



January 2013

## The Effect Of Masculinity On Post-Deployment Veterans' Help-Seeking Behaviors And Mental Health Outcomes

Nils-Erik Juhani Juanto Laver

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THE EFFECT OF MASCULINITY ON POST-DEPLOYMENT VETERANS' HELP-  
SEEKING BEHAVIORS AND MENTAL HEALTH OUTCOMES

by

Nils-Erik Juhani Juanto Laver  
Master of Arts, University of North Dakota, 2010

A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

In partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota

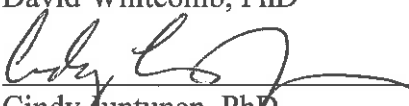
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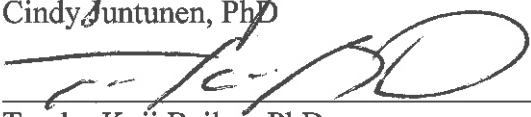
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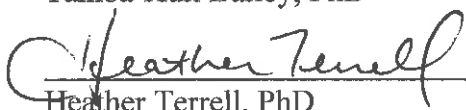


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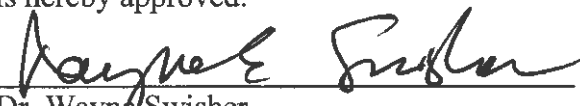
  
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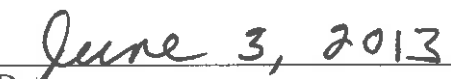
  
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Title           The Effect of Masculinity on Post-Deployment Veterans' Help-Seeking Behaviors and Mental Health Outcomes

Department    Counseling Psychology and Community Services

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## ABSTRACT

While the current literature has investigated various barriers to reintegration for male veterans of the Armed Forces of the United States, few have investigated how internal processes such as attitudes and beliefs impact reintegration outcomes. Civilian literature has indicated that men who adhere to traditional masculine ideals tend to have a lower quality of life, less help-seeking behaviors, and more mental and physical health problems. This study set out to investigate how traditional masculine values, age, combat exposure, and relative normative male alexithymia may affect mental health, quality of life, and help-seeking behaviors in veterans who were deployed to combat theaters. Participants were recruited online and filled out instruments related to the constructs. Multiple regression analyses were conducted to investigate possible predictive models. Results indicated a variety of models. In the models, the findings suggested that combat exposure, characteristics of a dominant personality, and normative male alexithymia together were predictive of higher levels of post-traumatic stress. It also suggested that restrictive emotionality and avoidance of emotional processing may serve as protective factors against the latter. Restrictive emotionality, adherence to normative male alexithymia, and dominant personality characteristics were significant predictors of less positive attitudes towards seeking professional psychological help. Restrictive emotionality, higher levels of alexithymia, and combat exposure were found to significantly predict lower levels of quality of life. Suggestions for future research and

implications included the need to tailor service delivery to veterans with regards to emotion-based messaging before and after deployments, for outreach, and to continue research into the complex interaction of warrior culture, traditional masculinity, resiliency and quality of life.

## **CHAPTER I**

### **INTRODUCTION**

Since the start of Operation Enduring Freedom (OEF, Afghanistan) in 2001, and Operation Iraqi Freedom (OIF) in 2003, more than 1.8 million American troops have been deployed to overseas theaters of war (Tanielian & Jaycox, 2008). These conflicts are different from past major conflicts of war in several ways; firstly, deployments are larger and longer; secondly, re-deployment to combat tours are more common than in past conflicts and breaks between tours are shorter; finally, casualties are comparatively fewer (Belasco, 2007; Bruner, 2006; Hosek, Kavanagh, & Miller, 2006).

Advances in troop protections such as body armor as well as in military transportation and medical advances have led to fewer casualties than in past conflicts such as Korea and Vietnam (Regan, 2004; Warden, 2006). Whereas many more service members would have died from these attacks in past conflicts, many more now survive, which has led some authors to suggest that they now instead carry wounds that are not easily seen( RAND Report; Tanielian & Jaycox, 2008). These invisible wounds include cognitive impairments related to traumatic brain injury (TBI), post-traumatic stress disorder (PTSD), major depressive disorder, and depressive symptoms.

Whereas past injuries often included more visible wounds such as the loss of limbs, these wounds remain invisible and are often hard to detect – even for family members. The RAND report investigated the related costs for these conditions as well as

the personal costs for these service members (Tanielian & Jaycox, 2008). Costs in dollars have been suggested to be immense: PTSD and major depression have been estimated to range from \$4 billion to \$6.2 billion over two years; these costs include not only direct costs but also indirect ones such as loss of productivity. Costs for TBI cases are estimated to range from \$591 million to \$910 million within the first year of diagnosis. Other costs include for instance loss of productivity. On a personal level, these mental health and cognitive conditions have been suggested to lead to negative consequences in family relations, other social relationships, and at work. Furthermore, they are associated with substance abuse, homelessness, and suicide.

The RAND report also suggested that the presence of these conditions in service members leads to higher rates of psychiatric diagnoses and suicide risk as compared to symptom-free service members (Tanielian & Jaycox, 2008). Thus, while the cost to society and the person has been fairly well-documented, few researchers have looked into specifically what the military has coined as “reintegration”; that is, the transition from deployment to home. The process of returning home from military operations more often than not involves rapid air transportation (Rosebush, 1998). This then allows for little time during which service members may decompress and reorient themselves for re-deployment or transition back to civilian life. Researchers have noted that this particular period in which veterans decompress and reorient is instrumental in detecting mental health and other possible impairments that could then be treated earlier rather than later (Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007). It has been suggested that early detection leads to more positive outcomes. In particular, feeling isolated and disconnected during those first months after returning from deployment has shown to be

an important indicator of PTSD (Wilson & Krauss, 1985). The reintegration process has also shown to be very important in terms of other domains such as family. Service members may return home and discover that routines have changed in the home: spouses and significant others may have developed differently than the service member (Pincus, House, Christenson, & Adler, 2001; Thompson & Gignac, 2001). For instance, they may have taken on new duties at the work place, in the home, and forged new friendships and may therefore have a different outlook on life and lifestyles as compared to before. They may also face significant work-related challenges. They may also lose support from their unit members if they get posted to a different unit after deployment, or if they opt to leave the military and try to re-integrate to civilian life.

There have been few studies that have looked into what constitutes successful re-integration from overseas deployment to new unit postings within the continental U.S., or to civilian life. Some studies have emphasized that positive homecoming receptions by family, friends, and communities may lead to better post-deployment psychosocial adjustments (Bolton, Litz, Glenn, Orsillo, & Roemer, 2002). Others have noted that service members who were able to reflect upon and recount positive experiences related to their deployment exhibited less post-traumatic stress (Aldwin, Levenson, & Spiro, 1994). One could therefore conclude that that the post-deployment reintegration process plays a significant role in generating positive outcomes for service members on a personal and societal level.

While men traditionally and officially have comprised combat units in the past, recent wars have blurred the lines between combat units and non-combat units in terms of gender. While women were not officially allowed to serve in combat units until 2013,

their participation in support units increasingly brought them in harm's way in the very same manner that official combat units are (Vogt et al., 2011). Thus, women face much of the same combat-related stress that men do in the Armed Services. However, several researchers have noted differences in resilience factors and trauma between men and women prior to deployment; for instance, women are much more likely to have experienced sexual trauma and men are more likely to have experienced non-sexual trauma (Stretch, Knudson, & Durand, 1998). Others have also proposed that within a larger framework, male and female service members have distinctly gendered historical risk factors that will come to influence their pre-deployment mental health and, hypothetically, also their post-deployment health. Because of these factors as well as the hypothesis that women are less likely to adhere to traditional masculinity ideology and also comprise a very small segment of the Armed Services, only men will serve as participants in the current study (Seal et al., 2010; Vogt et al., 2011).

Outside of the military psychology and research, the emerging field of Men's Studies has investigated men's physical and mental health, and help-seeking behaviors. Rejecting the traditional idea that men and women are predisposed to develop discrete masculine and feminine identities, an emerging constructionist paradigm of masculinity has emerged: the gender role strain paradigm posits that boys and men are socialized to adhere to traditional masculine values (Levant, Hall, Williams, & Hasan, 2009; Pleck, 1981). Traditional masculinity and the roles therein have traditionally been associated with stoicism and the belief that showing and expressing feelings is a sign of weakness. Culture and the way that boys and men are socialized tend to promote stoicism and self-reliance, especially in times of distress. These values include a possible reluctance and

restrictiveness in awareness and expression of feelings and emotions. This set of symptoms have been labeled alexithymia (Sifneos, 1967, 1972). This will be discussed in detail later.

Adherence to such values has been correlated with higher usage of tobacco, alcohol, illicit drugs, and risky sexual behavior such as unprotected sexual intercourse (Brooks, 1990; 2001). These sets of values have also been correlated with a reluctance to seek physical and psychological help. Interestingly, most of these syndromes, alexithymia in particular, have been correlated with PTSD symptoms. When conceptualizing reported difficulties for returning veterans, the picture becomes less clear and decidedly more problematic. Some have suggested that the military itself supports a hyper-masculine culture that imbues men and women who undergo military training with interpersonal and emotional behaviors that will last long after service is over (Brooks, 1990; 2001). The military's effort to indoctrinate such emotional regulation is thought to be connected to the idea that a service member who has the ability to control his/her emotions under duress is more apt for survival and mission completion (Brooks, 2005; Eisenhart, 1975). As such, veterans may have symptoms that are function of an enhanced and indoctrinated alexithymia co-morbid with PTSD-symptoms. This becomes even more problematic when considering that the initial period; in which a member of the Armed Services return from deployment to civilian life has been shown to be paramount in terms of a successful re-integration into civilian life (e.g., 6 months; Demers, 2011). That is, both alexithymia and PTSD enforce a sense of disconnect and an unwillingness to seek help. As numerous studies have suggested, the inability to express feelings surrounding traumatic and non-traumatic events tends to lead to poor adjustment and mental health outcomes. This is

particularly salient for veterans whose training has instilled the importance of conforming and adhering to hyper-masculine ideals. These values are therefore often internalized and can often be readily viewed in veterans, in whom the experience and expression of emotions, save for anger, is viewed as weak. This creates an emotional regulation system in which an awareness and expression of emotions is sometimes not only restricted because of an inability, but because a lack of desire to do so. Therefore, veterans often face a double-bind in terms of restrictive emotionality; firstly, they are indoctrinated to automatically restrict their emotions, especially in times of duress; secondly, there is also a conscious adherence to a belief that expressing any feeling beyond anger is an admission of weakness.

In summary, more than 1.8 million members of the Armed Services have participated in the OEF/OIF conflicts (Garcia, Finley, Lorber, & Jakupcak, 2011). New technology in terms of body armor as well as rapid air transport has allowed larger numbers of service members to survive injuries, as compared to past conflicts. These members of the Armed Services have returned with injuries not often seen before, these include mild traumatic brain injury, an ever-increasing numbers of PTSD-related symptoms, and various depressive symptoms (Uomoto & Williams, 2009). The costs related to these injuries have been suggested to be in the billions of dollar (RAND Report; Tanielian & Jaycox, 2008). On a more personal level, these mental health and cognitive conditions have been suggested to lead to negative consequences in family relations, other social relationships, and at places of work. Furthermore, they are associated with other negative consequences such as substance abuse, homelessness, and suicide. The emerging field of men's studies has investigated how adherence to



traditional masculinity ideology and its related concepts have negatively affected men's health. As the military indoctrinates, promotes, and upholds a hyper-masculine culture, there is a need to investigate how adherence to such ideals affect veterans as they transition from military to civilian life. The need becomes even more salient considering the perpetually increasing costs for society in general as well as on the personal level. As such, this study intends to investigate how adherence to traditional masculinity ideology affects male veterans as they transition from military to civilian life in terms of help-seeking behaviors, mental health outcomes, and quality of life.

### **The Military, Masculinity, and the Unique Features of OEF/OIF Veterans' Military Culture**

The Armed Services instill and enforce conformity to hyper-masculine ideals as part of an overall strategy in preparation for an ostensibly combat-ready Armed Services member (Arkin & Dobrofsky, 1978; Bryan & Morrow, 2011). As such, this part of training in the Armed Services is institutionalized. In particular, this part of a service member's psyche is instilled as part of basic training; for instance, one slogan during training is: "pain is fear leaving the body." (p. 297; Lorber & Garcia, 2010). This can also be seen in the promotional material the Armed Services use to foster and promote military culture such as "Army Strong", "The Few the Strong", and "A Global Force for Good" (Bryan & Morrow, 2011). While this and other features of hyper-masculinity has been the prevailing ideology of the military since its inception, some authors have suggested that veterans of Operation Enduring Freedom and Operation Iraqi Freedom have unique features that set them apart from service members of past conflicts (Lorber & Garcia, 2010) Lorber and Garcia noted that current veterans are relatively new to the

military (i.e., they have not been members for an extended period of time, and are relatively young) and have as such received their training very recently (and, thus, had their masculine views indoctrinated and continuously reinforced). Furthermore, the authors point out that current former service members are relatively new veterans; that is, many of them have returned from war zones in the recent past. This means that they may have had recent exposure to trauma that may have forced them to fall back on their training – which means emotional control and the concealment of feelings and other perceived personal weaknesses.

### **The Relative Youth of the OEF/OIF Veterans**

Another unique factor about veterans of OEF/OIF is their relative youth; this is particularly pertinent as endorsement of traditional masculinity is often higher in younger males (Levant & Richmond, 2007; Lorber & Garcia, 2010). Furthermore, consistent with past research, persons in their late teens to mid-20s may not have developed adequately functioning emotional regulation skills (Levant, 1998). This is a particularly salient notion if the younger service members adhered to traditional masculine gender roles prior to entering a branch of the Armed Services. That is, if their coping mechanisms prior to the military also involved non-expression of feelings and emotional avoidance, then it is highly possible that they never developed an alternative. In fact, most likely, that form of coping was strengthened and continuously reinforced during training.

### **The Paradigm of Emotional Control**

The military paradigm of emotional control has also, somewhat ironically, led to some veterans viewing their symptoms as non-normative. That is, because service members are trained to control and withhold feelings, and not otherwise show any visible

feelings, they also at the same time hide symptoms of depression and other mental illness from each other (Lorber & Garcia, 2010). In doing so, many veterans often think that they are, in fact, the only ones feeling depressed or experiencing various symptoms from the PTSD cluster. Emotional suppression, or psychic numbing as it was first identified in 1973 (Lifton), is the idea that the mental image of the enemy is depersonalized during basic training and then reinforced during counterinsurgency warfare. In theaters of war that have included heavy counterinsurgency warfare and pervasive, brutal violence, the aforementioned training also serves as a coping mechanism; that is, service members cut them themselves off from ordinary sensory experiences while under fire (Bryan & Morrow, 2011). Many of these service members often find it hard and painful to have humane feelings for other people, because they are often frozen in a semi-permanent state of emotional limbo. This state allows them to maintain a frame of mind in which memories live on, but do not have the full emotional impact. Beyond restrictive emotionality, the military also supports the notion of men being independent and strong. Furthermore, military identity and propaganda also support the warrior mythology; that is, that a real service member is strong, independent, and seemingly invincible and thus not susceptible to the horrors of combat (e.g., seeing friends and foes shot in gruesome manners (Arkin & Dobrovsky, 1978; Bryan & Morrow).

Endorsement of traditional male gender role norms has been correlated with substance use as a coping method in numerous studies (Moller-Leimkuhler, 2002; Levant et al., 2009). It should be noted that substance use as a method of coping has been prevalent in all recent conflicts (Erbes, Curry, & Leskela, 2009; Isenhardt, 1975). However, OEF/OIF veterans have been found to use more illicit drugs and drink more

alcohol than veterans of other eras (Lorber & Garcias, 2010). Again, the relatively young age and thus higher adherence to traditional male gender role norms may be an important explanation.

In those who have returned from OEF/OIF, studies have shown PTSD prevalence rates of 11-22% (Hoge et al., 2004; Mental Health Advisory Team [MHAT], 2003; Tanelian & Jaycox, 2008). These rates are said to be higher than that of the Vietnam era (Lorber, Garcia, & Jakupcak, 2011). Tanelian and Jaycox (2008) sampled 1,900 service members from the United States; they estimated that 14% of those screened would qualify for PTSD, 14% for major depression, and 19% for TBI. Using these data, it has been noted that as many as 300,000 U.S. service members and veterans may have diagnoses of PTSD, depression, and another 320,000 may have TBI. Despite the increase of empirically validated treatment, the veterans of OEF/OIF may face tougher odds of successful reintegration than those of the Vietnam era; not only are PTSD rates higher, but veterans of these recent conflicts miss more treatment sessions and have a twice as high a drop-out rate from therapy, as compared to the Vietnam era veterans (Erbes et al., 2009; Lorber et al., 2011).

### **PTSD, Alexithymia and Social Constructionism**

Many of the behaviors traditionally associated with masculine gender norms are very similar to those of post-traumatic stress disorder (PTSD), a disorder which has been diagnosed in 11-22% of all veterans returning from current war zones (Hoge et al., 2004; Mental Health Advisory Team [MHAT], 2003; Tanelian & Jaycox, 2008). PTSD is defined as an extreme psychobiological reaction marked by heightened levels of posttraumatic stress symptomology, including physiological and psychological arousal;

re-experiencing the event through intrusive thoughts, dreams, or feelings; and avoidance of circumstances associated with the event along with a general numbing of responsiveness (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition [DSM-IV]; American Psychiatric Association, 1994). PTSD symptoms that are not traditionally associated with masculine gender norms include persistent re-experiencing (flashbacks, memories, dreams). It would therefore seem appropriate to take cultural prescriptions into account when trying to understand the emotional and interpersonal difficulties experienced by some male war veterans. These difficulties often include decreased awareness of different kinds of emotions, difficulty communicating feelings and emotions, and an overall reluctance to seek support from others.

The difficulties described in the earlier paragraph has also been identified and labeled in other contexts in the mental health community; the difficulty of differentiating and expressing emotion has been labeled as alexithymia (Taylor, 1994). The word alexithymia literally means “without words for emotions” (Sifneos, 1967, 1972). It was originally used by Sifneos to describe what he had seen in psychiatric patients who had considerable difficulty in identifying and describing their feelings. In addition, they often demonstrated difficulty in understanding and being empathetic of the feelings of others, especially in interpersonal relationships (Berenbaum & Prince, 1994). These characteristics have also been noted in patients with PTSD, substance dependence, and chronic pain disorders.

Beyond decidedly clinical populations, alexithymia has also been recognized to exist along a continuum in clinical and non-clinical samples. Proposed etiologies have been varied, ranging from biological to interpersonal (Levant et al., 2009). Several

researchers have suggested a connection between brain abnormalities and alexithymia; specifically, right hemispheric deficits have been linked to higher levels of recognized alexithymia (Lumley & Sielky, 2000). Other proposed biological etiologies include an increased noradrenergic activity and a decreased basal activity of the hypothalamic-pituitary-adrenal (HPA) axis among men (Spitzer, Brandl, Rose, Nauck, & Freyberger, 2005). The Spitzer et al. study does, however, have a major limitation; its samples were taken from different clinical populations, such as patients who had suffered strokes and patients with major depressive disorder. As such, it is hard to conclude with any certainty the external validity of the study. Furthermore, as was noted, alexithymia has been observed in non-clinical samples on a continuum; in such samples, some have noted that social learning processes may play an important role in the psychogenesis of alexithymia (Borens, Grosse-Schultze, Jaensch, & Kortemme, 1977).

Levant (1992) proposed an extended hypothesis based on the social learning concept; he labeled it “normative male alexithymia” (NMA). This was an attempt to label the socialized pattern of restricted emotionality he had viewed in many men from non-clinical populations who adhered to traditional masculinity. Drawing upon clinical observations from his practice as well as from a research project, he began to observe that only with decided difficulty and repeated practice could these particular men find the words to describe their emotional world. He theorized that these men most likely would have been socialized as young boys to not express their feelings by the various adults in their lives (e.g., parents, peers, teachers, sports coaches, etc). Notably, these men showed the greatest difficulty in expressing their feelings when such feelings could expose to others their vulnerability, or induce it within themselves. Levant noted that this type of

vulnerability included a fear of showing sadness or fear. Furthermore, they also had great difficulty expressing feelings of attachment such as tenderness or caring. As such, he posited that these boys never developed the adequate vocabulary to express or the requisite ability to have an awareness of their own emotional states.

While restrictive emotionality can serve as an adaptive way of coping in particularly competitive environments, Levant's clients reported other dysfunctional aspects, such as problematic personal lives, including marital difficulties, estrangement from children, substance abuse, domestic violence, and sexual addiction (Levant & Kopecky, 1995). These observations and findings are similar to the currently predominant theoretical perspective originally offered by Pleck in his seminal book, *The Myth of Masculinity* (1981). Prior to Pleck, the predominant view of how gender roles are formed was based on the gender identity paradigm; that is, that gender roles are developed based on an innate psychological need to have a sex-appropriate gender role identity. The optimal and, presumably, most successful personality development would therefore be dependent on the construction of a sex-appropriate gender role identity (i.e., adherence to a traditional view of masculinity and femininity). Pleck theorized that men are socialized by their family of origin as well as society to conform and endorse norms of traditional masculinity (Pleck 1981; Thompson & Pleck, 1995; Levant, 1992; Unger, 1990). Pleck labeled his theory the gender role strain paradigm. Thus, in contrast to the idea that men and women are predisposed to develop an optimal type of gender-role adherence, Pleck posited that gender roles are not created biologically, but rather that they are created by society and that they serve certain functions therein, such as maintaining a system of power relations between males and females in society.

Pleck's hypothesis that boys who are exposed to and socialized to adhere to traditional masculinity are more likely to develop low to moderate alexithymia as adult men as compared to women, has been confirmed in research (Levant et al., 2003). In the study, despite controlling for geographic differences, traditional masculinity accounted for unique variance in alexithymia in men. Effect sizes between men and women, using a meta-analysis, was found to be .22 using Hedge's *d*. Although a relatively small effect, men also had higher levels of alexithymia overall. The constructionist view that socialization is instrumental in the development of restricted emotionality is in stark contrast to the traditionalist view of boys and men being biologically predisposed to being less emotionally expressive and more logical than girls and women. This essentialist view has generally been discredited by contemporary research; evidence has suggested that boys are, in fact, more emotionally expressive than girls at age two, only to decline and be surpassed by girls at age six (Levant, 1998). This significant developmental change is therefore indicative of how gender socialization is instrumental in changing and shaping gender-appropriate expression and awareness of emotion.

In an effort to further validate the idea of gender socialization, research has been focused on creating instruments that can measure and assess adherence to traditional masculinity ideology. Some of these instruments are: Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007), the Conformity to Masculine Norms Inventory (CMNI; Mahalik, Locke, Ludlow, Diemer, Scott, Gottfried, et al., 2003), and the Gender Role Conflict Scale (GRCS; O'Neil et al., 1986).



## **Critique Of Pleck's and Levant's Views Of The Psychogenesis Of Masculinity (and Alexithymia)**

Levant's NMA theory (1992, 1995, 1998) was challenged by Heesacker et al. (1999) and Wester et al. (2002) on the existence of gender differences in alexithymia. The authors posited that there is, in fact, no existing gender difference in the prevalence of alexithymia. In their view, theorists have been looking for gender differences where there are none. The authors argued that the existing empirical literature does not suggest a gender difference in alexithymia; rather, they suggested that Levant's hypothesis is based on gender-based stereotypes. Levant responded by noting that neither of the referenced sets of authors had completed a thorough review of the current literature (Levant, Hall, Williams, & Hasan, 2009). In their effort to respond to Heesacker et al. and Wester et al., Levant et al. conducted a 45-study meta-analysis, combining both clinical and non-clinical samples. Results showed that men scored higher on alexithymia than women on average. It should be noted that Levant et al., did agree with Heesacker et al., and Wester et al., in that they too think that the public believes that men have, in general, a limited range of emotions and ways of expressing them. And, that many psychologists and psychiatrists have these stereotypes, too. Overall, it would appear that both camps of authors make valid points that need to be taken into consideration when conducting research; firstly, Levant clearly provides a scientific and evidence-based argument for higher prevalence rates of alexithymia in men as compared to women; and, secondly, Heesacker et al., and Wester et al., make a valid point in that society as well as current researchers in psychology tend to overestimate and potentially stereotype men and alexithymia symptoms. As such, future research should take into account that men on

average appear to have higher prevalence rates of alexithymia but also to consider how and if research subjects are being stereotyped.

### **Men, Masculinity, Alexithymia, and Multicultural Factors**

The gender identity paradigm was based on a biological model, whereas the gender role strain paradigm is based on a decidedly constructionist viewpoint (Pleck, 1981, 1995; Levant, 1992, 1995, 1998). Thus, the gender identity paradigm is primarily based on past medical ideas and research as opposed to gender role strain, which emphasizes a societal, constructionist explanation. However, both paradigms are largely based on research with White Americans, thus largely ignoring multicultural factors in masculinity. Levant et al. (2003) noted that, traditionally, in Western societies gender roles serve to uphold a patriarchal system in which men are dominant and aggressive and women are more subservient and nurturing – especially within the home. He does note that there are noticeable differences within some non-Western societies; for instance, he noted that the people in French Polynesia and Semai of Malaysia have decidedly less delineated gender roles. Men do not seem more aggressive, nor do women in those particular cultures appear to be more nurturing than the men. As such, these societies provide some evidence that gender roles are primarily created as a function of the societies in which they exist. Levant et al. (2003) set out to investigate whether there would be any significant differences between ethnicities as well as genders in terms of adherence to traditional values and levels of alexithymia. The authors used four different geographic sites as their recruitment locations and labeled the dominant cultural group in each sample as follows: San Juan, Puerto Rico (Caribbean Hispanic); Gainesville, Florida (European American); Detroit, Michigan (African American); and, New York, New York

(Hispanic). Previous research had indicated that geographic residency had a moderating effect on adherence to traditional masculine values. The authors therefore chose to treat each site as a separate culture and investigate them separately.

Levant et al. (2003) collected a sample of 373 college students in San Juan, 416 in Gainesville, 200 in Detroit, and 162 in New York. The study used the Male Role Norms Inventory-Revised (MRNI-R), the Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994a; Bagby, Taylor, & Parker, 1994b), and the Emotions Inventory. Results indicated that overall women tended to endorse a less traditional view of masculinity than men, and White Americans tended to endorse less of a traditional view of masculinity than African American men. Persons of Hispanic origin tended to rank in between White Americans and African Americans in terms of adherence to traditional masculine values. Furthermore, the authors found, even after controlling for geographic variables, that masculinity ideology accounted for unique variance in alexithymia in men. These findings therefore indicate that it would be prudent to keep in mind that geographic variables may heavily influence research results in terms of adherence to masculinity ideology – especially with military samples that tend to have more African Americans as compared to civilian samples. SES was taken into account but was not found to be a main effect.

### **Men, Women, and Health – A Comparison**

As the psychological study of men has progressed, a growing number of researchers have voiced concern surrounding the mental and physical health of men (Addis et al., 2007; Baker, 2001; Bonhomme, 2007). During the past 50 years, men's health issues have not been attended to with much urgency, despite overwhelming

evidence that men, in general, mentally and physically, present with different health concerns and outcomes than do women. There are numerous documented health concerns for men; for instance, men die, on average, 5.2 years earlier than women and have higher death rates for all leading causes of death (Minino, Heron, Murphy, & Kocharek, 2007). Others have reported that men tend display higher rates of antisocial behavior, sexual deviance, and substance abuse (Bolt, Hare, Vitale, & Newman, 2004; Hare, 2003; Gove, 1978). Additionally, boys are more often diagnosed with conduct disorders, and have a four times as high rate of completed suicides at an adult age (Centers for Disease Control [CDC], 2004, 2011). Furthermore, men as compared to women, have higher prevalence rates of infectious diseases, alcohol consumption, circulatory conditions, chronic illness, terminal diseases, and various unintentional injuries (National Center for Health Statistics, 2011). Some have suggested that higher morbidity rates in men as compared to women may be related to a higher rate of risky behaviors and unhealthy life styles (Levant et al., 2009). Others have investigated these behaviors and have found 30 controllable behaviors that heighten the propensity for disease, injury, and death in men (Courtenay; 2000a, 2000b). In addition, men are reported to attend to personal wellness to a lesser extent; specifically, men have a worse dietary intake, poorer sleep hygiene, lower physical activity, and poorer weight management and higher overall rates of obesity as compared to women (CDC, 2004, 2011; Galuska, Serdula, Pamuk, Siegal, & Byers, 1996; Kandrack, Grant, & Segall, 1999; Shi, 1991). Furthermore, men are less likely than women to consider the usage of dietary supplements such as vitamins (Courtenay, 1996).

## **Past Research into Men's Health Issues Using Different (but Similar) Theoretical Lenses**

Several concepts and models have been developed in order to facilitate research of masculinity. These include traditional masculinity ideology, conformity to masculine norms, gender role stress, and gender role conflict. Each of these paradigms is reviewed below.

**Masculinity Ideology.** Research using Pleck's (1981, 1995) idea of traditional masculinity ideology has found that boys and men who adhere to such values are less likely to have a physical examination (Marcell, Ford, Pleck, & Sonnenstein, 2007), and have greater rates of abuse of tobacco (Courtenay, 1998), alcohol (Courtenay, 1998; Pleck, Sonnenstein, & Ku, 1994a), and illicit drugs (Courtenay, 1998; Courtenay, McCreary, & Merighi, 2002; Pleck, et al., 1994a) than do boys and men who did not adhere to such values. In one study, men were screened for adherence to masculinity ideology using the Male Role Attitude Scale (MRAS). Men who scored higher on the MRAS also tended to engage more in risky sexual behaviors, such as not using condoms during sexual intercourse. Furthermore, they were also more likely to experience higher levels of stress and anger (Courtenay et al.).

**Conformity to Masculine Norms.** Whereas traditional masculinity ideology defines the meaning and sets the norms for behavior associated with traditional masculinity, the idea of conformity to masculine norms refers to the rate at which men are likely to conform to such behaviors if they endorse masculinity ideology. That is, someone may on a personal level believe that a man should not cry, but he may in fact still do so. The research on conformity to masculine norms has shown that men who

score higher on a conformity measure are more likely to use alcohol, tobacco (Mahalik et al., 2003), and marijuana. They were also more likely to binge drinking and violent behavior as opposed to men who do not. The Conformity to Masculine Norms Inventory (CMNI; Mahalik, Locke, Ludlow, Diemer, Scott, Gottfried, et al., 2003) is used to measure conformity to masculine norms. It has also been revised to form an abbreviated version called the Conformity to Masculine Norms Inventory-46 (Parent & Moradi, 2009, 2011).

**Gender Role Conflict.** Gender-role conflict occurs when adherence to a specific set of behaviors connected to socialized gender roles results in restricted behaviors; that is, a person who endorses traditional masculinity ideology may be less likely to express emotions – even though he may see a benefit in doing so. Gender role conflict is typically measured with the Gender Role Conflict Scale (GRCS) (O'Neil et al., 1986). This concept as well as its aforementioned scale has been heavily researched since its original publication; over the past 25 years, no less than 232 empirical studies have used the GRCS (O'Neil, 2008). The scale has been evaluated in terms of its theoretical foundations, multicultural and cross-cultural properties, suitability for therapeutic use, as well as its similarity and dissimilarity with other instruments. The instrument is comprised of four factors/subscales: the Drive for Success, Power and Competition (SPC); Restrictive Emotionality (RE); Restrictive Affectionate Behavior Between Men (RABBM); and Conflict Between Work and Family (CBWF). In correlational studies, psychological help-seeking has been found to be negatively correlated with the SPC, RE, and RABBM (Blazina & Watkins, 1996). Using regression analyses, only SPC and RE predicted negative attitudes toward psychological help-seeking behaviors. Finally, gender

role conflict was found to be correlated with the Barriers to Help Seeking Scale [BHSS], which is an instrument that measures attitudes towards psychological help-seeking behaviors (Mansfield, Addis, & Courtenay, 2005).

### **Men and Help-Seeking Behaviors**

Research on men and help-seeking behaviors has consistently shown that men report more negative attitudes toward seeking psychological help than women (Addis & Mahalik, 2003; Berger et al., 2012; Gonzalez, Alegria, & Prihoda, 2005; McCarthy & Holliday, 2004; Smith, Tran, & Thompson, 2008; Vogel, Wade, & Hackler, 2007). Furthermore, research has indicated that men seek help less often for numerous problems, including: cocaine use, alcohol use, psychiatric illness, and physical problems (CDC, 2011; Kessler, Brown, & Boman, 1981; McKay, Rutherford, Cacciola, & Kabaskalian-McKay, 1996; Substance Abuse and Mental Health Services Administration [SAMHSA], 2008; Padesky & Hammen, 1981; Thom, 1986; Weissman & Klerman, 1977; Wills & DePaulo, 1991). Research has also indicated that men are less likely to see physicians for minor symptoms and tend to avoid making such visits until conditions have become more serious (Sayer & Britt, 1996).

Men's higher risks of illness and death may also be related to poor adherence to preventive care. Again, men are socialized to refrain from disclosing health concerns – and, that even if they do, they should still not seek care. Overall, men tend to have fewer visits to medical doctors and mental health providers, and have fewer dental check-ups than do women (CDC, 2011; Corney, 1990; Good, Dell, & Mintz, 1989). In terms of regular check-ups, men are reported to have less cholesterol and blood-pressure testing done, and fewer cancer screenings. (Bostick, Sprafka, Virnig, & Potter, 1993; Rossi,

1992). Despite the overwhelming evidence that men are less likely to seek help, more likely to take risks, and are more likely to contract illnesses, few studies have been conducted to identify the variables that influence men's negative help-seeking attitudes. Although, it should be noted that some studies have suggested that men who adhere to more traditional, masculine values, gender roles, and who experience more gender role conflict tend to have more negative attitudes towards seeking psychological help (McCusker & Galupo, 2011; Pedersen & Vogel, 2007; Rochlen, Land, Wang, 2004; Smith, Tran, & Thompson, 2008)

Levant et al., (2009) combined traditional masculinity ideology (using the MRNI-R; Levant et al., 2007), conformity to masculine norms (CMNI; Mahalik, Locke, Ludlow, Diemer, Scott, Gottfried, et al., 2003), and gender role conflict (GRCS; O'Neil et al., 1986) to ascertain to what extent the combination of these aspects predict self-reported risky health behaviors (Health Risks Questionnaire; APA, 2006) and Negative Attitudes Towards Seeking Professional Psychological help (ATSPPH; Fisher & Farina, 1995). The study had a sample of 137 college-age men. Overall, all three measures of masculinity variables were moderately and negatively correlated with the ATSPPH, thus indicating that the more a man adhered to masculinity ideology the more negative he was towards seeking professional psychological help. Furthermore, overall, only the GRCS significantly correlated with the Health Risks Questionnaire. Using regression analyses, higher gender role conflict was a unique predictor of risky health behaviors. Surprisingly, traditional masculinity was inversely associated with risky health behaviors. Finally, conformity to masculine norms was found to be a unique predictor of negative attitudes toward seeking psychological help. Levant et al (2009) noted that that while it was



surprising that only conformity to male masculine norms was a unique predictor, they argued that the considerable overlap (correlations of .6 or greater between the three masculinity variables) between the various constructs may have been a confounding factor. Furthermore, Levant et al., noted that this is consistent with past findings in the literature where only the CMNI produced unique results in terms of predicting a connection between masculinity constructs and psychological help-seeking behaviors (Levant et al., 2009).

### **Combat Exposure and PTSD**

Veterans of the OEF and OIF conflicts have been returning from service with various mental health disorders, including depression, traumatic brain injury (TBI), anxiety, and post-traumatic stress disorder (PTSD) (Tanielian & Jaycox, 2008). Perhaps the most well-known of these disorders is the latter, PTSD. As has been noted elsewhere in this study, the costs of posttraumatic stress for the individual veteran as well as society are immense. Because of the pervasive nature of the disorder, it may also be a direct and indirect contributor to other negative mental health symptoms such as substance abuse, fewer and more significant social relationships, as well as a lower quality of life. As such, one can conclude that posttraumatic stress on a continuum is an important indicator of a veteran's overall mental health.

In this dissertation, post-traumatic stress will be referred to as "PTS" to reflect the continuum on which it exists; however, when referring to the studies of other authors, their preferred terminology will be applied. In terms of predicting levels of PTS and PTSD, the literature suggests that the severity of experienced trauma is an important indicator; for veterans, this often means exposure to combat or combat-related trauma

such as witnessing comrades, support personnel, or civilians incur bodily damage (Baker et al., 2009; Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004; Vogt et al., 2011). In fact, in Hoge and colleagues' (2006) massive study, which screened more than 300,000 Army soldiers and Marines who had deployed to OEF or OIF as part of a routine, post-deployment health assessment, indicated that overall mental health is a function of varying levels of combat exposure. Exposure to a combat situation was correlated with screening positive for PTSD among OEF/OIF veterans. It can therefore be concluded that assessing combat exposure is an important aspect in investigating a veteran's level of functioning. This is typically done through brief screening tools but is not yet part of the routine post-deployment process. In terms of these screening tools, the most widely used is the Combat Exposure Scale (CES, Keane et al., 1989). The CES is an instrument that assesses combat exposure in terms of intensity, frequency, and duration of the experienced combat. In terms of screening for PTSD, the PCL is the most widely used self-report questionnaire for assessing severity of symptoms as well as diagnosing PTSD (Weathers, Litz, Herman, Huska, & Keane, 1993). PTSD is typically screened for as part of the post deployment process but is also routinely done in other settings such as V.A. Both of these instruments are further reviewed in the Methods chapter.

In summary, there is a consensus in the military literature that combat exposure is an important predictor, if not the most important predictor, of PTS in veterans. It therefore makes sense that it should be included in current and future studies as part of adding to that literature as well as investigating how it may compare or interact with the effect of other factors on the mental wellbeing and overall quality of life for veterans.

## **Existing Research Regarding OEF/OIF Veterans and Reintegration**

Surprisingly little research has focused on holistic aspects of veterans' struggles to transition back to civilian life from combat theatres. Primarily, most research tends to focus on PTSD as the single predictor of various negative aspects of transitioning to civilian life or as a co-morbid factor. Because effects of PTSD on returning veterans and society have been described elsewhere in paper, it will not be the primary focus of this section.

Bryan and Morrow (2011) conducted a study in which novel ways of marketing as well as delivery of mental health services were investigated. The authors noted that because of a pervasive "warrior culture" exists within the Armed Services, there is a significant stigma surrounding admitting to feeling hurt as well as receiving services for such concerns. In fact, they note that because the Armed Services promote an identity of self-reliance and strength, seeking help is an admission of weakness and failure as a service member. Additionally, seeking services may also temporarily remove you from your unit and thus isolate individual service members. Recognizing these problems, the researchers designed a marketing program as well as a service delivery program for a squadron of 192 United States Air Force (USAF) Security Forces (SF) personnel charged with conducting security patrols and other combat-related duties as part of Quick Reaction Force (QRF) mission while deployed to Iraq. The program was designed from the beginning to fit within the SF culture, with the primary aim to promote resilience overall health among SF members and to counteract mental health issues and morbidity during and after deployment. The basis of the program was to recognize the inherent resilience of the service members as well as portray combat as an athletic event; this

meant that mental health symptoms could be described as hindering operational performance and thus not as mental health problems per se (and instead be described as “skills” to be improved upon), which made service delivery more palatable for service members. Service delivery was also group-based, using psychologists to deliver suggestions and corrections informally as way of improving combat readiness. Program feedback was delivered by members who participated in the program by way of program evaluation forms. This feedback, the authors noted, demonstrated high acceptability from the service members of the “training” they received as well as that overall, a strength-based approach to marketing and delivering services appeared to effectively mitigate some of the stigma surrounding mental health services.

Researchers Tsai, Harpaz-Rotem Pietrzac, and Soutwick (2012) conducted a cross-sectional study with 164 veterans seeking VA primary care or mental health care within one year after returning from Afghanistan and/or Iraq. These service men were screened for PTSD and thereafter completed a number of questionnaires that assessed social functioning, coping, and life satisfaction. The authors reported that of those veterans who screened positive for PTSD (54%) also indicated greater difficulties with their intimate partners and relationships, less family cohesion, less social support, lower social functioning, and overall lower life satisfaction as compared to the veterans who did not screen positive for PTSD. The association between PTSD and poor social functioning was mediated by less social support from the community, excessive worry, decreased acceptance of change, and lower availability of secure relationships. In addition, the relation between PTSD and lower partner satisfaction was mediated by greater cognitive social avoidance and lower availability of secure relations. Overall, the authors concluded

that therapeutic interventions such as psycho-education, cognitive processing and acceptance and commitment therapy may help address these mediating variables in order to improve overall social functioning in veterans with PTSD who are seeking treatment.

Uomoto and Williams (2009) wrote an extensive review on the history of exposure to combat, the various labels of post-combat symptoms, and the different treatments. They also present a way forward in terms of medical treatment upon reintegration. Overall, they noted that in each major war the United States fielded large amounts of ground troops, there were also a number of expressions used for describing injuries and symptoms thereof in idiosyncratic ways. For instance, the term “shell shock” was first coined and expressed to describe symptoms experience by World War I vets, but is now described as post-concussion syndrome (PCS). In terms of the OEF/OIF veterans they described, the complexity of symptoms of their battle wounds stood out. Mild TBI can be described as the signature or expression for these conflicts, although it does not in itself begin to accurately describe the symptoms presented by these veterans. The authors noted that many veterans present symptoms of TBI in the absence of actual head trauma. They thereafter go on to describe the various symptoms that OEF/OIF present such as the aforementioned mild TBI, chronic pain, PTSD and multiple functional impairments such as activity level changes (cognitive impairments, trouble leaving house, etc.) as well as everyday life tasks (e.g., rearing children, working, etc.). In terms of treatment, the authors argued that a single medical diagnosis or event should not decide the course of treatment – rather, the clinical presentation of OEF/OIF veterans are an amalgam of risk exposures (particularly combat exposure) and an accumulation of symptoms and functional impairments that cannot be traced to a single event. As such, the authors

proposed that reintegration should not be measured by a single criterion such as social, vocational, familial or community roles but rather through common symptom pathway of functional disability and levels of suffering.

Anne Demers (2011) of San Jose University conducted a combined quantitative/qualitative study that investigated challenges of reintegrating to civilian life and its impact on service members' mental health. She recruited participants who had served in either the Afghanistan or Iraqi wars, or both. Interviewing was done in focus groups in four separate locations in California. Participants in the author's study expressed difficulties navigating the feelings of "in between-ness" when leaving active duty and returning to civilian life. In particular, this was difficult for reservists and veterans who by design do not have the same access to camaraderie that their activity duty counterparts do (e.g., shorter post-deployment debriefing, lesser access to military bases and little to no contact with unit). As such, they reported feeling lonely, without support and that they often would resort to maladaptive ways of coping. The author likened this initial period (first six months) being home as a transition period comparable to boot camp (e.g., shedding civilian life and custom for military ones and vice versa). This idea of a particularly difficult first period has been substantiated by other literature showing that PTSD and depression rates increase during the initial period home (Lapierre, Schwegler, & LaBauve, 2007). In this particular study (Demers, 2011) veterans and reservists described problems with relearning and renegotiating household duties with spouses and partners, losing a sense of self-worth and purpose, feeling guilty for having left friends who go on to deploy again, as well as feeling misunderstood and alienated from family, friends, and society. In terms of helping to make this

aforementioned military-civilian gap more easily bridged, the author recommended the creation of support groups for veterans, transition groups for family and friends, and, finally, military cultural competence for mental health practitioners.

Maguen and colleagues (2010) also acknowledge the many unique features facing OEF/OIF veterans in a manner similar to the earlier reviewed article by Uomoto and Williams (2009). Maguen and his colleagues also argue that perhaps one of the more effective ways of reaching these veterans is by using an integrated primary care model. They noted that this type of model has been effective in other populations that face multiple stressors. This system has begun to be tested at the OEF/OIF Integrated Care Clinic (ICC) at the San Francisco VA Medical Center. The veterans who are seen there are essentially seen by a “one-stop shop”; when veteran is seen by a primary care provider, he/she is also seen consecutively by a number of providers located in the same building, such as a psychologist and a social worker. The psychologists are referred to as post-deployment specialists (PDS) to reduce stigma surrounding mental health. Overall, a multitude of different providers in the same building help orient the veterans to the various sources of treatment (e.g. psychiatry, individual, group, and family therapy with a wide variety of focuses) and help normalize their experiences. At each stage, the various providers communicate and help inform each other of the patient’s progress and thereafter make care-based decisions which may include more referrals.

Authors Blevins, Roca, and Spencer (2011) conducted a study on the efficacy of a 2-hour workshop based on Acceptance and Commitment Therapy (ACT; Hayes & Strosahl, 2004) called Lifeguard. It was run by a nurse, psychologist, social worker, and a recreational therapist. To make the workshop more interactive, power points were not

allowed and interaction between participants and the speakers were encouraged. The workshop was developed by the Arkansas National Guard. The sample included 144 veterans (63 intervention and 81 control). The demographic make-up of the veterans was largely young, White, and married whereas the control group was significantly older and more educated but otherwise similar. The workshop used a pre-post design with a 2-month interim period. Various psychological and psychosocial symptoms were measured in both the pre and post tests. Participants reported high pre-test levels of exposure to traumatic events, physical injury, and symptoms of psychosocial distress. Post test levels indicated that the intervention group as compared to the control, significantly decreased symptoms of depression, anxiety, PTSD, and also suggested an increase in relationship satisfaction. Only effects for depression and relationship satisfaction remained significant in between-group comparisons. Veterans overwhelmingly reported that they found the workshop to be worthwhile because of its interactive nature and real-life application. The authors concluded that while the sample size was relatively small, their study provided some positive signs that this type of workshop could be helpful for veterans and provide impetus for larger, more rigorous studies.

Karin Jordan (2011) reviewed the literature on unique challenges that veterans and their partners have faced as they transitioned to civilian society after having been deployed in either OEF or OIF; specifically, she highlights how couples are impacted by multiple deployments and using emotion-focused therapy (EFT) to help reintegrate couples. The author highlights that because of the volunteer-based nature of the current Armed Forces, it has had to rely on repeated deployments for individual service members not seen in past wars. This means that combat veterans often receive re-deployment



orders before returning home and/or start to train for a temporary duty assignment (TDY) soon after they return home. Deployments have also often lasted longer than 12 months. These deployments not only complicate the transition for the service member, but also for their potential romantic partners and family (Mansfield et al., 2005).

Spouses whose husbands had deployed for 11 months or more in OEF or OIF saw anxiety disorder rates of 29%, depression rates of 24%, sleep disorder rates of 40%, and acute stress disorder rates of 39% (Jordan, 2011). This process of deployment, reintegration, and re-deployment can create unhealthy attachment bonds, or non-existing ones. Couple reintegration therefore becomes increasingly difficult depending on length of deployment and possible re-deployments. Jordan suggested that emotion-focused therapy (EFT) may be a beneficial way of helping couples deal with redeployment, deployment to combat zones, and separation through strengthening family cohesiveness and supportiveness. The author noted that prior to start of couples counseling there should be thorough assessment. EFT uses three stages for counseling, stabilization, restructuring, and integration. Stabilization mainly focuses on creating a secure base in the counseling session in which the couple knows that they can confront trauma associated with the deployment cycle and how it has defined their relationship and sense of individual self. This may involve setting safety rules, examining current how combat trauma, separation, and lack of security may be affecting interaction patterns and attachment. These challenges then have to be confronted by way of seeing the respective partner as a resource and the relationship as a haven. Restructuring typically focuses on expanding and restructuring emotional processes; this may involve owning how each partner protects their emotional self, express fundamental fears, and clarify attachment

needs. The final stage of integration focuses on helping the couple integrate new emotional experiences and self-concepts through self-reflection and highlighting. With its unique focus, Jordan believes that EFT would be apt at helping military couples reintegrate in a healthy way during and after the deployment cycle.

As can be noticed, most research on veterans tend to focus on psychiatric diagnoses (e.g. PTSD, depression, etc.) or types of service delivery (e.g. types of therapy, workshops, etc.) and not other factors such as attitudes or emotions. As such, there are suggestions for interventions in the literature, but very few outcome studies. This highlights the need in the literature to investigate factors beyond psychiatric diagnoses such as predictors of overall quality of life and successful reintegration into civilian society after discharge.

### **Men, Masculinity, and Existing Research with OEF/OIF Veterans**

At the current time, few studies have been conducted with OEF/OIF veterans to investigate possible connections among masculinity ideology, conformity to masculine norms, gender role conflict and help-seeking behavior, general mental health outcomes, and successful re-integration into civilian society post discharge. In addition, most civilian studies do not identify or specify whether the sample contained any veterans, unless the study specifically focused on veterans as a population. One study, however, investigated the relationships among masculine gender role stress, PTSD symptom severity, alexithymia, fear of emotional states, and social support with Vietnam-era Veterans. An additional study investigated the connection between traditional masculine behavioral norms and PTSD symptoms in Iraq and Afghanistan Veterans. And, finally, one study investigated the connection between masculinity and cardiac health in veterans.

Jakupcak, Osborne, Michael, Cook, and McFall (2006) conducted a study in 2006 with 45 male veterans from the Vietnam era who were seeking inpatient care. Their objective was to investigate the relationships between masculine gender role stress, PTSD symptom severity, alexithymia, fear of emotional states, and social support. The study used the Masculine Gender-Role Stress Scale (MGRS; Eisler & Skidmore, 1987), the Mississippi Scale for Combat-Related PTSD (M-PTSD; Keane, Caddell, & Taylor, 1988), the Toronto Alexithymia Scale (TAS-20; Bagby, Parker, & Taylor, 1994; Bagby, Taylor, & Parker, 1994), and the Affect Control Scale (ACS; Williams, Chambless, & Aherns, 1997). After measuring and accounting for PTSD severity, masculine gender role stress was significantly and positively associated with alexithymia, and significantly and negatively related to social support. However, somewhat surprisingly, masculine gender role stress was not associated with PTSD symptom severity or fear of emotional states. This was surprising as past studies had found positive relationships between masculine gender role stress and symptoms of depression and anxiety (Carpenter & Addis, 2000; Eisler & Skidmore, 1988), and with men's fear of emotions (Jakupcak et al., 2003, 2005). The authors (Jakupcak et al., 2006) noted that inadequate statistical power is not a likely explanation as the magnitude of the relationships indicated a near-zero correlation. Instead, they offered the explanation that the severity of self-reported PTSD-symptoms and fear of emotional states in combat veterans are not associated with potential gender role stress because onset of the psychiatric symptoms were linked to military service; that is, trauma experienced in combat situations and the fear that it may elicit do not invoke negative associations with weakness (e.g., disclosure of feelings that invoke a sense of loss in connection with trauma) as research has shown in civilian men. Two major

shortcomings of the study was that it only featured Vietnam-era veterans and, naturally, the participants' relatively advanced age. Gender role stress has been shown to be more frequent and of greater magnitude in younger men, which also could help explain the finding.

Garcia, Finley, Lorber, and Jakupcak (2011) recruited 69 OEF/OIF veterans to participate in a study about the association between traditional masculine behavioral norms and PTSD symptoms in Iraq and Afghanistan Veterans. The study used archival data from 69 patients who had sought treatment at an outpatient PTSD clinic. The study used several scales to examine the connection between masculine behaviors and PTSD symptoms, which included the Masculine Behavior Scale (MBS; Snell, 1989), PTSD checklist-military (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993), and the Combat Exposure Scale (CES; Keane et al., 1989). The MBS is 20-item self-report scale that is designed to assess men's endorsement of traditional masculine behavior. It has 4 subscales: the success dedication subscale (assesses concerns with achievement), the restrictive emotionality subscale (assesses public restriction of personal feelings), the inhibited affection subscale (assesses inhibition of affectionate sentiments in relationships), and the exaggerated self-reliance and control subscale (evaluates concern with self-sufficiency and individual control).

Results indicated a positive trend: total MBS scores were not correlated with overall PTSD severity. The authors (Garcia et al., 2011) noted that this might be due to inadequate statistical power as the small sample size ( $N = 69$ ). However, the MBS subscale of exaggerated self-reliance and control predicted hyper-arousal symptoms in a hierarchical regression model. Contrary to their hypothesis, the MBS subscale of success

dedication negatively predicted avoidance, which may indicate that this masculine norm is functioning to protect against avoidance symptoms. Garcia et al. suggested that maybe the drive for success serves as a function that allows veterans to be goal-oriented in overcoming uncomfortable stimuli. To support their notion, they argue that, for instance, maybe the drive for success could help a veteran remain on campus and taking classes despite fear-reactions to crowds of people. They thereby argue that the drive for success may serve as a form of inoculation against certain aspects of PTSD. Furthermore, they note that this is consistent with past research in that some aspects of masculinity may serve as adaptive factors (Good et al., 2006).

There are several limitations in the study, which include: the small sample size; self-report measures which may have inflated some responses and deflated others; that the participants had willingly sought treatment for PTSD, which means their symptoms may be different from veterans who do not seek treatment; the sample was geographically restricted (south Texas) and results may not generalize beyond the sample of primarily Hispanic men. Garcia and colleagues note, however, that in the study there were no differences between ethnicities in terms of endorsement of masculine gender norms.

Morrison (2012) conducted a study with the intent of examining the relationship among symptoms of PTSD, masculinity, and health behaviors related to cardiac health in a sample of veterans. The author hypothesized that symptoms of PTSD would be related to health risks behaviors; that masculinity would be associated with greater self-reported PTSD symptoms and fewer positive health risks behaviors; and, finally, that masculinity would moderate the relationship between PTSD-symptoms and health behaviors in a way that greater endorsement of masculinity would be associated with even worse health

behaviors than predicted by PTSD alone. The author recruited a sample of a 197 male veterans from a Veteran Affairs Health Care system in the Northeastern United States. Participants completed the Cardiac-Related Health Behaviors Index.(CR-HBI; Mahalik & Burns, 2011), the Posttraumatic Stress Disorder Checklist–Military Version (PCL–M; Weathers, Huska, &Keane, 1991), the Conformity to Masculinity Norms Inventory (CMNI; Mahalik et al., 2003) and the Masculine Gender Role Stress Scale (MGRS; Eisler & Skidmore, 1987). The CR–HBI is a self-report instrument that assesses eight health behaviors (such as exercise, food and alcohol consumption, tobacco, weight, blood pressure, etc.) related to cardiac health recommended by the American Heart Association. The PCM-M is a self-report instrument that measures posttraumatic stress. The CMNI is a self-report measure that measures conformity to masculine norms and which has been reviewed previously in this study. And, finally, the MGRS is also a self-report instrument which measures masculine gender role stress.

Hierarchical multiple-regression procedures were run to test hypothesized main and interaction effects. Results indicated that greater reported PTSD symptoms were significantly associated with worse health behaviors overall. Greater masculinity, including masculine gender role stress and conformity to masculine norms, was associated with severe self-reported posttraumatic stress. The hypothesis that masculinity would predict greater overall health promotion behaviors was partially supported; conformity to masculine norms was not significantly related to health behaviors whereas greater masculine gender role stress was. Morrison (2012) noted that this difference has been found elsewhere (Levant et al., 2009) and speculated that this difference may be due to the different theoretical underpinnings; that conformity to masculine norms is a model

that is not specifically connected to either well-being or pathology but is hypothesized to have both benefits and costs whereas MGRS is a model of distress. Morrison reported that the findings add to the growing body of literature which documents the relationship between masculinity and health behaviors. Morrison noted several limitations with the study; firstly, that the cross-sectional nature of the study may have prevented clear causal attributions regarding the variables studied. Another limitation noted was that sample used was not comprised of persons specifically seeking care for PTSD and that future research may be wise to make use of a targeted sample (although, remarkably, a significant interaction effect was still found in this study). Other limitations not noted by the author was that the sample was drawn from only one geographical location (Northeastern United States), that the sample almost exclusively heterosexual, and White.

In conclusion, there have been very few studies that have investigated how adherence to traditional masculinity ideology affects veteran populations – thus highlighting the need to bridge this very wide gap in existing literature. Whereas past and current studies have studied the relationships between PTSD, masculinity, and positive health behaviors, most have not investigated overall quality of life or other broader, abstract concepts that could be meaningful on a daily basis in the reintegration process. It should, however, be noted that these studies provide impetus and suggestions for future research. In particular, they add to the literature in some of the findings seen in civilian literature have now also been found in veteran samples; that is, that certain aspects of adherence to masculinity are predictive of more severe levels of PTSD, that certain aspects of masculinity may be adaptive in terms of inoculating against PTSD, and that adherence to masculinity may be predictive of fewer positive health promotion behaviors.

## **Rationale for the Current Study**

Whereas there have been numerous studies researching the barriers to mental health services for post-deployment male service members or veterans, very few have studied the internal mental states and processes thereof that enable the most successful mental health outcomes in terms of reintegration to civilian life. That is, if a male veteran has access to mental health services, what internal attitudes and processes are most likely to produce more healthy mental health outcomes? Similarly, veterans as a population are seldom recognized within civilian clinical samples (e.g., whether they were part of the civilian sample) unless the study specifically focuses on veterans. The emerging field of men's studies outside of military psychology has in the past 15-20 years investigated how adherence to traditional masculine ideology and ideals affect mental and physical well-being in boys and men in civilian society. An increasingly growing compendium of literature suggest that men who adhere to traditional masculinity ideology or its related concepts are less likely to have a physical examination and other health-seeking behaviors (Marcel, Ford, Pleck, & Sonnenstein, 2007); have greater rates of use of tobacco, alcohol and illicit drugs (Courtenay, 1998; Pleck, Sonnenstein, & Ku, 1994; Courtenay, McCreary, & Merighi, 2002; Pleck, et al., 1994a); engage more often in risky sexual behaviors; and, experience greater levels of stress and anger (Courtenay et al.). Additionally, such men are less likely to express emotions (O'Neil et al., 1986). Furthermore, research outside men's studies have added to the wealth of information of documented health concerns for men; men die, on average, 5.2 years earlier than women (Minino, Heron, Murphy, & Kocharek, 2007); have higher reported rates of antisocial behavior, sexual deviance (Grove, 1978), infectious diseases, chronic illnesses, terminal



diseases, various unintentional diseases (Centers for Disease Control [CDC] 2004, and drug abuse (Grove). Additionally, men also have higher rates of completed suicides than do women (Minino et al.).

As the Armed Services indoctrinate, foster, and promote a hyper-masculine culture in which men are taught to suppress emotion, it is decidedly important to investigate the impact of the masculinity spectrum on veterans as they have reintegrated to civilian society (Arkin & Dobrofsky, 1978; Bryan & Morrow, 2011). This need becomes even more urgent when considering that new technology in terms of body armor as well as rapid air transport have allowed larger numbers of service members to survive injuries, as compared to past conflicts. These members of the Armed Services have returned with injuries not often seen before, these include mild traumatic brain injury, ever-increasing numbers of PTSD-related symptoms, and various depressive symptoms. Some of these symptoms, such as mild TBI which may be comorbid with PTSD and psychosocial factors have been said to be function of the ability to survive combat exposure to a greater extent as compared to past conflicts due to medical advances, new armor technology, and more rapid air transports. The costs related to these injuries have been suggested to be in the billions of dollar (RAND Report; Tanielian & Jaycox, 2008). Thus, bridging the gap in the literature between civilian and veteran samples could help to enhance the understanding of the process male veterans go through as they transition from military to civilian life. This current study aims to, rather than looking into correlations between single mental health diagnoses and masculinity, study how the masculinity spectrum affects help-seeking behaviors and general mental health outcomes post-deployment in male veterans of the Armed Services.

## **Hypotheses**

1. Adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia are significantly associated with significantly worse general mental health outcomes in veteran populations who have been deployed to active war zones.
2. Adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia are significantly associated with fewer help-seeking behaviors in veteran populations that have been deployed to active war zones.
3. Adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia lead to less successful post-deployment reintegration of veterans into civilian life.

## CHAPTER II

### METHODS

#### Participants

Participants were 145 ( $N=145$ ) male veterans hailing from 24 states with a majority from North Dakota (22%,  $n=31$ ). The mean age was 29 ( $SD=5.6$ ) with a range from 18 to 38. The distribution in terms of race in percentages was as follows: White, 86.9% ( $n=126$ ); African American, 3.4% ( $n=5$ ); Hispanic, 6.2% ( $n=9$ ); and Native American, 3.4% ( $n=5$ ). A majority identified their religious status as Christian, 77.2% ( $n=112$ ); others identified as agnostic, 14.5% ( $n=21$ ); atheist, 7.6% ( $n=11$ ); and, finally, Buddhist, 0.7% ( $n=1$ ). For sexual orientation, 97.2% ( $n=141$ ) identified as straight/heterosexual, 1.4% ( $n=2$ ) as having no label, and 1.4% ( $n=2$ ) as questioning. This means that not a single person identified as gay or bisexual. In terms of attained education level, 6.3% ( $n=10$ ) reported being high-school graduates, 69% ( $n=100$ ) reported having some college education, 26.2% ( $n=38$ ) reported having a college degree, and 2.8% ( $n=4$ ) reported having a master's degree. For reported current yearly income, 28.3% ( $n=41$ ) reported earning \$0 to \$10,000, 41.4% ( $n=60$ ) reported making \$10,001 to \$30,000, 24.8% ( $n=36$ ) reported making \$30,001 to \$60,000, 3.4% ( $n=5$ ) reported making \$60,001 to \$90,000, 1.4% ( $n=2$ ) reported making \$90,001 to \$150,000, and 0.7% ( $n=1$ ) reported making \$150,001 to \$250,000.

In the sample, 26.9% ( $n=39$ ) reported being single, 31.7% ( $n=46$ ) reported being in a dating relationship, 36.6% ( $n=53$ ) reported being married, and 4.1% ( $n=6$ ) reported being divorced. In geographic terms of growing up, 45.1% ( $n=65$ ) reported being raised in a city/town with a population of less than 25,000. The city size for the remaining participants was: 21.5% ( $n=31$ ) between 25,000 and 50,000, 16.7% ( $n=24$ ) between 50,000 and 100,000, 9.7% ( $n=14$ ) between 100,000 and 200,000, 3.4% ( $n=5$ ) between 200,000 and 500,000, and, 3.4% ( $n=5$ ) reported growing up in a city with a population of more than 500,000.

In terms of overseas deployment, 63.1% ( $n=89$ ) reported having been deployed to Iraq, 33.3% ( $n=49$ ) to Afghanistan, 2.3% ( $n=3$ ) to Kuwait 1.4% ( $n=2$ ) were on submarine duty, 1.4% ( $n=2$ ) were on a classified deployment. Regarding pay grade at discharge, 4.9% ( $n=7$ ) reported having been discharged with the pay grade of E2, 17.9% ( $n=26$ ) at E3, 30.6% ( $n=44$ ) at E4, 25% ( $n=36$ ) E5, 6.3% ( $n=9$ ) E6, 1.4% ( $n=2$ ) at E7, 0.7% ( $n=1$ ) at E7, 0.7% ( $n=1$ ) at E8, 0.7% ( $n=1$ ) at E9, 0.7% ( $n=1$ ) at W4, 2.8% ( $n=4$ ) at O3/O3E, and 0.7% ( $n=1$ ) at O4. Pay grades correspond to military ranks; “E” is short for enlisted, “W” for warrant officers, and, finally, “O” for commissioned officers. Ranks range from E-1 to E-9, W-1 to W-5, and O-1 to O-11. A higher number indicates a higher rank. Finally, in terms of branch, 5.5% ( $n=8$ ) reported having been in the Air Force, 44.1% ( $n=64$ ) in the Army, 12.4% ( $n=18$ ) in the Marine Corps, 5.5% ( $n=8$ ) in the Navy, 27.6% ( $n=40$ ) in the Army Guard, 2.1% ( $n=8$ ) in the Air Guard, 1.4% ( $n=2$ ) in the Army Reserve, 0.7% ( $n=1$ ) in the Air Force Reserve, and, 0.7% ( $n=1$ ) reported having been in the Marine Corps Reserve.

## Measures

**Demographics form.** The participants were asked to complete a demographics form (See Appendix A). It asked the participants about their sex, gender identity, age, racial identity, current spiritual and/or religious beliefs, sexual orientation, relationship status, level of education attained, current state of residence, current personal income, current or former military branch, rank, and the location of their deployment.

**The Combat Exposure Scale (CES, Keane et al., 1989).** The CES is an instrument that assesses combat exposure in terms of intensity, frequency, and duration of the experienced combat (Keane et al., 1989, 1997). It uses self-report and is comprised of seven questions (See Appendix D). Respondents are asked to respond based on their exposure to various combat situations, such as firing rounds at the enemy and being on dangerous duty. Items are rated in three different ways, depending on the nature of the question; 5-point frequency (1 = “no” or “never” to 5 = “more than 50 times”), 5-point duration (1 = “never” to 5 = “more than 6 months”), 4-point frequency (1 = “no” to 4 = “more than 12 times”) or 4-point degree of loss (1 = “no one” to 4 = “more than 50%”) scale. The total CES score (ranging from 0 to 41) is calculated by using a sum of weighted scores, which can be classified into 1 of 5 categories of combat exposure ranging from “light” to “heavy.” Reported Cronbach's alpha was .85 in the standardization sample. Test-retest reliability for the instrument and sample was  $r(29) = .97, p < .0001$  using a one-week interval. There were no between-group differences in test-retest reliability; means for Time 1 and 2 were 23.2 and 22.2, respectively. The study does not report convergent validity data, but did use two samples for divergent validity; one with a history of a PTSD diagnosis ( $n=30$ ) and one that did not have a history of a

PTSD diagnosis from the Vietnam Veterans Leadership Group (VVL); the PTSD group reported greater amounts of combat exposure than the VVL group. The CES has been validated and used with veterans and active members of the various branches of the military after every major armed conflict since the 1980s (Carter et al., 2011; Rudd et al., 2011; Wang et al., 2011).

**PTSD Checklist-Military (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993).** The PCL is the most widely used self-report questionnaire for assessing severity of symptoms as well as diagnosing PTSD (Arbisi et al., 2012). It has been used to assess PTSD in active duty service members as well as veterans since the early 1990s. Questions are directly based on DSM-IV criteria (See Appendix I). There are three different versions of the instrument: a civilian (PCL-C), military (PCL-M), and situation specific one (PCL-S). For the purposes of this study, the military version was used. It is specifically designed to ask questions regarding symptoms in relation to stressful military experiences. It is a self-report measure that usually takes about 5-10 minutes to complete. The instrument has 17 items. The test uses a Likert-type scale with the following order: “not at all,” “a little bit,” “moderately,” “quite a bit,” and “extremely.” Sample item: “In the past month, how much have you been bothered by repeated, disturbing memories, thoughts, or images of a stressful military experience?” Scoring yields a total symptom severity score ranging from 17-85 and indicates whether an individual meets criteria for PTSD. Cronbach's alpha was reported to be .96. PCL scores were correlated with scores from the clinician-administered PTSD scale (CAPS; the gold standard of PTSD assessment); overall correlation of total PCL score with CAPS total score was found to be  $r(38) = .929$  (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). It has also

correlated highly with other PTSD symptoms checklists such as the Mississippi Scale for Combat-related PTSD ( $r = .85$ ; Weathers et al., 1993), Impact of Events Questionnaire ( $r = .9$ ; Weathers et al.), and again, the CAPS ( $r = .79$ ; Keane et al., 2008). Two to three day test-retest reliability was .96 in one study with Vietnam veterans (Weathers et al., 1993) and .66 for a study with psychiatric patients (Mueser et al., 2001).

**Normative Male Alexithymia Scale (NMAS; Levant et al., 2006).** The NMAS was designed to assess normative male alexithymia, a mild form of alexithymia theorized to be normative for men (See Appendix H). Alexithymia refers to the inability to put emotions into words. This concept described in detail in the previous chapter. The NMAS is a self-report questionnaire. Respondents indicate their responses to questions about their experience of emotions using a Likert-type format. (ranging from 1 [strongly disagree] to 7 [strongly agree]). The scale has 20 items. Scores are averaged after recoding reverse-worded items, with a higher score indicating greater normative alexithymia. Sample item: “When asked, I can easily give an account of what I am feeling”. Cronbach’s alpha was .93. Test-retest reliability ( $r = .86-.91$ ) was tested over a 1-2 month period. The NMAS correlated significantly with the TAS-20 (Toronto Alexithymia Scale; Bagby, Parker, & Taylor, 1994) ( $r = .72$ ) and the MRNI ( $r = .34$ ). At the time of writing, due to the relative newness of the scale, cross-validation data were not available. The original scale reliability and validity was achieved using a diverse sample including White Americans, Latino/Latin Americans, African Americans, and persons who identified as attracted to the other sex or being on a continuum (Levant et al, 2006).

**Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007, 2010).**

The MRNI-R is a self-report questionnaire that has 53 items (Levant et al., 2007, 2010). It uses a Likert-type scale ranging from 1=strongly disagree to 7= strongly agree (see Appendix E for examples of questions from each subscale of the total scale). A higher score indicate a higher endorsement of traditional masculinity ideology. All items are summed then averaged in order to receive the total score. The scale has seven subscales: avoidance of femininity; negativity toward sexual minorities; self-reliance; aggression; dominance; non-relational sexual activity; and, restrictive emotionality. Levant et al.'s original analysis showed evidence of convergent validity in a significant correlation between the MRNI-R and Male Role Attitudes Scale ( $r = .60, p < .01$ ); divergent validity due to no significant correlation with the Personal Attributes Questionnaire (correlation of overall test scores;  $r = .08, p = .29$ ); and, concurrent validity through significant correlations with three instruments cited above: the CMNI ( $r = .60, p < .01$ ), GRCS ( $r = .54, p < .01$ ), and the NMAS ( $r = .51, p < .01$ ). Internal consistency was reported to be .96. The scale has been used and validated cross-culturally and ethnically. Some of these factors include race and ethnicity (White Americans, African Americans, Chinese persons, Russians, Latino/a Americans) as well as age and gender (Levant & Richmond, 2007).

**Attitudes Towards Seeking Professional Psychological Help Scale – Short Form [ATSPPH-short form] (Fischer & Farina, 1995).** The ATSPH short form is a self-report questionnaire that utilizes a 10-item Likert-type format that assesses attitudes toward seeking psychological help (See Appendix G). The original instrument used 29 items, but this short form has been shown to retain the original's psychometric properties



(Fischer & Farina, 1995). Respondents rate statements in accordance with agreement, with possible alternatives ranging from 0=disagree to 3=agree. Total scores range from 0-30, with higher scores indicating more positive attitudes toward seeking professional psychological help. Items 2, 4, 8, 9, and 10 are reverse scored. Higher scores, 15 or higher, indicate more positive attitudes. The short version has been shown to have good internal consistency ranging from .82 to .84 (Fischer & Farina, 1995; Komiya et al., 2000; Constantine, 2002), and a test-retest reliability of  $(r).80$  over a month. The short form is strongly correlated with the full version ( $r=.87$ ). Divergent validity was found to be  $-.41$  with the Stigma Scale for Receiving Psychological Help (SSRPH). The scale is widely used and has been utilized in research for instance in studies pertaining to men and masculinity (Levant, Wimer, & Williams, 2011), with college students and cross-culturally (Kakhnovets, 2011; Leong, Kim, & Gupta, 2011; Nam et al., 2013 ).

**The Quality of Life Scale (QOLS; Burckhardt & Anderson, 2003).** The QOLS is a 16-item self-report questionnaire designed to measure the following conceptual domains of quality of life: material and physical well-being; relationships with other people; social, community, and civic activities; personal development and fulfillment; and recreation (See Appendix F). Respondents indicate their responses to questions about their quality of life using a Likert-type format ranging from 1 (terrible) to 7 (delighted). Responses are simply added for a total score, where a lower overall score indicate a lower quality of life. Cronbach's alpha was reported to be .92. Convergent validity was found high correlations between the QOLS and the Life Satisfaction Index-Z (LSI-Z; Wood, Wylie, & Sheafor, 1969) and divergent validity, with low to moderate correlations with the Duke-UNC Health Profile (DUPH; Parkerson et al., 1980). The QOLS has been

translated into 16 different languages. It has also been published and validated in three of those: Swedish, Norwegian, and Hebrew (Burkhardt & Anderson). At the time of writing, no literature found indicated that the scale had been used with veterans.

## **Procedure**

**Recruitment.** Participants were recruited through Veteran Certifying officials on university campuses around the country. No preference was given to specific geographic areas or states; however, the sample as a whole turned out more rural than urban. This is addressed in the limitations section of the Discussion chapter. Participants were asked to forward a recruitment message to their email lists (see Appendix C). As an incentive, participants were offered to participate in a lottery in which five \$50 gift cards to a national retailer were gifted. In the recruitment email, participants were directed to an online survey on Qualtrics software through the University of North Dakota.

**Participation on the Internet and in person.** Participants who chose to participate over the Internet after having read the recruitment message (Appendix C) completed the consent form (see Appendix B), demographics questionnaire (Appendix A), and the five standardized instruments mentioned earlier. The consent form did not use a form of electronic signature to give consent; rather, participants gave consent by reading the consent form online, then gave consent by clicking on the “next button” to start the survey. Furthermore, participants were able to be completely anonymous and not leave their name or any identifying information, including IP-number for their computer. However, by remaining anonymous, participants were not able to participate in the lottery. Estimated completion time for each participant was 25 minutes. The survey did not have to be completed in one continuous session, rather, participants could come back

and finish it at a time of their own choosing. Due to incomplete protocols, there was no inclusion of results from paper and pencil participants. A total of four incomplete protocols were not used.

## CHAPTER III

### RESULTS

#### Descriptive Statistics

Overall, 145 ( $N = 145$ ) participants completed most or all measurements. When running multiple regression analyses, only those who had completed all instruments pertaining to the dependent variable of the hypotheses were kept (i.e., the statistical software program only included such participants). In terms of completing the Attitudes Towards Seeking Professional Psychological Help Scale (Fischer & Farina, 1995), 140 participants completed the measurement with an average score of 12.9 ( $SD = 6.38$ ), where a higher score indicates more positive attitudes. The range was 27, with a minimum of 0 to a high of 27. The highest possible score is 30. For the Combat Exposure Scale (CES, Keane et al., 1989), a total of 145 ( $n = 145$ ) completed the measurement with an average score of 14.80 ( $SD = 8.67$ ) This indicates an overall light to moderate combat exposure (41 is the highest possible score). The range was from 0 to 41. A total of 145 ( $n = 145$ ) participants completed the Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007) with a mean score of 3.8 ( $SD = .88$ ). The range was 1.45 to 6.21. Possible scores for the scale ranges between 0 and 7, where 7 indicate the highest possible adherence to traditional masculinity. For the Normative Male Alexithymia Scale (NMAS; Levant et al., 2004), a total of 140 ( $n = 140$ ) completed the measure with an average score of 4 ( $SD = .54$ ). Similarly to the MRNI-R, possible scores range from 0 to

7, with 7 being the highest possible score. The range for the participants was 2.70 to 5.25. A total of 138 ( $n = 138$ ) participants completed the PTSD Checklist-Military (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993) with an average score of 32 ( $SD = 14.64$ ). Possible scores for the scale range from 0 to 85, where scores between 17-33 indicate low PTS, 34-43 indicate moderate PTS, and where scores between 44-85 indicate high PTS. In this sample, the range was between 16 and 85. For the Quality of Life Scale (QOLS; Burckhardt & Anderson, 2003), a total of 142 ( $n = 142$ ) completed the measure with an average score of 78 ( $SD = 11.43$ ). Possible scores for the scale range between 0 and 112, where a higher score indicates a higher quality of life. An average score for healthy population is typically around 90 (Burckhardt & Anderson). Tables 1 and Table 2 below highlight descriptive statistics for participants who finished all scales, as well as the intercorrelations between all auxiliary measures.

Table 1. Participants' scores on all scales.

Measure	M	SD
ATTSPPH	12.90	6.38
CES	14.73	8.67
MRNI	3.80	0.88
NMAS	4.05	0.54
PCLM	32.38	14.64
QOLS	78.24	11.43

Note. ATSPPH =Attitudes Towards Seeking Professional Psychological Help; CES= Combat Exposure; MRNI= Male Role Norm Inventory-Revised; NMAS=Normative Male Alexithymia Scale; PCLM=PTSD Checklist Military; QOLS=Quality of Life Scale

Table 2. Intercorrelations of auxiliary measures.

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. age	--													
2. PCLM	.03	--												
3. CES	.05	.53**	--											
4. MRNI	-.16	-.25**	-.02	--										
5. aggression	-.16	-.17	-.01	.79**	--									
6. avoidfem	-.12	-.43**	-.17	.89**	.70**	--								
7. dominance	-.28**	-.01	.06	.83**	.58**	.67**	--							
8. fearhmsxlt	.06	-.18*	-.01	.83**	.46**	.68**	.67**	--						
9. restrictemo	-.03	.24**	-.05	.86**	.66**	.71**	.64**	.66**	--					
10. selfreliant	-.21*	-.20*	-.01	.76**	.79**	.69**	.54**	.41**	.61**	--				
11. sexattitude	-.13	-.08	.10	.61**	.35**	.55**	.52**	.39**	.47**	.42**	--			
12. NMAS	-.02	.41**	.16	.28**	.25**	.10	.27**	.15	.44**	.25**	.20*	--		
13. QOLS	.03	-.17*	-.23**	-.40**	-.35**	-.26**	-.28**	-.31**	-.47**	-.31**	-.31**	-.39**	--	
14. ATTSPH	.08	.01	-.09	-.52**	-.42**	-.34**	-.50**	-.40**	-.58**	-.47**	-.30**	-.47**	.43**	--

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

Note. Age=age; CES= Combat Exposure Scale; MRNI= Male Role Norm Inventory-Revised; aggression= aggression (MRNI subscale); avoidfem= avoidance of femininity (MRNI subscale); dominance = dominance (MRNI subscale); restrictemo= restrictive emotionality (MRNI subscale); selfreliant = self-reliance (MRNI subscale); attitudes towards non-relational sex; NMAS=Normative Male Alexithymia Scale; PCLM=PTSD Checklist Military; QOLS=Quality of Life Scale; ATSPPH =Attitudes Towards Seeking Professional Psychological Help

## Multiple Regression

Stepwise multiple regressions were conducted to determine which independent variables (combat exposure scale score [CES]); age [age]; adherence to masculinity [MRNI]; and level of normative male alexithymia [NMAS] were the predictors of level of post-traumatic stress [PCL-M]; quality of life [QOLS]; and attitude towards seeking professional psychological help [ATTSP-SH].

**Predicting PCL-M.** In terms of predicting models of PCL-M (hypothesis one), results indicated three overall models (CES), (CES and NMAS), and (CES, NMAS, MRNI) that significantly predicted level of post-traumatic stress (PCL-M). The first model (CES) significantly predicted levels of post-traumatic stress,  $R^2 = .28$ ,  $R^2_{adj} = .28$ ,  $F(1, 131) = 52.05$ ,  $p < .001$  thus, this model accounted for 28% of the variance in levels of post-traumatic stress (See Table 3). Effect size was found to be  $f^2 = .28$ . The second model (CES and NMAS), significantly predicted post-traumatic stress,  $R^2 = .40$ ,  $R^2_{adj} = .39$ ,  $F(1, 130) = 24.62$ ,  $p < .001$ ; it accounted for 39% of the variance in levels of post-traumatic stress. The effect size was  $f^2 = 0.66$ . The third model (CES, NMAS, and MRNI), significantly predicted post-traumatic stress,  $R^2 = .52$ ,  $R^2_{adj} = .51$ ,  $F(1, 129) = 31.48$ ,  $p < .001$ ; it accounted for 51% of the variance in levels of post-traumatic stress. The effect size was  $f^2 = 1.07$ . Thus, in the final model, CES accounted for 28% of the variance, NMAS 11%, and the MRNI for 12%. As such, the biggest contributor and most important variable is CES. Tolerance was greater than .1 for each of the predictors in the final model (.966, .897, and .923 respectively) and the variance inflation factor (VIF) was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 3. Summary for predicting PTS.

Models	<i>R</i>	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> <sub>adj</sub>	$\Delta R^2$	<i>F</i> <sub>chg</sub>	<i>p</i>	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>
1.	.53	.28	.28	.28	52.05	< .001	1	131
2.	.63	.40	.39	.11	24.62	< .001	1	130
3.	.72	.52	.51	.12	31.48	< .001	1	129

Note. Model 1: CES, Model 2: CES, NMAS, Model 3: CES, NMAS, MRNI-R

Table 4. Coefficients for predicting PTS.

Models	<i>B</i>	$\beta$	<i>t</i>	Bivariate <i>r</i>	Partial <i>r</i>
1. CES	0.90	.53	7.21	.53	.53
2. CES	0.80	.48	6.89	.53	.52
NMAS	9.34	.34	4.96	.42	.34
3. CES	0.76	.45	7.22	.53	.54
NMAS	12.08	.44	6.85	.42	.52
MRNI-R	-6.04	-.36	-0.56	-.25	-.34

**Predicting ATSPPH-SH.** In terms of predicting seeking professional psychological help (Hypothesis Two), results indicated two overall models (MRNI) and (MRNI and NMAS) that significantly predicted levels of seeking professional psychological help (ATTSP-SH). The first model (MRNI) significantly predicted levels of seeking professional psychological help,  $R^2 = .27$ ,  $R^2_{adj} = .27$ ,  $F(1, 133) = 49.89$ ,  $p < .001$ ; thus, this model accounted for 27% of the variance in levels of seeking professional psychological help (see Table 5). The effect size was  $f^2 = 0.38$ . The second model (MRNI and NMAS), significantly predicted levels of seeking professional psychological help,  $R^2 = .37$ ,  $R^2_{adj} = .37$ ,  $F(1, 132) = 23.59$ ,  $p < .001$ ; it accounted for 37% of the variance in levels of seeking professional psychological help. The effect size was  $f^2 = 0.6$ . Thus, the MRNI accounted for 27% of the unique variance in the final model and the NMAS accounted for 11%. This means that the MRNI was by far, the largest contributor in the



final model in terms of unique variance. Tolerance was greater than .1 for each of the predictors in the final model (.921 and .921, respectively) and the VIF was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 5. Summary for predicting seeking professional psychological help.

<b>Models</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup><sub>adj</sub></b>	<b>ΔR<sup>2</sup></b>	<b>F<sub>chg</sub></b>	<b>p</b>	<b>df<sub>1</sub></b>	<b>df<sub>2</sub></b>
1.	.52	.27	.27	.27	49.89	< .001	1	133
2.	.62	.37	.37	.11	23.59	< .001	1	132

Note. Model 1: MRNI-R, Model 2: MRNI-R, NMAS

Table 6. Coefficients for seeking professional psychological help.

<b>Models</b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>Bivariate r</b>	<b>Partial r</b>
1. MRNI-R	-3.80	-.52	-7.06	-.52	-.52
2. MRNI-R	-3.09	-.43	-5.96	-.52	-.46
NMAS	-4.06	-.35	-4.86	-.47	-.33

As the MRNI contains subscales and accounted for variance in some models, it was decided to run all multiple regressions a second time, with the inclusion of its subscales (avoidance of femininity; negativity toward sexual minorities; self-reliance; aggression; dominance; non-relational sexual activity; and, restrictive emotionality) and excluding the overall MRNI score to see which individual subscale(s) would account for the variance in the various models.

**Predicting QOLS.** In terms of predicting levels of QOLS (Hypothesis Three), results indicated three overall models (MRNI), (MRNI and NMAS), and (MRNI-R, NMAS, CES) that significantly predicted level of quality of life (QOLS). The first model (MRNI) significantly predicted levels of quality of life,  $R^2 = .17$ ,  $R^2_{adj} = .16$ ,  $F(1, 133) = 26.19$ ,  $p < .001$ ; thus, this model accounted for 16% of the variance in levels of quality of life (see Table 7). The effect size was  $f^2 = .19$ . The second model (MRNI-R and NMAS)

significantly predicted levels of quality of life,  $R^2 = .24$ ,  $R^2_{adj} = .23$ ,  $F(1, 132) = 13.38$ ,  $p < .001$ ; thus, this model accounted for 23% of the variance in levels of quality of life. The effect size was  $f^2 = 0.317$ . The third model (MRNI-R, NMAS, CES) significantly predicted levels of quality of life,  $R^2 = .28$ ,  $R^2_{adj} = .26$ ,  $F(1, 131) = 7.12$ ,  $p = .009$ ; thus, this model accounted for 26% of the variance in levels of quality of life. The effect size was  $f^2 = 0.39$ . Thus, in the final model, the MRNI-R accounted for 16% of the variance, the NMAS 8%, and CES for 4%. This means that the MRNI-R was the biggest contributor to the variance, whereas the NMAS and the CES, in particular, accounted for less unique variance. Tolerance was greater than .1 for each of the predictors in the final model (.914, .894, and .970 respectively) and the VIF was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 7. Summary for predicting quality of life.

Models	$R$	$R^2$	$R^2_{adj}$	$\Delta R^2$	$F_{chg}$	$p$	$df_1$	$df_2$
1.	.41	.17	.16	.17	26.19	< .001	1	133
2.	.49	.24	.23	.08	13.38	< .001	1	132
3.	.53	.28	.26	.04	7.12	.009	1	131

Note. Model 1: MRNI-R, Model 2: MRNI-R, NMAS, Model 3: MRNI-R, NMAS, CES

Table 8. Coefficients for predicting quality of life.

Models	$B$	$\beta$	$t$	Bivariate $r$	Partial $r$
1. MRNI-R	-5.36	-.41	-0.51	-.41	-.41
2. MRNI-R	-4.28	-.32	-4.10	-.41	-.34
NMAS	-6.16	-.29	-3.66	-.38	-.30
3. MRNI-R	-4.50	-.34	-0.34	-.41	-.36
NMAS	-5.40	-.25	-0.25	-.38	-.27
CES	-0.27	-.20	-0.27	-.23	-.23

### Predicting PCM-LM including subscales of the MRNI-R. In terms of

predicting levels of PCL-M (Hypothesis One), results indicated five overall models

(CES), (CES and Avoid Femininity), (CES, Avoid Femininity, NMAS), (CES, Avoid Femininity, NMAS, Restrictive Emotionality), and (CES, Avoid Femininity, NMAS, Restrictive Emotionality, dominance) that significantly predicted level of post-traumatic stress (PCL-M). The first model (CES) significantly predicted levels of post-traumatic stress,  $R^2 = .28$ ,  $R^2_{adj} = .28$ ,  $F(1, 131) = 56.05$ ,  $p < .001$ ; thus, this model accounted for 28% of the variance in levels of post-traumatic stress (see Table 9). The effect size was found to be  $f^2 = .40$ . The second model (CES and Avoid Femininity), significantly predicted post-traumatic stress post-traumatic stress,  $R^2 = .41$ ,  $R^2_{adj} = .40$ ,  $F(1, 130) = 26.68$ ,  $p < .001$ ; it accounted for 40% of the variance in levels of post-traumatic stress. The effect size was found to be  $f^2 = .68$ . The third model (CES, Avoid Femininity, NMAS), significantly predicted post-traumatic stress post-traumatic stress,  $R^2 = .55$ ,  $R^2_{adj} = .54$ ,  $F(1, 129) = 40.39$ ,  $p < .001$ ; it accounted for 54% of the variance in levels of post-traumatic stress. The effect size was found to be  $f^2 = 1.21$ . The fourth model (CES, Avoid Femininity, NMAS, Restrictive Emotionality), significantly predicted post-traumatic stress post-traumatic stress,  $R^2 = .58$ ,  $R^2_{adj} = .57$ ,  $F(1, 128) = 10.04$ ,  $p = .001$ ; it accounted for 57% of the variance in levels of post-traumatic stress. The effect size was found to be  $f^2 = 1.39$ . The fifth model and (CES, Avoid Femininity, NMAS, Restrictive Emotionality, Dominance), significantly predicted post-traumatic stress post-traumatic stress,  $R^2 = .32$ ,  $R^2_{adj} = .61$ ,  $F(1, 127) = 13.35$ ,  $p < .001$ ; it accounted for 61% of the variance in levels of post-traumatic stress. The effect size was found to be  $f^2 = 1.64$ . Thus, in the final model, CES accounted for 28% of the variance, avoidance of femininity 12%, NMAS 14%, restrictive emotionality 3%, and finally, dominance accounted for 4%. This means that CES is by far the biggest contributor and most important variable in the final model. Due

to the relative small contribution of restrictive emotionality and dominance, their importance in the model should be taken into account with caution. Tolerance was greater than .1 for each of the predictors in the final model (.899, .370, .696, .363, and .483, respectively) and the VIF was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 9. Summary for predicting PTS including subscales of MRNI-R.

<b>Models</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup><sub>adj</sub></b>	<b>ΔR<sup>2</sup></b>	<b>F<sub>chg</sub></b>	<b>p</b>	<b>df<sub>1</sub></b>	<b>df<sub>2</sub></b>
1.	.53	.28	.28	.28	56.05	< .001	1	131
2.	.64	.41	.40	.12	26.68	< .001	1	130
3.	.74	.55	.54	.14	40.39	< .001	1	129
4.	.76	.58	.57	.03	10.04	.002	1	128
5.	.79	.62	.61	.04	13.35	< .001	1	127

Note. Model 1: CES, Model 2: CES, AvoidF, Model 3: CES AvoidF, NMAS Model 4: CES, Avoid F, NMAS, Restrict E., Model 5: CES, AvoidF, NMAS, RestrictE, Dominance

Table 10. Coefficients for predicting PTS including subscales of MRNI-R.

<b>Models</b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>Bivariate r</b>	<b>Partial r</b>
1. CES	0.90	.53	7.21	.53	.53
2. CES	0.80	.48	6.92	.53	.52
AvoidF	-4.40	.35	-5.16	-.43	-.41
3. CES	0.68	.40	6.59	.53	.50
AvoidF	-4.90	-.39	-6.50	-.43	-.50
NMAS	10.47	.38	6.35	.42	.49
4. CES	0.68	.40	6.82	.53	.52
AvoidF	-2.48	-.20	-2.36	-.43	-.20
NMAS	13.50	.50	7.27	.42	.54
Restrict E	-3.94	-.29	-3.17	-.24	-.27
5. CES	0.61	.36	6.24	.53	.48
AvoidF	-4.26	-.34	-3.82	-.43	-.32
NMAS	12.74	.47	7.13	.42	.39
Restrict E	-4.89	-.37	-4.02	-.24	-.22
Dom	3.91	.29	3.65	-.01	.20

**Predicting ATSPPH -SH including subscales of the MRNI-R.** In terms of predicting levels of seeking professional psychological help (Hypothesis Two), results indicated three overall models (RE), (RE, NMAS), and (RE, NMAS, Dominance) that significantly predicted levels of seeking professional psychological help (ATTSP-SH). The first model (RE) significantly predicted levels of seeking professional psychological help,  $R^2 = .32$ ,  $R^2_{adj} = .32$ ,  $F(1, 133) = 63.15$ ,  $p < .001$ ; thus, this model accounted for 32% of the variance in levels of seeking professional psychological help (see Table 11). The effect size was found to be  $f^2 = 0.47$ . The second model (RE, NMAS), significantly predicted levels of seeking professional psychological help,  $R^2 = .38$ ,  $R^2_{adj} = .37$ ,  $F(1, 132) = 12.47$ ,  $p < .001$ ; it accounted for 37% of the variance in levels of seeking professional psychological help. The effect size was found to be  $f^2 = 0.61$ . The third model (RE, NMAS, Dominance), significantly predicted levels of seeking professional psychological help,  $R^2 = .41$ ,  $R^2_{adj} = .40$ ,  $F(1, 131) = 6.99$ ,  $p < .009$ ; it accounted for 40% of the variance in levels of seeking professional psychological help. The effect size was found to be  $f^2 = 0.7$ . In the final model, restrictive emotionality accounted for 32% of the unique variance, NMAS for 6%, and dominance for 3%. Thus, restrictive emotionality was by far the largest contributor of variance to the model whereas the NMAS and, dominance, in particular accounted for less variance. Thus, the relative importance of dominance to the final model should be taken into account with caution due to its relatively small contribution; however, it should still be noted that its contribution was still statistically significant. Tolerance was greater than .1 for each of the predictors in the final model (.528, .808, and .603, respectively) and the VIF was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 11. Summary for predicting seeking professional psychological help including subscales of MRNI-R.

Models	<i>R</i>	<i>R</i> <sup>2</sup>	<i>R</i> <sup>2</sup> <sub>adj</sub>	$\Delta R^2$	<i>F</i> <sub>chg</sub>	<i>p</i>	<i>df</i> <sub>1</sub>	<i>df</i> <sub>2</sub>
1.	.57	.32	.32	.32	63.15	< .001	1	133
2.	.62	.38	.37	.06	12.47	< .001	1	132
3.	.64	.41	.40	.03	6.99	.009	1	131

Note. Model 1: RestrictE, Model 2: RestrictE, NMAS Model 3: RestrictE, NMAS, DOM

Table 12. Coefficients for predicting attitudes towards seeking professional psychological help including subscales of MRNI-R.

Models	<i>B</i>	$\beta$	<i>t</i>	Bivariate <i>r</i>	Partial <i>r</i>
1. RestrictE	-3.27	-.57	-7.94	-.57	-.57
2. RestrictE	-2.59	-.45	-5.90	-.57	-.46
NMAS	-3.16	-.27	-3.53	-.47	-.29
3. RestrictE	-1.76	-.31	-3.06	-.57	-.28
NMAS	-3.16	-.27	-3.61	-.47	-.30
DOM	-1.34	-.23	-2.23	-.50	-.23

**Predicting QOLS including subscales of the MRNI-R.** In terms of predicting levels of QOLS (hypothesis three), results indicated three overall models (RE), (RE, CE), and (RE, CE, NMAS) that significantly predicted quality of life (QOLS). The first model (RE) significantly predicted levels of quality of life,  $R^2 = .22$ ,  $R^2_{adj} = .22$ ,  $F(1, 133) = 38.45$ ,  $p < .001$ ; thus, this model accounted for 22% of the variance in levels of quality of life (see Table 13). The effect size was found to be  $f^2 = 0.29$ . The second model (RE, CE) significantly predicted levels of quality of life,  $R^2 = .29$ ,  $R^2_{adj} = .28$ ,  $F(1, 132) = 11.93$ ,  $p < .001$ ; thus, this model accounted for 28% of the variance in levels of quality of life. The effect size was found to be  $f^2 = 0.41$ . The third model (RE, CE, NMAS) significantly predicted levels of quality of life,  $R^2 = .31$ ,  $R^2_{adj} = .29$ ,  $F(1, 131) = 4.00$ ,  $p = .047$ ; thus,

this model accounted for 29% of the variance in levels of quality of life. The effect size was found to be  $f^2 = 0.45$ . Thus, in the final model, restrictive emotionality accounted for 22% of the unique variance, CES for 6%, and NMAS 2%. The biggest and most important predictor in the final model is therefore restrictive emotionality. NMAS should be taken into account with caution, due to its relatively small contribution; however, it should be noted that it is still a significant contribution. Tolerance was greater than .1 for each of the predictors in the final model (.793, .958, and .777, respectively) and the VIF was less than 5 for each predictor, indicating that multicollinearity was not a factor.

Table 13. Summary for predicting quality of life including subscales of MRNI-R.

<b>Models</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>R<sup>2</sup><sub>adj</sub></b>	<b>ΔR<sup>2</sup></b>	<b>F<sub>chg</sub></b>	<b>p</b>	<b>df<sub>1</sub></b>	<b>df<sub>2</sub></b>
1.	.47	.22	.22	.22	38.45	< .001	1	133
2.	.54	.29	.28	.06	11.93	< .001	1	132
3.	.56	.31	.29	.02	4.00	.047	1	131

Model 1: RestrictE, Model 2: RestrictE, CES Model 3: RestrictE, CES, NMA

Table 14. Coefficients for predicting quality of life including subscales of MRNI.

<b>Models</b>	<b>B</b>	<b>β</b>	<b>t</b>	<b>Bivariate r</b>	<b>Partial r</b>
1. RestrictE	-4.97	-.47	-6.20	-.47	-.47
2. RestrictE	-5.11	-.49	-6.63	-.474	-.500
CES	-0.34	-.25	-3.45	-.228	-.288
3. RestrictE	-4.34	-.41	-5.07	-.474	-.405
CES	-0.30	-.23	-3.02	-.228	-.256
NMA	-3.51	-.17	-2.001	-.380	-.172

## **CHAPTER IV**

### **DISCUSSION**

In this chapter, the various findings based on the original hypotheses will be discussed including implications, suggestions for future research, and limitations. Hypothesis one, that adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia, would predict significantly worse general mental health outcomes in veteran populations who have been deployed to active war zones, was partially confirmed. Age was not found to be a significant predictor. This is partially consistent with the literature; Jakupcak and colleagues (2006) is the only study that indicated that age was a predictor of PTS in a veteran sample that involved masculinity measures. In the Jakupcak study, the younger someone was, the more likely it was that they endorsed PTSD. Similarly, Levant (2006) noted that in civilian samples, age is a predictor of higher levels of PTSD (the younger one is, the more likely one is to acquire symptoms of PTSD). It should be noted though that the sample in the current study had a mean age of 29, which may have impacted the results in this case as the sample was relatively older.

The model that predicted the greatest levels of post-traumatic stress was one that combined combat exposure, normative male alexithymia, and adherence to masculinity ideology. In the model, combat exposure accounted for the greatest amount of variance



followed by normative male alexithymia, and adherence to masculinity ideology. As such, the greater levels of combat exposure and levels of normative male alexithymia a person endorsed, the greater levels of post-traumatic stress were reported. Interestingly, level of adherence to traditional masculinity ideology had a negative relationship; that is, the more someone endorsed masculinity ideology, the less PTS symptoms they endorsed. This will be discussed further later in this section. Past research has indicated that combat exposure by itself is a significant predictor of post-traumatic stress (Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007). This was found in this study as well; however, the combined model of three predictors accounted for a greater level of variance than combat exposure by itself. As such, this finding is consistent with current research although it adds to it by finding that combat exposure combined with higher levels of normative male alexithymia predicts higher levels of PTS than does combat exposure by itself. And, as a model, combat exposure, normative male alexithymia, and adherence to traditional masculinity ideology accounts for more variance than does a model with only combat exposure (See Table 1).

As the MRNI has several subscales, the regression analyses were run again using the various subscales of the MRNI (avoidance of femininity; negativity toward sexual minorities; self-reliance; aggression; dominance; non-relational sexual activity; and, restrictive emotionality) and the other predictors to investigate which subscale(s) of the MRNI accounted for the variance in PTS. Interestingly, five models emerged; these models mirrored previous results, only now a few subscales replaced the total MRNI score in each model thus indicating that these subscales were what accounted for the variance. These were combat exposure, and the subscales of avoidance of femininity,

level of normative male alexithymia, restrictive emotionality, and dominance from the MRNI-R. In the model, higher combat exposure, levels of normative male alexithymia, and dominance indicated greater levels of post-traumatic stress, whereas avoidance of femininity and restrictive emotionality had negative relationships. As such, the more avoidant of femininity someone was, the less post-traumatic stress he reported; and, similarly, the more emotionally restrictive someone was, the less PTS he endorsed. The literature on PTSD suggests that women are twice as likely to acquire and maintain PTSD because of their ability to better remember emotional events through an emotional prism; that is, emotional processing (Felmingham & Bryant, 2012). As such, perhaps men who are avoidant of femininity are less likely to acquire and maintain symptoms of PTSD because of their relative difficulty recognizing and remembering emotionally traumatic events (such as seeing a friend wounded in battle). It may also be that some of these men simply do not experience violence as traumatic to the same extent as others due to their training. This prism may be explained by the Armed Forces' "warrior culture"; that is, a culture that values strength, resilience, courage, and personal sacrifice (Bryan & Morrow, 2011). In this culture, which espouses elitism and superiority, there is a cultural norm to exude mental toughness, master stress and to discard personal feelings of hurt. Thus, some explanations for this phenomenon may be that some of these men may choose to not report symptoms of PTS as that would be an admission of weakness, that they do not experience the symptoms because of their training as well as subsequent reinforcement throughout deployment (which would be a function of restrictive emotionality; Bryan & Morrow; Mental Health Advisory Team [MHAT]-V, 2008). This would occur on a relative basis or continuum, as the results do not suggest that men who are more

emotionally restrictive or avoidant of femininity are free of PTS symptoms, merely that there is a negative relationship (where avoidance of femininity and emotional restrictiveness negatively predicted PTSD). As such, the warrior culture may serve as a partial protective factor against PTS for some men; this may also have other unintended consequences which will be discussed later in this section as well as the “implications and suggestions for future research” section (Bryan & Morrow; Garcia et al., 2011). Finally, adherence to the warrior culture may also lead to greater avoidance of femininity as it may be viewed as sign of weakness to be viewed as “feminine”.

The other novel finding was that the more dominance a person endorsed, the higher the level of PTS he had. This finding should be taken into account with caution as, in the final model to which it was included, dominance added relatively little variance although it was still statistically significant. In this case, the questions that formed the subscale of dominance mostly involved being in control over others; for instance, “Men should be the leader in any group,” “A man should provide the discipline in the family,” and, “Men should make the final decision involving money”. It may be that these men, due to their level of dominance, would be more likely to take more risks in combat (e.g., seek out more dangerous situations). They might also not have had the same level of camaraderie with others in their unit due to their possible need to dominate others (and, as such, might not be able to make connections or friendships). Connectedness and social relationships have been shown be predictors of successful reintegration into society after deployment (Tanielian & Jaycox, 2008). As such, persons who have more and more positive social relationships may report less PTS symptoms and more successful transitions than those who have dominant characteristics. This may also serve to explain

why men who endorsed higher levels of normative male alexithymia reported higher levels of PTS; that is, whereas those who endorsed restrictive emotionality to a higher degree may actively choose to ignore such symptoms, those with higher levels of normative male alexithymia may not be able to understand their feelings and thus not be able to accurately understand why they are feeling the way they are. Additionally, they may also not have the same level of social connectedness required to form social relationships upon reintegration. As social connectedness was not directly measured in this study, it would be an important concept to include in future studies to see if it can help moderate restrictive emotionality and/or normative male alexithymia. This finding should be into account with caution, due the similarity of the two constructs (restrictive emotionality and normal male alexithymia) as well as the relatively small addition of variance seen when going from Model Three to Four.

Hypothesis Two, that adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia would predict fewer help-seeking behaviors in veteran populations that have been deployed to active war zones was partially confirmed. Similarly to the first hypothesis, age was not found to be a significant predictor. Combat exposure was also not found to be a significant predictor. Two models emerged; the model that accounted for the greatest variance was one that combined level of adherence to traditional masculinity ideology and normative male alexithymia. Again, because the MRNI was a significant predictor, a new multiple stepwise regression was conducted to investigate which subscale(s) accounted for the variance in the model in place of the total MRNI score. This regression included the aforementioned subscales, as well as the other

predictors of age, normative male alexithymia, and combat exposure. Much like with Hypothesis One, new models emerged but they mirrored the previous results; that is, models were identical, only now some subscales of the MRNI-R in lieu of the overall score.

The model that accounted for the greatest amount of variance was one that combined the subscales of restrictive emotionality and dominance from the MRNI-R, and level of normative male alexithymia. This means that the greater levels of restrictive emotionality, dominance, and normative male alexithymia someone endorsed, the less positive attitudes he had to seeking professional mental health help. The first two findings are consistent with research; that is, if someone is more emotionally restrictive and/or endorses more male alexithymia, he would be less likely to have, on a continuum, positive attitudes towards seeking professional mental health help (Addis & Mahalik, 2003; McCarthy & Holliday, 2004; Levant, 2009; Smith, Tran, & Thompson, 2008). The subscale that measures restrictive emotionality in this case is based on questions such as, “being a little down in the dumps is not good reason for a man to act depressed,” and “men should be detached in emotionally charged situations”. This means that a man endorsing this subscale most likely would have a relatively more negative attitude (as compared to someone who does not) towards seeking help and minimize feelings of sadness or other mental discomfort which would also be consistent with the findings in hypothesis one; that is, that although these men may have relatively negative attitudes towards seeking professional mental health help, this may also be a function of the fact that they do not experience high levels of PTS.

It may also be that these men, because of their high adherence to traditional masculinity ideology as well as adherence to the “warrior culture”, also view seeking help as an admission of weakness and thus feel compelled to report less positive attitudes towards seeking help (Bryan & Morrow, 2011; Mental Health Advisory Team [MHAT]-V, 2008). In terms of explaining why both the restrictive emotionality subscale of the MRNI-R and the NMAS were found to be significant predictors of fewer help-seeking behaviors, this author hypothesizes that the difference between endorsing restrictive emotionality and normative male alexithymia is that men who endorse that latter most likely will have a hard time recognizing and understanding feelings (and thus not feel compelled to get help for a non-existing problem), whereas the former understand that they feel mental discomfort but chose to minimize or ignore them. Dominance was found to also be a predictor of negative attitude towards seeking professional psychological help; much like in hypothesis one, this may be explained by the fact that these men may not feel inclined to have positive attitudes towards any form of help due to their need to feel in control.

Hypothesis Three, that adherence to more traditional gender roles as compared to less traditional ones on a continuum, combined with age, level of combat exposure, and normative male alexithymia would predict less successful post-deployment reintegration (quality of life) of veterans into civilian life, was partially confirmed. Three models emerged: the one that accounted for the greatest amount of variance combined level of adherence to traditional masculinity ideology, normative male alexithymia, and combat exposure. As such, again, age was not a predictor of quality of life after reintegration. Furthermore, as level of adherence to traditional masculinity was a predictor, it was

decided to once again run the same multiple regression and include the various subscales of the MRNI but exclude the total score. In this case the results mirrored the ones found in the first multiple regression except that the subscale of restrictive emotionality replaced the overall MRNI total score; thus, it was what accounted for the variance and not a combination of the various scales or the total score. To summarize, the model that amounted for the greatest amount of variance included restrictive emotionality, combat exposure, and normative male alexithymia (See Table 11). And, again, these relationships were negative; higher levels of restriction of emotionality, normative male alexithymia, and combat exposure predicted lower quality of life.

Taking the results of Hypothesis Two into account (higher restriction of emotionality and normative alexithymia predicted more negative attitudes towards help-seeking attitudes) it would make sense that someone who has a negative attitude towards seeking professional help would experience a lower quality of life than someone with a more positive attitude. Furthermore, taking the results of hypothesis one (that higher levels of normative alexithymia and combat exposure predicted higher levels of PTS) as well as current literature (Baker et al., 2009; Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007; Hoge, Auchterlonie, & Milliken, 2006; Vogt et al., 2011) into account, it does make sense that someone who has seen more combat exposure would have a lower quality of life after returning to civilian life. That is, persons who have relatively less positive attitudes towards seeking professional psychological mental help and who have seen combat would experience lower quality of life than those who do not endorse higher restriction of emotionality, normative male alexithymia, and who have experienced less combat exposure. They would as such face the double bind of having relatively negative

views of psychological treatment as well as also facing higher levels of PTS to begin with as compared to those who do not endorse said scales to the same extent. Finally, this also lends some credence to this author's discussion above of possible reasons why veterans who were avoidant of femininity and had restrictive emotionality reported fewer symptoms of PTS; that is, in this case, restrictive emotionality predicted a lower quality of life which would be consistent with the suggestion that some of the veterans are misrepresenting or underreporting their symptoms of PTS. It should be noted that this is simply one possible explanation and that there may be other explanations as to why those who endorse lower levels of PTS may still have lower quality of life than those who do not (social connectedness, income, family relations, etc.). The aforementioned outcome variables (the different outcome variables in the various hypotheses) were not measured together and therefore constitute a speculation on part of this author. Finally, normative male alexithymia as part of the model should be taken into account with caution due to its construct similarity with restrictive emotionality; it should be noted that normative male alexithymia and restrictive emotionality were moderately correlated in this sample. Finally, it should also be stated that normative male alexithymia added relatively little variance in the final model, although the model was still statistically significant.

### **Limitations**

There are several limitations in this study. The study was conducted online and all participants could therefore complete the various scales anonymously. This means that causal relationships cannot be assumed as veterans may have minimized or exaggerated their responses. That is, regression models do not provide causality and overall this study lacks control for social desirability (e.g., not wanting to appear weak). Another limitation



is that it is hard to ascertain how and where most participants were recruited, as word of mouth may have contributed to data collection; however, because most recruitment was done through V.A. certifying officials at various universities, it can be assumed that most of the participants in the sample were college students. This was also confirmed in the descriptive statistics in that most, if not all, of the participants noted that they had some college education. As such, one could conclude that the sample was one in which most participants were to a degree, high-functioning individuals. It is therefore hard to say that the findings would also generalize to less functioning veterans.

Furthermore, the sample was primarily White and predominantly heterosexual, meaning that the findings may not be generalized to more diverse veterans. In this sample, zero participants identified as gay or bisexual and only 3.4% identified as African American. In 2011, 16% of enlisted men on active duty identified as African American according to Pew Research Center (2011). Although the sample was geographically diverse, most participants came from smaller states and primarily from smaller towns and cities, which means that it may be difficult to generalize the findings to veterans who grew up in large, heavily populated urban areas. Other limitations included the ratio of enlisted versus commissioned officers; that is, the sample primarily consisted of former enlisted members of the Armed Forces and a very small amount of commissioned officers. As training for officers inherently is more focused on leadership and problem-solving skills, one can conclude that it is hard to say that the findings in this study would also apply to commissioned officers.

There is a possible confounding effect in that it is hard to ascertain when participants were discharged from the military; that is, someone who was recently

deployed may have more severe PTSD symptoms as compared to someone who was discharged years ago and who may have received mental health treatment. Time of discharge and services received since discharged were not assessed in this study. As such, some participants may have had higher levels of PTSD in the past but may now be largely free of symptoms. Furthermore, this also applies to quality of life in that this may have changed in both negative and positive directions as time since discharge increase. As such, this is also an inherent flaw in using anonymous participants in that time cannot be controlled. Another confound is that participants were sampled after but not before their deployments, meaning that there no way to control for how their adherence to masculinity ideology may have changed during deployments nor whether participants had encountered trauma prior to their military service.

### **Implications for Service Delivery and Suggestions for Future Research**

The implications for the findings in this study are numerous. Past research has indicated that the more exposure to combat soldiers experience, the higher levels of PTS they tend to report (Baker et al., 2009; Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004; Vogt et al., 2011). This in itself means that for reintegration, various levels of government help can or should be geared towards identifying those who have seen high levels of combat and thereafter allocate resources (e.g., mental health services, case management, etc.; Tanelian & Jaycox, 2008). Although resources have been allocated towards those who have screened positive for various mental health disorders, the screening after deployment (e.g., debriefing) does not take into account that some service members may choose not to report symptoms nor does it take into account those who are unable to identify or label their feelings of hurt. As such, military and civilian agencies,

whether state or federal, may need to anticipate that traditional screenings and outreach (e.g., marketing) may need to be specifically tailored towards a class of individuals in which recognizing feelings of hurt is an admission of weakness and failure.

This study adds to the literature in that it identifies factors beyond combat exposure as predictors of PTS and quality of life in those service members who transition from active duty to civilian life. As such, this current study also found that combat exposure by itself predicts higher levels of PTS, but also adds to the literature in that it suggests that combat exposure together with higher levels of normative male alexithymia predict higher levels of PTS. In terms of service delivery by civilian and military agencies, this means that both outreach as well as services geared to these individuals should be tailored to someone who has difficulty identifying and labeling emotions. While one study (Bryan & Morrow, 2011) has tried novel ways of marketing mental health services to service members in terms of using strength-based messages based on existing warrior culture, none have specifically tried to tailor outreach and services specifically using a strategy comprised of messages geared towards those with difficulty identifying and labeling emotions. This may involve describing symptoms or emotions in non-traditional ways (e.g., not using clinical language) for outreach but also to include traditional ways of treating alexithymia (Levant, Halter, Hayden, & Williams, 2009). This could involve developing new tools for screening for PTS that may not involve traditional language; that is, constructing an instrument that takes into account that some service members may be unable to identify and accurately label emotions. This tool could also be used to screen current active duty members as part of regular medical check-ups throughout their service. Beyond screening tools, it could also be used to change the way

in which services are marketed by using the example set by Bryan and Morrow (2011) and adding nomenclature that takes into account that some service may not respond to emotion-based language. This would add to the current literature in that it would go beyond simply suggesting transition support for veterans and their families (e.g., as suggested by Demers), and add novel ways for mental health screening and outreach, and tailor services towards military culture with the inclusion of non-emotion based language.

The current study indicated that restriction of emotion as well as a tendency towards limited emotional processing may serve as protective factors and/or as a form of inoculation against PTS. This fits with the literature that has shown that the warrior culture within the Armed Services can have both positive as well as negative consequences (Bryan & Morrow, 2011, Garcia et al., 2011). This culture pressures service members to minimize and restrict emotions which this study suggests can serve as an inoculation against PTS, but it also means that those who do experience PTS may choose to ignore signs of PTS and not seek help. Seeking help from civilian or military agencies is highly stigmatized and tends to isolate service members as they have to temporarily leave their units, admit to weakness, and thereby feel isolated from their units/comrades (Bryan & Morrow). As such, while restriction of emotion may help to inoculate some against PTS, it may also serve to enhance and add to levels of PTS in others; that is, while some may successfully, inadvertently or not, restrict emotions during deployment to combat theaters and as such reduce future levels of PTS, it may also mean that those who do not successfully use restriction of emotion in said manner may end up experiencing PTS and perceive reaching out for help as failure. The combination of these factors suggests that training prior to deployment should help focus and differentiate

types of stress and emotions so that inoculation itself does not hinder help-seeking behaviors and increase stigma. This may include research to identify the various types of stress and stressors that service members may encounter during basic training and deployment and thereafter modifying their training so that it may help to better prepare them for their possible challenges. This training would have to be constructed in careful ways taking into account the pervasive warrior culture that does not promote seeking help; that is, while the training helps the individual service member to identify stress, stressors, emotions and hurt, it should also not promote a culture in which seeking help from other service members or superiors is seen as an admission of weakness and something that is frowned upon or non-normative. More research is therefore needed in terms of how to promote resilience and strength in a service member while not promoting stigma surrounding help-seeking behaviors. Thus, research is needed on how to both promote resiliency training prior to deployment as well as how to modify outreach and service delivery post deployment for veterans and active duty members of the Armed Services.

In regards to the results that indicated that restrictive emotionality and avoidance of emotional processing may serve as protective factors, there is also the possibility that some of these individuals, because of their training to minimize feelings and emotions, may be underreporting their symptoms of PTS. In terms of suggestions for service delivery and research, they would be the same as in the previous paragraph; that is, promoting resiliency training pre-deployment that separates resilience from avoidance and minimizing-behaviors as well as having non-traditional approaches to outreach and service delivery post-deployment.

A potentially more troubling implication of this inoculation process is also tied into the warrior culture; that is, that violence and carnage has been normalized to be something benign. It may also be that some service members entered the Armed Forces with a level of morality or culture similar to that of the warrior culture (Cohrs, Moschner, Maes, & Kielmann, 2005). Their attitude toward carnage and violence may therefore be unlike that seen in the civilian population in general. This mindset, no matter if it was developed in or exacerbated during training, would ultimately be reinforced during deployment and subsequent events such as promotions, homecomings, where our society rewards this type of behavior in our service members (Bryan & Morrow, 2011). Although this may seem positive at first, this also means that the possibility for “mission creep” may increase in terms of justifying increasing levels of violence beyond stated rules of engagement. This means that these service members may not care about the level of force they apply to enemy combatants or civilian populace as they see themselves as above others in addition to a general lack of empathy. In fact, it may not even be that this is seen as lack of empathy. Instead, it would be an example how an individual is helping his unit and country. This may serve to explain past abuses that have been seen in both the Afghan as well as Iraqi combat theatres (Mestrovic & Romero, 2012; Rubenstein, Pross, Davidoff, & Lacopino, 2005). This can also be seen in historical societies where militarism and obedience were promoted such as 19<sup>th</sup> and 20<sup>th</sup> century Prussia and subsequently in the Nazi state, and Imperial Rome and early 20<sup>th</sup> century Italy during Mussolini (Rafter, 2008). These societies also had professional militaries in which their societies heavily reinforced obedience and rewarded brutal, violent behaviors if they served the purpose of its Armed Services and its leaders. As such, whereas our

professional Armed Forces have been very successful in what they were designed for, there may also be long-term, unintended consequences. As this is a hypothesis, future research is needed to better understand how morality and concern for others change after basic training, deployments, and subsequent events. Additionally, it may also be beneficial to investigate whether the professional nature of the Armed Forces and the warrior culture may lead to increased aggression in civilian life after deployments.

As was previously discussed, higher levels of dominance predicted higher levels of PTS. This author argued that this may be a function of increased risk-taking in combat (and thus more combat exposure) and more difficulty in forming social relationships within the combat unit as well as in civilian life post-deployment (Tanelian & Jaycox, 2008). Implications for this interpretation of the findings are that while aggression is fostered and reinforced during training, it may also serve to reinforce behaviors that are adverse overall (e.g. resulting in more PTS). Thus, more research is needed in order to investigate how training can help foster “positive” aggression vis-à-vis enemy combatants while still maintaining care for allied service members as well as maintaining camaraderie within the unit. This may also involve investigating how social connectedness and outreach to others may impact service members who are transitioning to civilian life; that is, while some of these members feel connected to their branch of service as well fellow service members, their transition to civilian society may be a culture shock and thus induce feelings of disconnectedness and feelings of meaninglessness (Demers, 2011; Mallow, Williams-Gray, Kelly, & Alex, 2011). This has been seen in the current body of literature where service members describe not feeling understood by civilians and feel separate from society as a whole. Again, our professional

Armed Forces serve to enhance the feelings of being special and as being part of an elite society separate from civilian life (Bryan & Morrow, 2011). When encountering civilian life, customs and behaviors of civilians may seem foreign, meaningless, and disrespectful which may serve to promote the feelings of separateness in some veterans (Demers, 2011).

Investigating these factors (e.g., having professional Armed Forces in a civilian society and whether it creates and maintains a separateness between members of the Armed Forces and civilian society) may be important not only for individual service members but also for society as a whole in terms of how we treat our Armed Forces and the members thereof. As part of such a research project, it would also be needed to take into account how aggression and care for others can be fostered simultaneously, and, also, using restrictive emotionality as a covariate. On a larger scale, research may be needed to understand how maintaining a professional armed force impacts the force(s), society, and the individual members of said forces. On a smaller scale, this may involve investigating how service members can build and maintain connection to civilian society and groups of support therein; this may include having programs that promote, enhance, and make it easier to maintain connections with family, significant others, and friends through more personal time and access to technology that makes such connections easier (e.g., Internet, satellite phones, shorter deployments and additional leave time). It may also involve pre-deployment services in which service members are encouraged to think about how they can better foster contact with civilian members of society. It may also involve family services in which extended parts of the family are present throughout the deployment cycle (when feasible as determined by military officials). This would be similar to and an



expansion of Demer's (2011) suggestion of more family integration throughout the deployment cycle. This would help to inform and prepare the family as well as the individual service members how to better communicate and maintain positive, healthy relationships. Although there have been some studies that have investigated the deployment cycle and the impacts thereof, none have tried to investigate how a proactive approach may impact both the service members and their families; that is, most research has tried to correct problems after adverse events have happened rather than investigate how proactive services may have a positive impact after deployment (Sayers, 2011).

As was previously discussed about Hypothesis Two, the findings are mostly consistent with past research. That is, the greater the levels of restrictive emotionality, normative male alexithymia, and dominance someone endorsed, the less positive attitudes towards seeking professional psychological help he would have. Implications and suggestions for future research are similar to those for Hypothesis One; that is, service delivery and outreach pre- and post-deployment may need to be tailored taking these findings into account. Specifically, if someone chooses to minimize feelings of hurt or fails to identify and label them, they tend to, on a continuum, view seeking psychological help less positively. And, similarly, the more dominant someone is, the less positively someone views receiving psychological help. Pre-deployment training may have to factor in how to minimize stigma surrounding acknowledging feelings of hurt as well as training that helps service members identify and accurately label emotions. Some research has indicated that a strength-based approach works well in doing so (Bryan & Morrow, 2011). This was achieved by focusing on promoting mental health services by using nomenclature that served to promote increased combat readiness (for instance,

labeling mental health services as “performance enhancement”). This also serves to reduce stigma as in this case a service member would simply be doing their jobs by receiving services.

Implications for Hypothesis Three, while taking into account Hypothesis Two, are that veterans who have restrictive emotionality, normative male alexithymia, and combat exposure are less likely to have positive attitudes towards seeking professional psychological help and have a lower quality of life. As such, suggestions for current service delivery as well as future research are the same as for Hypotheses One and Two.

### **Summary**

Since the beginning of Operation Enduring Freedom, more than 1.8 million American troops have deployed overseas to combat theatres in both the latter conflict as well as Operation Iraqi Freedom, marking more than 10 years of continuous war and repeated deployments for individual service members. These conflicts have fundamentally been different from past wars in American history due to the creation of a professional service in which deployments have been longer and with more repeated deployments (Belasco, 2007; Bruner, 2006; Hosek, Kavanagh, & Miller, 2006).

Advancements in body armor, medical technology and service delivery, as well as military transportation have led to fewer casualties (Regan, 2004; Warden, 2006). While individual service members have survived at greater rates than past wars, past and newer injuries and symptoms such as PTSD, TBI, depression and negative symptoms thereof such as substance abuse, homelessness, lost productivity, and medical costs have been exacerbated and inflicted large costs for both individuals as well as families and society

at large (Tanielian & Jaycox, 2008). Whereas past studies have investigated what constitutes successful reintegration to civilian society after overseas deployments such as positive homecoming receptions from friends, family, and society (Bolton, Litz, Glenn, Orsillo, & Roemer, 2002), service delivery in V.A. hospitals (Maguen et al., 2011), treatment of PTSD (Tsai et al., 2012), few have investigated how internal attitudes and beliefs may impact attitudes towards seeking professional psychological help, as well as quality of life for veterans who have been deployed to combat zones in OEF and OIF. Recognizing that the Armed Forces indoctrinate, reinforce, and promote a warrior culture in which traditional masculine values such as self-reliance, minimizing of pain, and non-expression of feelings are highly regarded, this study set out to investigate how adherence to traditional masculinity ideology, normative male alexithymia, age, and combat exposure may predict attitudes towards seeking mental health services, overall quality of life, and mental health.

The findings suggested that higher levels of combat exposure and normative alexithymia predicted higher levels of PTS. It was also suggested that avoidance of femininity (emotional processing) and restrictive emotionality may serve as a form of inoculation or protective factors against PTS; however, subsequent findings indicated that restrictive emotionality also predicted less positive attitudes towards seeking professional psychological help as well as a lower quality of life. Thus, the participants who had more restrictive emotionality may have underreported their levels of PTS; however, avoidance of emotional processing is still suggested as a protective factor against PTS. The findings also indicated that combat exposure and normative alexithymia predicted higher levels of PTS than combat exposure by itself, thereby adding to the current literature. A dominant

personality or characteristics thereof were also found to be significant predictors of higher levels of PTS as well as less positive attitudes towards seeking professional psychological help.

In terms of attitudes towards seeking professional psychological help, it was found that more restrictive emotionality, adherence to normative male alexithymia, and dominant characteristics were significant predictors of lower levels thereof. Restrictive emotionality, higher levels of alexithymia, and combat exposure were found to significantly predict lower levels of quality of life.

Taken all of these findings into account, the implications are immense in terms of understanding the relationship how masculinity ideology, normative male alexithymia, and combat exposure can affect the process of reintegration for our nation's veterans. In terms of service delivery, the current findings highlight the need to tailor pre-deployment training as well as service delivery post deployment as well as outreach efforts. Finally, the support for the hypotheses in this dissertation provide impetus for further research in regards to the interaction of the warrior culture, traditional masculinity, resiliency and quality of life for those who have been deployed to active war zones.

## **APPENDICES**

Appendix A  
Demographics Sheet

**DEMOGRAPHIC INFORMATION**

**INSTRUCTIONS: Check the answer that most closely reflects your identity. When longer responses are called for, please enter information in the appropriate space.**

Sex

- Female
- Male
- Other Identity: \_\_\_\_\_

Gender Identity

- Female
- Male
- Other Identity: \_\_\_\_\_

Current Age: \_\_\_\_ (Options listed in years)

Racial Identity:

- African American/Black/Caribbean/African descent
- Arab Descent
- Asian American/Asian/South Asian/Pacific Islander descent
- European American/Caucasian/White
- Hispanic or Latina/o
- Native American/Indigenous
- Native Hawaiian or Other Pacific Islander
- Other, including biracial or multiracial (Please specify: \_\_\_\_\_)

Current spiritual or religious beliefs:

- Agnostic (believe that it is unknowable whether God exists)
- Atheist (do not believe in the existence of a higher power/God)
- Buddhist
- Christian (Including Catholic or Protestant)
- Hindu
- Islam
- Jewish
- Protestant
- Other, please specify: \_\_\_\_\_

Of the following, the sexual orientation label that most closely reflects my current identity is:

(Please choose the label that you most frequently tell other people when you come out.)

- Bisexual
- Gay (Homosexual)
- Lesbian (Homosexual)
- No Label for Sexual Orientation
- Queer
- Questioning
- Straight (Heterosexual)

Please list any other word(s) that you use to describe your sexual orientation.

---

Current relationship status:

- Divorced
- Married/Legal Union
- None/Single
- Romantic or Sexual Dating Relationship (regardless of label)

Highest level of education completed:

- no high school
- some high school
- high school graduate
- some college
- college degree
- master's degree
- doctoral or other professional degree

Current state of residence, if living in the U.S.

Current *personal* income:

- \$0 to \$10,000
- \$10,001 to \$30,000
- \$30,001 to \$60,000
- \$60,001 to \$90,000
- \$90,001 to \$150,000
- \$150,001 to \$250,000
- \$250,001 and above

Where were you deployed overseas? Please check every option that applies.

- Operation Enduring Freedom

- Operation Iraqi Freedom
- Operation Desert Storm.
- Kosovo War
- Bosnia

If none of the above, please type location of your overseas deployment.

What was your rank, in terms of pay, upon leaving full-time active duty?

In which branch of the Armed Forces did you deploy?



Appendix B  
Consent Form

**INFORMED CONSENT**

IC 701-B  
05/09/11

**THE UNIVERSITY of NORTH DAKOTA**

**How do men reintegrate after deployment?**

**Nils-Erik Juanto, M.A.**

**(509) - 413-8745**

**Dept. of Counseling Psychology & Community Services**

You are invited to participate in this research because you are at least 18 years of age, male, and have served in either Operation Enduring Freedom, Operation Iraqi Freedom, or both. Please take your time in making your decision as to whether you would like to participate. If you have any questions at any time, please ask.

A large number of men and women have served in either Operation Enduring Freedom or Operation Iraqi Freedom; this study hopes to study the different ways in which service members successfully reintegrate to civilian society after deployment.

Approximately 130 people will be invited to participate in the study. Your participation in the study will last approximately 30 minutes. You can take the survey (questionnaire) in person or on the internet.

You can choose to participate completely anonymously or choose to enter some identifying information which will allow you to participate in a lottery. The lottery will have four prizes of \$40 to a major local retailer. If you choose to participate in the lottery, you will be assigned a 4-digit code to safeguard your confidentiality. You may skip any question on the questionnaires.

You may experience frustration that is often experienced when filling out questionnaires. Some questions may be of sensitive nature, and you may become upset as a result. If, however, you become upset by questions, you may stop at any time or choose not to answer a question. Participation in this study may also involve unforeseen risks. If you would like to talk to someone about your feelings about this study, you are encouraged to contact the University of North Dakota Counseling Center, their number is: 777-2127.

You will not personally benefit from this study. However, we hope that in the future, other people may benefit from this study as it may lead to an understanding of how service members can integrate to civilian society after active duty more successfully.

There is no cost involved in participating in this study. You will not be paid to participate in this study. The University of North Dakota and the research team are receiving no payments from other agencies, organizations, or companies to conduct this research study.

The records of this study will be kept private to the extent permitted by law. In any report about this study that might be published, you will not be identified. Your study record may be reviewed by Government agencies, and the University of North Dakota Institutional Review Board. Any information that is obtained in this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a 4-digit coding procedure; questionnaires will be filed and locked away in Montgomery Hall. Only Nils-Erik-Erik Juanto and his academic adviser Dr. David Whitcomb will have access.

Your participation is voluntary. You may choose not to participate or you may discontinue your participation at any time without penalty or loss of benefits to which you are otherwise entitled. Your decision whether or not to participate will not affect your current or future relations with the University of North Dakota or any class that you may be currently taking, or may be planning to take.

### **CONTACTS AND QUESTIONS?**

The researcher conducting this study is Nils-Erik Juanto, M.A. You may ask any questions you have now. If you later have questions, concerns, or complaints about the research please contact Nils-Erik Juanto during the day and at (509) 413-8745. Or, you may contact Dr. David Whitcomb at 701-777-3738.

If you have questions regarding your rights as a research subject, or if you have any concerns or complaints about the research, you may contact the University of North Dakota Institutional Review Board at (701) 777-4279. Please call this number if you cannot reach research staff, or you wish to talk with someone else.

Your signature indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study. You will receive a copy of this form.

Subjects Name: \_\_\_\_\_

\_\_\_\_\_  
Signature of Subject

\_\_\_\_\_  
Date

***(Optional)***

***I have discussed the above points with the subject or, where appropriate, with the subject's legally authorized representative.***

\_\_\_\_\_  
***Signature of Person Who Obtained Consent***

\_\_\_\_\_  
***Date***

## Appendix C Recruitment Message

Dear Veteran,

Have you been deployed to an overseas? Did you get what you needed when you returned to civilian life? This project is created to investigate what predicts a healthy reintegration into civilian life after your tour is completed, and is conducted by individuals who are working to address combat tours and transition needs and rights of veterans and service members.

We would like you to answer a brief internet or paper questionnaire about your experiences from an overseas deployment. We are researchers who hope to find out what you need the most when you return from combat deployment and what predicts a successful reintegration to civilian life. Specifically, we are hoping that we can improve service delivery provided by various state and local agencies to veterans who have experienced combat in overseas deployment and who are in the process of reintegrating to civilian society. Some of the questions will ask about your values, possible combat experiences, and quality of life.

Participating in this project will involve completing an internet questionnaire, which will likely take less than half an hour to complete. You can choose which one you prefer. If you choose to participate online, click on the link below. In return for your commitment of time, you can choose to enter a lottery of five \$50 prizes which will be drawn at the end of data collection (December, 2012). You can choose to participate anonymously; however, if you choose to participate in the lottery, I will need your name and address (these will be kept separate from your questionnaire answers- which means I will not be able to pair them with your name and address). You can participate by clicking on this link: [https://und.qualtrics.com/SE/?SID=SV\\_bkOmPUWe2Q4LKa8](https://und.qualtrics.com/SE/?SID=SV_bkOmPUWe2Q4LKa8)

Please give less than 25 minutes of your time to this important research initiative. If you have questions about the study, please contact Nils Juanto at [nils.juanto@gmail.com](mailto:nils.juanto@gmail.com). This project is housed in the Department of Counseling Psychology & Community Services at the University of North Dakota.

Thank you,

Appendix D  
The Combat Exposure Scale (CES, Keane et al., 1989)

Please circle the number above the answer that best describes your experience

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

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

2. Were you ever under enemy fire?

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

3. Were you ever surrounded by the enemy?

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

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

1	2	3	4	5
None	1-25%	25-50%	51-75%	75% or more

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

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

6. How often did you see someone hit by incoming or outgoing rounds?

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

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

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

Appendix E

Male Role Norms Inventory-Revised (MRNI-R; Levant et al., 2007): Two questions from each subscale in ascending order.

**Please complete the questionnaire by circling the number which indicates your level of agreement or disagreement with each statement. Give only one answer for each statement.**

<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Slightly Disagree</b>	<b>No Opinion</b>	<b>Slightly Agree</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>

---

**Avoidance of Femininity:**

6. Men should not wear make-up, cover-up or bronzer.

**1            2            3            4            5            6            7**

15. A man should prefer watching action movies to reading romantic novels.

**1            2            3            4            5            6            7**

**Fear and Hatred of Homosexuals:**

1. Homosexuals should never marry.

**1            2            3            4            5            6            7**

5. Men should not talk with a lisp because this is a sign of being gay.

**1            2            3            4            5            6            7**

**Self-reliance:**

4. A man should be able to perform his job even if he is physically ill or hurt.

**1            2            3            4            5            6            7**

12. Men should not borrow money from friends or family members.

**1            2            3            4            5            6            7**

**Aggression:**

10. Men should excel at contact sports.

1            2            3            4            5            6            7

34. If another man flirts with the women accompanying a man, this is a serious provocation and the man should respond with aggression.

1            2            3            4            5            6            7

**Dominance:**

2. The President of the US should always be a man.

1            2            3            4            5            6            7

21. A man should always be the boss.

1            2            3            4            5            6            7

**Non-relational Attitudes Towards Sex**

16. Men should always like to have sex.

1            2            3            4            5            6            7

20. A man should not turn down sex.

1            2            3            4            5            6            7

**Restrictive Emotionality:**

31. A man should not react when other people cry.

1            2            3            4            5            6            7

33. Being a little down in the dumps is not a good reason for a man to act depressed.

1            2            3            4            5            6            7

Appendix F  
The Quality of Life Scale (QOLS; Burckhardt & Anderson, 2003)

Please read each item and circle the number that best describes how satisfied you are at this time. Please answer each item even if you do not currently participate in an activity or have a relationship. You can be satisfied or dissatisfied with not doing the activity or having the relationship.

Delighted 7	Pleased 6	Mostly Satisfied 5	Mixed 4	Mostly Dissatisfied 3	Unhappy 2	Terrible 1
1. Material comforts home, food, conveniences, financial security .....	7	6	5	4	3	2 1
2. Health - being physically fit and vigorous .....	7	6	5	4	3	2 1
3. Relationships with parents, siblings & other relatives - communicating, visiting, helping .....	7	6	5	4	3	2 1
4. Having and rearing children.....	7	6	5	4	3	2 1
5. Close relationships with spouse or significant other.....	7	6	5	4	3	2 1
6. Close friends .....	7	6	5	4	3	2 1
7. Helping and encouraging others, volunteering, giving advice .....	7	6	5	4	3	2 1
8. Participating in organizations and public affairs.....	7	6	5	4	3	2 1
9. Learning- attending school, improving understanding, getting additional knowledge .....	7	6	5	4	3	2 1
10. Understanding yourself - knowing your assets and limitations – knowing what life is about .....	7	6	5	4	3	2 1
11. Work - job or in home. ....	7	6	5	4	3	2 1
12. Expressing yourself creatively .....	7	6	5	4	3	2 1
13. Socializing - meeting other people, doing things, parties, etc. ....	7	6	5	4	3	2 1
14. Reading, listening to music, or observing entertainment .....	7	6	5	4	3	2 1
15. Participating in active recreation .....	7	6	5	4	3	2 1

Appendix G  
Attitudes Towards Seeking Psychological Help Scale [ATSPPH-short form]  
(Fischer & Farina, 1995)

Please select the answers which best describe to which extent you agree or disagree with the statements below.

Disagree	Partly Disagree	Partly Agree	Agree
0	1	2	3

1. If I believed I was having a mental breakdown, my first inclination would be to get professional attention.
2. The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts.
3. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy.
4. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears without resorting to professional help.
5. I would want to get psychological help if I were worried or upset for a long period of time.
6. I might want to have psychological counseling in the future.\
7. A person with an emotional problem is not likely to solve it alone; he or she is likely to solve it with professional help.
8. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.
9. A person should work out his or her own problems; getting psychological counseling would be a last resort.
10. Personal and emotional troubles, like many things, tend to work out by themselves



Appendix H

Normative Male Alexithymia Scale (NMAS; Levant et al., 2004): Selected Questions

**DIRECTIONS:** Please use the scale below to indicate the extent to which you personally agree or disagree with each statement. There are no right or wrong responses.

---

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral or Undecided	Slightly Agree	Agree	Strongly Agree

---

1. If I am upset or worried I don't like to show it for fear that I will be seen as weak.

**1 2 3 4 5 6 7**

2. I feel comfortable expressing my affection to family members and friends.

**1 2 3 4 5 6 7**

3. It does not usually occur to me to deal with my stress by talking about what is bothering me.

**1 2 3 4 5 6 7**

4. I find it is very hard to cry.

**1 2 3 4 5 6 7**

5. When asked, I can easily give an account of what I am feeling.

**1 2 3 4 5 6 7**

6. I have no trouble putting my feelings into words and discussing them with others.

**1 2 3 4 5 6 7**

## Appendix I

PTSD Checklist-Military (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993).

Instructions: Below is a list of problems and complaints that veterans sometimes have in response to a stressful military experience. Please read each one carefully, and select the answer that describes your experiences.

Not at all	A little bit	Moderately	Quite a bit	Extremely
1	2	3	4	5

1. Repeated, disturbing memories, thoughts, or images of a stressful military experience?
2. Repeated, disturbing dreams of a stressful military experience?
3. Suddenly acting or feeling as if a stressful military experience were happening again (as if you were reliving it)?
4. Feeling very upset when something reminded you of a stressful military experience?
5. Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful military experience?
6. Avoid thinking about or talking about a stressful military experience or avoid having feelings related to it?
7. Avoid activities or talking about a stressful military experience or avoid having feelings related to it?
8. Trouble remembering important parts of a stressful military experience?
9. Loss of interest in things that you used to enjoy?
10. Feeling distant or cut off from other people?
11. Feeling emotionally numb or being unable to have loving feelings for those close to you?
12. Feeling as if your future will somehow be cut short?
13. Trouble falling or staying asleep?
14. Feeling irritable or having angry outbursts?
15. Having difficulty concentrating?
16. Being "super alert" or watchful on guard?
17. Feeling jumpy or easily startled?

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