			
Survey Question: <i>Do you feel working with horses helped lessen anxiety?</i>			.999
Yes	100	8	
No	0.0	0	
Data sets 2-4 (2013-2014) Likert Responses (n=19)			
Survey Question: <i>Do you feel this experience helped lessen anxiety?</i>			.511
Extremely	47.4	9	
Moderately	47.4	9	
A Little	5.3	1	
Not at all	0.0	0	
Data sets 2-4 (2013-2014) Yes/No Responses (n=19)			.999
Yes	100	19	
No	0.0	0	
Data sets 5-10 (2015-2017) Likert Responses (n=22)			
Survey Question: <i>Working with horses helped lower anxiety?</i>			.105
Strongly agree	72.7	16	
Agree	9.1	2	
Neutral	13.6	3	
Disagree	4.5	1	
Strongly Disagree	0.0	0	
Data sets 5-10 (2015-2017) Yes/No Responses (n=22)			.080
Yes	81.8	18	
No	4.5	1	
Neutral	13.6	3	
Data sets 1-10 (2013-2017) Yes/No Responses (n=49)			.002*
Yes	91.8	45	
No	2	1	
Neutral	6.1	3	

Note: * $p < .05$

Qualitative analysis. Social connection, introspection, and the connection to horses were all identified as important elements of the program for addressing symptomology. Of the participants that were interviewed, five of six reported depression at time of program offering and all ($n=6$) reported symptoms of anxiety. Thus, five participants answered the questions about depression and six answered about anxiety.

Social connection. Social connection emerged as a theme when exploring what aspects of the VF-EFMH program respondents' thought helped reduce depression and anxiety. Social support is a protective mechanism that may insulate returning veterans from psychological distress (Smith, Benight, & Cieslak, 2013). Eighty percent ($n=5$; 4 of 5) of interviewed participants with depression and 50% ($n=6$; 3 of 6) of those with anxiety mentioned connecting, bonding, interacting, and sharing information with other veterans as an important aspect of the VF-EFMH program that facilitated lowering of depression and anxiety.

Internal processing. Three of the five (60%) that reported symptoms of depression and three of six (50%) of those that reported anxiety discussed that the program facilitated the ability for them to introspect about themselves. This introspection led to diminishing symptoms of depression. Respondents reported that this introspection facilitated awareness about negative and destructive thinking and behavior patterns that they were able to address during the VF-EFMH program. This insight and addressing of issues lead to mitigation of symptoms.

The horse. Connection with the horses is another aspect of the VF-EFMH program that was reported by those interviewed with active symptoms of depression and/or anxiety as being important for lowering depression. Sixty percent, three of the

five, respondents that reported depression and 83.3% of the six that reported anxiety conveyed this effect.

The analysis of data provides support that a VF-EFMH program design that includes supporting the development of a sense of social connection, introspection and time to reflect, with horse interaction may be a viable alternative treatment for veterans suffering from symptoms of depression and/or anxiety. Generally, there was a perception on the part of respondents that being in the presence of a horse, working with a horse, and establishing a connection with a horse supported a lowering of psychological symptoms.

Perceived Value. SPSS software was used to analyze the exit survey data (N=49) to determine if there was a statistical difference regarding the value of the program, Across the program offerings, interview respondents were also asked about their perception of program value. After re-coding of the exit surveys to facilitate congruence between data sets, descriptive analysis revealed that all forty-nine (100%) responded with an affirmative response that the program was of value. Interview transcripts were analyzed (Saldaña, 2016) and all six (100%) of interview respondents reported perceived value from the program. Further analysis (Creswell & Plano-Clark, 2011; Patton, 2015; Saldaña, 2016) revealed the themes of *social connection* and *internal processing* as what was most valuable about the VF-EFMH program. Analysis looked also at the perceived value of the horse. All respondents (100%; $n=6$) discussed that using horses was vitally important for their experience in the VF-EFMH program and would not have been as successful if another animal was used.

Further analysis revealed that having a VF-EFMH program facilitator that is a veteran and a licensed social worker was of value to all six interviewees (100%). These

interviewees voiced their perception of higher credibility, relevance, and influence being created by those facilitator characteristics. Analysis revealed that facilitator military history and veteran status was not only a motivating factor for participants to enroll in this specific VF-EFMH program offering, but that it also led participants to perceive the facilitator as having greater understanding of veteran issues which enabled higher levels of trust and openness during the program.

Conclusion

Quantitative finding in this study support that VF-EFMH may be effective for reducing depression and anxiety with the veteran population and supports existing literature (Earles, Vernon, & Yetz, 2015; Ferruolo, 2016; Holmes et al., 2012; Kemp, Signal, Botros, Taylor, & Prentice, 2014; Mayfield, 2016; Schultz et al., 2007).

Qualitative finding are congruent with and support that VF-EFMH is effective for lowering depression and anxiety and that it is of value for participants. Qualitative questioning provided deeper insight into the factors of the VF-EFMH program that facilitate symptom reduction and the perceived value gained. Social connection, internal processing, and the horse were core themes that emerged through this research that were identified by participants as reasons for program effectiveness, mitigating symptoms of depression and anxiety.

The findings of the current study suggest that purposefully designing VF-EFMH programs to integrate evidenced based therapeutic interventions for anxiety and depression with EFMH therapy is vital for providing a facilitative context that is conducive to lowering depression and anxiety in veterans. Additionally, the inclusion of facilitators that are both licensed mental health professionals and who have experience as

deployed members of the military, plays a vital role in both increasing access of VF-EFMH program offerings by veterans and in their ability to openly engage with the experience of the offering. These findings suggest that VF-EFMH that includes the characteristics found through this inquiry is a viable alternative form of treatment for veterans experiencing depression and anxiety. Future research on VF-EFMH programs should include a deeper look at the influence of facilitator credentials, in particular training as mental health practitioners and status as military veterans.

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APPENDIX

Appendix A: Invitation Message

Appendix B: Interview Protocol

Appendix C: Interview Questions

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Appendix E: Transcription Table Example

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APPENDIX A

Interview Questions

Interview Questions

Questions for qualitative analysis

1. If you were experiencing depression at the time, did the EFMH program help facilitate lowering symptoms of depression?
 - What about the EFMH program facilitated this?
 - Help me understand why you think these things helped?
 2. If you were experiencing anxiety at the time, did the EFMH program help facilitate lowering symptoms of anxiety?
 - What about the EFMH program facilitated this?
 - Help me understand why you think these things helped?
 3. Tell me about the things you did and learned in the EFMH program that continue to help mitigate those symptoms, if applicable?
 4. Were there any beneficial changes in yourself or your life from your participation in the EFMH program?
 - Please explain.
 5. If the EFMH program helped you learn or improve on social skills, what were they and how did they help?
 - If they helped, tell me more about how learning these social skills have helped you since the program?
 6. Tell me about the value you think this program had for you and in your life, if any?
 7. Was my prior military status influential and/or relevant to your experience with the EFMH program?
 - If so, How much?
 - Please talk more about that?
 8. How important was the horse in your experience?
 - Talk more about that.
 - If I had used a different animal do you think it would have made a difference for you?
 - Explain.
 9. Is there anything else in particular you want to share about the program?
 10. What was your biggest takeaway from the EFMH program?
 - Why is this so?
-

APPENDIX B**Invitation Message Script**

LOOKING FOR YOUR HELP TO HELP MORE VETERANS!

Thank you for your time. I am following up with you regarding the Equine Facilitated Mental Health (EFMH) program that you attended. If you remember, I discussed that I was conducting research for a doctorate degree on the effectiveness of EFMH with veterans. At the end of the program, you had filled out an exit survey.

I am now looking for volunteers to participate in a one-hour interview so that I can continue my research and complete my doctorate dissertation. The title of my study is: Equine Facilitated Mental Health with Veterans. This study will help me make the existing program better and will also help inform other EFMH clinicians how to better help veterans with the use of horses.

If you are interested, please email me back at david.ferruolo@yahoo.com and we will set up an interview time. Interviews can be in person, if you live locally or they can be via video call. We will use DOXY (www.doxy.me) for video calls, as DOXY is a secure platform that is HIPPA and HITECH compliant. Using DOXY insures privacy and confidentiality.

There is a time line for this research, and I will need to conduct your interview within the next two weeks from the date of this message.

Attached you will find a consent form. Please look it over. We will go over it when we meet or video talk.

Thank you again. I really appreciate your help! I look forward to speaking with you.

Dave Ferruolo
David.ferruolo@yahoo.com
603-556-4360

APPENDIX C

Consent Form

RESEARCHER AND TITLE OF STUDY

My name is Dave Ferruolo. I am an Independent Licensed Clinical Social Worker, Master Licensed Drug and Alcohol Counselor, a former Navy SEAL, and a current doctorate student at Plymouth State University. The title of the study I am conducting is: *Equine Facilitated Mental health with Veterans.*

WHAT IS THE PURPOSE OF THIS STUDY?

In 2013 I conducted a pilot study that investigated the effectiveness of Equine Facilitated Mental Health (EFMH) as a treatment modality for veterans suffering with depression, anxiety, and reintegration issues. The currently proposed study will further develop the knowledge gained from the pilot while simultaneously providing additional information to the field on the potential for EFMH as a treatment modality for veterans and additionally closing some of the current gaps and limitations in EFMH literature.

WHAT DOES YOUR PARTICIPATION IN THIS STUDY INVOLVE?

This study will require you to participate in a semi-structured in-person, video or phone interview. If possible, an in-person interview is preferred. The interview should only take one hour or so of your time.

WHAT ARE THE POSSIBLE RISKS OF PARTICIPATING IN THIS STUDY?

Survey Risk. There are minimal risks associated with your participation. One possible risk is that discussing the program and your psychosocial issues may evoke strong feelings that you may not be ready to deal with. These feelings could result in experiencing strong negative emotions and moods such as depression and anxiety.

Confidentiality. Confidentiality is of utmost importance. Personal and identifying information will not be disclosed. Your name will not be used for any reason in connection with this study. Any resulting publication will not have any personal identifying information. Videos/transcripts/notes will be stored in a file cabinet in my office. All artifacts will be destroyed after the study is concluded.

WHAT ARE THE POSSIBLE BENEFITS OF PARTICIPATING IN THIS STUDY?

Your participation will help inform important research that will enable me to improve existing EFMH programs, inform and help others improve other EFMH programs, and may have positive benefits for future veterans participating in EFMH programs.

IF YOU CHOOSE TO PARTICIPATE IN THIS STUDY, WILL IT COST YOU ANYTHING?

Participation in this study will not cost you anything.

WILL YOU RECEIVE ANY COMPENSATION FOR PARTICIPATING IN THIS STUDY?

There will not be any compensation for helping with this study, however your time and consideration is greatly appreciated.

DO YOU HAVE TO TAKE PART IN THIS STUDY?

Your consent to participate in this research is entirely voluntary, and that your refusal to participate will involve no prejudice, penalty or loss of benefits to which you would otherwise be entitled.

CAN YOU WITHDRAW FROM THIS STUDY?

If you consent to participate in this study, you may refuse to answer any question and/or stop your participation in the study at any time without prejudice, penalty, or loss of benefits to which you would otherwise be entitled.

HOW WILL THE CONFIDENTIALITY OF YOUR RECORDS BE PROTECTED?

I seek to maintain the confidentiality of all data and records associated with your participation in this research. As stated earlier, personal identifying information will not be released or shared. I am also required by law to report certain information to government and/or law enforcement officials (e.g., child abuse, threatened violence against self or others, communicable diseases). Videos, notes, transcripts will be stored in a locked file cabinet in my office. Besides myself, my dissertation committee and the IRB members at Plymouth State University will have access to the materials to ensure the highest of research ethics. Results of this research may be used in reports, presentations, and publications. Results may also be posted on the Internet.

WHOM TO CONTACT IF YOU HAVE QUESTIONS ABOUT THIS STUDY

If you have any questions pertaining to the research you may contact Dave Ferruolo at (603) 556-4360 to discuss them.

If you have questions about your rights as a research subject you may contact Dr. Linda Carrier at Plymouth State University discuss them: lcarrier@plymouth.edu.

Signatures :

Participant Name (Print)

Participant Signature

Date

I, the undersigned, certify that to the best of my knowledge, the subject signing this consent form has had the study fully and carefully explained by me and have been given an opportunity to ask any questions regarding the nature, risks, and benefits of participation in this research study.

David M Ferruolo, MSW, LICSW, MLDAC, ABD
Investigator's Name (Print)

David M Ferruolo
Investigator's Signature

Date

APPENDIX D

Interview Protocol

Interview protocol adapted from (Creswell, 2015).

Heading

During this segment of the interview protocol, the participant will be cordially greeted and thanked for their participation. At this an initial segment of the interview, place of interviewer, place of interviewee, full name of interviewer, full name of interviewee, and medium in which the interview will be captured will be established and recorded.

Heading script. Good morning. My name is Dave Ferruolo, and thank you for participating in this interview. The purpose of this interview is to get your thoughts and feelings regarding your experience with the equine facilitated mental health retreat that you took part in. Please understand that this interview is purely voluntary, there are no right or wrong answers, there are no undesirable or desirable answers, and I want you to feel free to speak your truth. This interview is part of a multiyear study of the efficiency of equine facilitated mental health with veterans. The study is being conducted with IRB approval from Plymouth State University as part of my requirements for doctorate of education.

Instruction

During this section of the interview process, instructions will be given to the participant. This will ensure standardization and that protocol be followed during each interview.

Instruction Script. I will ask your permission to videotape this interview. The purpose of videotaping is so that I can capture all the details of our interaction, including our conversations, and body language. Videotaping our interaction will also allow me to pay close attention to everything that you say, so that nothing is misunderstood. Although I will be

videotaping, I will also be taking notes. These notes will help me keep track of important aspects of the conversation. Please know that your anonymity and confidentiality is vitally important. Videotapes and notes will not be shared, and will be locked in a secure location. Once our interview is concluded, I will be creating detailed transcripts of our interview and sending them to you so that you can check for accuracy. All videotapes and notes will be destroyed once research is concluded. As a reminder, there are no right or wrong answers and no undesirable or desirable responses. Do you have any questions before he proceed?

Questions

The questioning segment of the interview protocol will begin with an icebreaking question, then followed by four or five main questions that will be constructed after the quantitative analysis is complete.

Questions script. If you are ready, we will move on to the first of nine primary questions:

Questions 1...

Follow up Questions

After the questioning is complete, follow-up questions will be asked to gain more in-depth knowledge and information that was not provided during the initial questioning.

Follow-up script. I would like to thank you for answering these primary questions, now with your permission I will would like to ask these follow-up questions

Follow up questions: to be determined during qualitative questioning

Final Thank You

After the interview was concluded, the participant will be thanked for their participation and given information regarding how this survey will be used. Participants will also be offered the opportunity to ask any brief questions they may have.

Thank you script. Thank you very much for your participation in your time. Your participation and responses not only provide data for this research study, but also has the potential to inform positive changes in future programs that will serve and help many more veterans. Again, I thank you very much for your time and your participation.

APPENDIX E

Transcription Table Example

	Transcription	Data for attribute coding & initial codes/theming	Initial Codes /Theming
PI			
RV			
PI			
RV			
PI			
RV			
PI			
RV			

Primary Investigatory (PI)

Respondent Volunteer (RV)

APPENDIX F

Coding Matrix

Research Question 1:				
	STRUCTURAL DATA	IN VIVO DATA	Theming	attributes/misc data&codes
P1				
P2				
P3				
P4				
P5				
P6				
Research Question 2:				
	STRUCTURAL DATA	IN VIVO DATA	Theming	attributes/misc data&codes
P1				
P2				
P3				
P4				
P5				
P6				
Research Question 3:				
	STRUCTURAL DATA	IN VIVO DATA	Theming	attributes/misc data&codes
P1				
P2				
P3				
P4				
P5				
P6				

APPENDIX G

Secondary Recoding Matrix

Research Question 1:			
	IN VIVO DATA	Thematic Data	Theming
P1			
P2			
P3			
P4			
P5			
P6			
Research Question 2:			
	IN VIVO DATA	Thematic Data	Theming
P1			
P2			
P3			
P4			
P5			
P6			
Research Question 3:			
	IN VIVO DATA	Thematic Data	Theming
P1			
P2			
P3			
P4			
P5			
P6			

APPENDIX H

Research Terms

The below listed terms and definitions are from the Professional Association of Therapeutic Horseman, International (PATH) standards for certification and accreditation manual (PATH Intl., 2012). The Professional Association of Therapeutic Horseman is an organization that “promoted the safety and optimal outcomes in equine-assisted activities and therapies” (PATH, Intl., 2017, para. 1).

Equine-Assisted Activities (EAA). These are any activities that use horses to facilitate specific learning or therapeutic change for a participant (Knapp, 2013; PATH, Intl., 2017).

Equine-Assisted Therapy (EAT). These are activities that use horses specifically to address participants’ physical rehabilitative goals (Knapp, 2013; Klontz et al, 2007).

Equine-assisted therapy is treatment that incorporates equine activities and/or the equine environment. Are related to the patient’s needs and the medical professional’s standards of practice.

Equine-Assisted Learning (EAL). The use of equine assisted activities specifically for the objective of learning and the development of targeted, specific personal, professional, or business skills (Knapp, 2013; PATH, intl., 2017).

Equine-Facilitated Psychotherapy (EFP). These are equine assisted activities facilitated by a licensed mental health clinician in which evidenced-based treatment frameworks are used while using a horses to address and treat the mental illness of the human participant (Ferruolo, 2015; Knapp, 2013; PATH, Intl., 2017).

Equine. Any animal within the species domain of equus: horse, donkey, zebra, onager, kiagn.

Horse handler, horse expert, equine professional. These are the experienced, trained persons that are responsible for handling and control of the horses, ultimately attending to the well-being and safety of both human and horse (Knapp, 2013; PATH, Intl., 2017).

Natural horsemanship. Natural horsemanship is a philosophy working with horses based on an understanding of how horses communicate and learn instinctually; it is a philosophy of patient and persistent relationship building by partnering with the horse in a practitioner facilitated, collaborative learning environment (Knapp, 2013; Parelli, 2004).