

## ABSTRACT

LYNN, BRIGID MARY-DONNELL. Shared Sense of Purpose and Well-Being among Veterans and Non-Veterans. (Under the direction of Dr. Roger Mitchell.)

This study examined separation from the military and reintegration into community life as a cultural transition in which shared sense of purpose may play an important role. The military, especially within combat environments, socializes military personnel to value sense of purpose, commitment to mission, and loyalty to one's comrades (Caplin & Lewis, 2011; Demers 2011; Doenges, 2011; Early, 2011; Osran, Smee, Sreenivasan, & Weinberger, 2010). Upon leaving the military, Veterans often enter environments where these values of purpose and solidarity may not be as highly valued. The author hypothesized that having a shared sense of purpose would serve as a stronger predictor of well-being among Veterans than among non-Veterans.

*Method.* The study was a cross-sectional design, comparing Veterans and non-Veterans on well-being [i.e., Satisfaction with Life Scale (SWLS)], with predictors including stress, social support, coping, shared sense of purpose, and Veteran status (i.e., Veteran or not). Data were collected with an on-line survey via Amazon Mechanical Turk (MTurk, an online crowdsourcing website that can be used for data collection). All participants were male ( $N = 550$ ; Veteran  $n = 172$ ; non-Veteran  $n = 378$ ) between the ages of 21 to 73 ( $M = 34$ ,  $SD = 9.27$ ). The Veteran and non-Veterans groups were significantly different on several dimensions. Veterans were significantly more likely to have higher levels of depression, PTSD, and negative affect than non-Veterans. However, there were no significant univariate differences between the groups on well-being, stress, social support, and coping.

*Results.* Shared sense of purpose was significantly related to greater well-being, social support, and coping, and to less stress, depression, PTSD, and negative affect. Hypothesis 1 was

supported; regression analysis indicated that shared sense of purpose was a significant predictor of well-being even after controlling for stress, social support, and coping. The overall  $R^2 = .46$ ,  $F(4, 545) = 114.10$ ,  $p < .01$ , with shared sense of purpose uniquely explaining a significant, if small, percent of variance. Hypothesis 2 was not supported; regression analysis indicated Veterans status was not a significant moderator of the relationship between shared sense of purpose and well-being. In explaining well-being, shared sense of purpose was not a more powerful predictor for Veterans than for non-Veterans, with an overall  $R^2 = .46$ ,  $F(6, 543) = 77.89$ ,  $p < .01$ .

*Discussion.* Study strengths were a theoretical framework that approached reintegration as a cultural transition, the use of well-developed measures, and an innovative method for online sampling of Veterans. Limitations were the cross-sectional nature of the design, and sampling strategies that may have resulted in a restricted range in shared sense of purpose. In the future, shared sense of purpose could serve as a focus for further research and as a possible component of interventions.

Note. Throughout this paper the word “Veterans” will be capitalized, as is mandated by the Department of Veterans Affairs (Department of Veterans Affairs, 2010, p. ii).

Shared Sense of Purpose and Well-Being among Veterans and Non-Veterans

by  
Brigid Mary-Donnell Lynn

A dissertation submitted to the Graduate Faculty of  
North Carolina State University  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

Psychology

Raleigh, North Carolina

2014

APPROVED BY:

---

Dr. Kwesi Craig Brookins  
Chair of Advisory Committee

---

Dr. Roger Mitchell

---

Dr. Denis Gray

---

Dr. Joan Pennell

## **DEDICATION**

To my family, thank you for your constant love and support. There is no way for me to express exactly what it means to me.

To the military service members that I have had countless conversations with, thank you for sharing your thoughts and ideas about shared sense of purpose. I appreciated the much needed motivation to keep going. I hope to dedicate my professional career to this idea.

To the people who participated in this study, it couldn't have happened without you.

## BIOGRAPHY

Brigid Mary-Donnell Lynn's professional interests include the effective reentry of service organization members after service missions (e.g., military, humanitarian aid, and development personnel); the impact of the reentry process on Veterans' health; transitions associated with military careers; and access to disease / illness prevention and health promotion programs and care. Brigid's teaching, scholarship, and intervention experience have centered around these issues. She earned a BA in General Psychology from UNC-Wilmington, and then served as a Peace Corps Rural Health Educator in Haiti. Upon return from Haiti she attended UNC-Greensboro earning a MPH in Community Health Education. This experience served her well in her work as a Research Health Science Specialist at The Durham Veterans Affairs Medical Center on the Family Matters study, where she conducted motivational interviewing sessions with chronically ill Veterans.

Brigid's interest in developing research to understand issues of transition and health led her to graduate school at NC State, where she conducted research that examined factors predicting reentry experiences of students studying abroad. Brigid's dissertation research centered on the impact of shared sense of purpose on well-being among Veterans during times of transition from a cultural transition perspective. She argues having a salient shared sense of purpose and mission during military service and then transitioning to civilian environments where similar purpose is not easily achieved, leaves a gap that negatively impacts well-being. This line of research may inform how and when to intervene to help people ease the transitions that are associated with a military career.

It is her goal to pursue a program of research that examines shared and action-oriented sense of purpose as a distinct and meaningful construct; how shared sense of purpose may manifest in military communities (both within military and non-military environments); how shared sense of purpose impacts health and well-being (including stress and health behaviors); and how interventions may be designed to be more inclusive through the identification, maintenance, and actualization of a shared sense of purpose.

## ACKNOWLEDGEMENTS

I would like to thank my family and friends for the continuous love and support, I love you all so much. Henry you are an amazing partner, and I am so thankful for you and Charlie June. Having you two in my life has kept me balanced, all I had to do was imagine your faces and I was able to smile, even when all I felt like doing was crying. Mom and Dad, you have always helped me to believe in myself, and for that I am forever grateful. Thank you for the shoulders to cry on and helping calm me in moments when I was feeling the worst. Carin you are the greatest sister a girl could ask for, you have helped me in countless ways on all of my crazy journeys, and I hope I can become half the generous, caring, supportive woman you are. Cameron and Ben, you two have supported me in ways that you are probably not even aware of, one of the most beautiful things about you is that I know you are always there when I need you, I hope you know the same of me. Cassie you always know how to encourage me and help me remember what life is all about. I am so thankful I met you that first year of college, best thing I got from school is a best friend for life. Lee thank you so much for your love and support. Henry, Charlie June, and I couldn't have done it without you.

Thank you Amanda for being such a rock for me. I am so glad we have become such good friends. You blazed a path for me and helped to constantly move me forward when I didn't think I could do it anymore. Jess, I am so happy you came in to my life. Your passion has motivated me time and time again, and I am forever grateful for your support. Thank you to all the wonderful women in my cohort. I have felt your spoken and unspoken support numerous

times. I will always be grateful for you. Sarah, you were a great around the corner office mate, and thank you for all the support as I embarked on motherhood.

Thank you very much to my committee members. Roger, you have put so much work into this dissertation project. Thank you for your open door and the time and effort you put into my education. You started as my advisor and have become my friend. Dr. B, your thoughtful questions pushed me to think beyond my own boundaries. I appreciate your support and the talks that I was able to have with you that made me feel like a whole person, not just a student. Denis, your insight always helped me feel that I was making my researcher stronger, which helped me believe in myself. Joan, you have reinvigorated me numerous times. I am so thankful for you helping me to continually think through the concrete application of the research I was doing, that really is what is most important. You made me feel as if I did have something useful to offer that could potentially add to the world.

Thank you Cristina and Veronica, you two made my life easier through your hard work and dedication. You also helped me through panicked moments numerous times. Your efforts were constantly noticed by me, and I didn't say thank you enough. Mercy, Susie, and Rose you were the bright spots of my day as I entered Poe Hall. As soon as I saw you my day was better. You are thoughtful generous people and were constantly looking out for me. You are beautiful strong woman that have enriched my life.

Thank you to all the people that have served in the military; special thanks to those that have been willing to dedicate their time and efforts to moving this research forward. You have driven me to think through what it is I am doing and be purposeful in my actions.

Finally, thank you to all of the people who have roles both big and small in my life. I feel such love and support and hope to put half of the kindness and love I have experienced back into the world.

## TABLE OF CONTENTS

<b>LIST OF TABLES</b> .....	xi
<b>Shared Sense of Purpose and Well-Being among Veterans and Non-Veterans</b> .....	1
<b>Problem Explication</b> .....	1
<b>Clarification of Terms</b> .....	3
<b>Theoretical Framework</b> .....	5
<b>Literature Review</b> .....	8
<b>Transitions</b> .....	8
<b>Well-being</b> .....	16
<b>Sense of Purpose</b> .....	21
<b>Stress Social Support, and Coping</b> .....	29
<b>Study Purpose</b> .....	33
<b>Hypotheses</b> .....	33
<b>Method</b> .....	34
<b>Procedures</b> .....	34
<b>Phase 1</b> .....	34
<b>Phase 2</b> .....	38
<b>Phase 3</b> .....	40
<b>Measures</b> .....	48
<b>Outcome Variable</b> .....	48
<b>Predictor Variable</b> .....	50

<b>Moderating Variable</b> .....	52
<b>Covariates</b> .....	52
<b>Descriptive Variables</b> .....	57
<b>Power Estimate</b> .....	59
<b>Results</b> .....	61
<b>Missing Data</b> .....	61
<b>Descriptive Statistics</b> .....	62
<b>Group Comparison: Veteran versus Non-Veteran</b> .....	66
<b>Bivariate Correlations</b> .....	68
<b>Regression Analysis – Hypothesis Testing</b> .....	69
<b>Discussion</b> .....	72
<b>Role of Shared Sense of Purpose</b> .....	72
<b>Strengths</b> .....	82
<b>Limitations</b> .....	84
<b>Implications for Future Research</b> .....	85
<b>REFERENCES</b> .....	88
<b>APPENDICES</b> .....	116
Appendix 1: Satisfaction with Life Scale (SWLS) (Diener et al., 1985) .....	117
Appendix 2: Work as Meaning Inventory (WAMI) (Steger et al., 2012) .....	118
Appendix 3: Perceived Stress Scale (Cohen et al., 1983) .....	120
Appendix 4: Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahelm, Zimet, & Farley, 1988).....	121

Appendix 5: Active Coping (COPE subscale) (Carver, 1997) .....	122
Appendix 6: Patient Health Questionnaire - 9 (PHQ-9) (Kroenke et al., 2001) .....	123
Appendix 7: Manipulation Check Questions.....	124
Appendix 8: Phase 1 Survey Materials .....	127
Appendix 9: Phase 2 Survey Materials .....	129
Appendix 10: Phase 3 Survey Materials .....	130
Appendix 11: Informed Consent and Complete Survey .....	132

## LIST OF TABLES

Table 1	<i>Distribution of Outcome, Predictor, and Covariate Variables .....</i>	104
Table 2	<i>Categorical Variable Percentages.....</i>	105
Table 3	<i>Distribution of Military Specific Demographic Variables .....</i>	106
Table 4	<i>Military Specific Demographic Categorical Variables .....</i>	107
Table 5	<i>Factor Loadings of the Adapted WAMI with Promax Rotation.....</i>	108
Table 6	<i>Psychometric Properties of Scales (N=550).....</i>	109
Table 7	<i>Mean Comparisons for Veteran and Non-Veteran Groups.....</i>	110
Table 8	<i>Correlations among Predictor, Outcome, Moderate, and Covariate Variables....</i>	111
Table 9	<i>Correlations among Predictor, Outcome, Moderate, and Descriptive Variables.....</i>	112
Table 10	<i>Results of Hypothesis 1 Testing: Hierarchical Multiple Regression to Predict Well-being using Mean Centered Shares Sense of Purpose as Predictor.....</i>	113
Table 11	<i>Results of Hypothesis 2 Testing: Hierarchical Moderated Multiple Regression with a Categorical Moderator Analysis to Predict Well-being using Mean Centered Shared Sense of Purpose as Predictor .....</i>	114
Table 12	<i>Veteran Status Screening Questions Between Group Differences Pearson Chi-Square Analysis.....</i>	115

### **Shared Sense of Purpose and Well-Being among Veterans and Non-Veterans**

With the United States' (US) involvement in the wars in the Middle East winding down, an increasing number of Veterans are making the transition to non-military life. Of much concern are the effects of earlier deployment on mental health, and the integration of Veterans back into the civilian workforce and their communities. Conceptualized more broadly, however, separation from the military represents a cultural transition into settings that generally hold much less value (both in terms of emphasis and opportunity) for qualities highly esteemed in military life (e.g., camaraderie, sense of mission, and shared sense of purpose). Veterans often comment on the loss of the sense of being a part of something larger than themselves, even when they are demonstrating signs of individual success and accomplishment (Doenges, 2011; Early, 2011; Greene, Buckman, Dandeker, & Greenberg, 2010). More seriously, this sense of estrangement may hinder Veterans' abilities to make linkages and take advantage of opportunities within new settings. Veterans who are able to create a sense of shared purpose in their new surroundings may be better able to withstand the stresses of this transition and maintain a sense of well-being. A social-ecological perspective was used for this study to view military separation and community reintegration as a cultural transition, with the goal of examining whether the presence of a shared sense of purpose is more important to Veterans in maintaining their well-being than to non-Veterans.

### **Problem Explication**

There is ample research on the effects of multiple deployments on mental health among service members, and the continued challenges of post-traumatic stress disorder (PTSD) and depression (Schumm, Koucky, & Bartel, 2014). However, there is less research

among military populations that focuses on the many difficulties associated with general reintegration into a once familiar community after a prolonged period of absence (Demers, 2011; Doenges, 2011). Many people experience stress in the transition between cultures (e.g., combat zone to home, military to civilian, and service member to student) regardless of whether they are, or are not, experiencing diagnosable mental health illness. For example, the Veterans Educational Assistance Act (the 2008 post 9/11 GI Bill) has made school more accessible to Veterans, and many Veterans leave the military context and return to school (Bonar & Domenici, 2011; Doenges, 2011; Durdella & Kim, 2012; Pennell & Ryder-Burge, 2011; Smith-Osborne, 2012). However, this transition is not without difficulty. Veterans often report having a hard time identifying with fellow classmates, and find the skills learned during military service do not always translate well into the classroom (Bonar & Domenici, 2011; Doenges, 2011; Durdella & Kim, 2012; Smith-Osborne, 2012). Veterans feel as if they lack a sense of purpose and direction in the college environment, and as if their undergraduate classmates are spoiled and unaware (Bonar & Domenici, 2011; Caplin & Lewis, 2011; Doenges, 2011; Durdella & Kim, 2012; Smith-Osborne, 2012). These factors illustrate how Veterans may be experiencing difficulties related to a cultural transition and adjustment.

Little attention has been paid to the ways in which Veterans experience broader challenges during community reintegration and the extent to which the challenges of reintegration can also affect well-being. Experiences that lead to a change in world view and perspective may lead to difficulty processing, understanding, and incorporating both new perspectives and once familiar perspectives, therefore creating a source of conflict. For example, service members that have

experienced combat deployments report having difficulty relating to family and friends because their sense of what is important has changed, and they often feel misunderstood (Doenges, 2011; Early, 2011; Greene et al., 2010; Hayes et al., 2010). Veterans also report feeling a loss of purpose and direction upon return home from deployment or when transitioning into civilian settings (Doenges, 2011; Early, 2011; Greene et al., 2010).

...[During deployment] you've got a purpose. You wake up in the morning; you know what you're going to do. There's a real focus on what you've got to do and that's really, for some of us, for a lot of us, easy! And now you come home and try to remember if you paid your electric bill on time and the water bill and the momma and the kids have all been taken care of ... I think that transition is a little bit awkward. (Caplin & Lewis, 2011, p. 163-164)

These challenges can negatively affect the well-being of Veterans trying to transition home from deployment and/or from military life to civilian life. This study was designed to examine the experience of Veterans within different non-military organizations through a lens of cultural transition. There was an intentional focus on a general measure of well-being, rather than more traditional measures of psychological disorder, since the relationship of shared sense of purpose to psychological health is seen as important across the entire spectrum of Veterans.

### **Clarification of Terms**

As is so common in research, the meaning and understanding of the terms surrounding transition processes varies. The terms reentry, reintegration, transition, and adjustment have been

used and defined in many ways in research concerning military Veterans. For the purposes of clarity, the author's current line of thinking in regard to these terms in the specific context of the US military is as follows.

Reentry is the process of changing environments and is thought to occur after a person leaves a US civilian society, experiences a deployment in a foreign society, and then returns home to a US civilian society. The reentry process is considered to be short-term. The reentry process includes a series of deliberate formal and informal actions from US government, military communities, home communities, families, and individuals, as well as many unplanned and unanticipated formal and informal actions from the same entities.

Reintegration is the intermediate process of working to return to an active role in the environment where there was a prolonged period of absence. When a person returns to a once familiar environment, the process of reestablishing a day to day rhythm of life is considered reintegration.

Transition is considered a more general term. Both reentry and reintegration can be considered transitions. Transitions can vary in intensity and duration.

Adjustment is considered to be the longer-term outcome of transitions, with the understanding it is related to a person's military experience (e.g., individual characteristics and military experience; career trajectory; and when applicable pre-, during, and post-deployment experiences) and the great deal of processing that is happening at all stages of these experiences. On the outcome continuum, people may adapt well and have a positive adjustment outcome or people may have a difficult transition experience and have a negative adjustment outcome.

## **Theoretical Framework**

The social-ecological perspective acknowledges the context within which an individual functions. This perspective allows for the acknowledgement of interdependence among individuals and their surrounding environment and the notion of reciprocity (behaviors influence the environment and the environment influences behaviors). From this perspective, research creates a more complete picture when individual behavior is examined in context rather than looking at individual behavior in isolation (NCI, 2005). Therefore, an examination of community reintegration needs to go beyond an examination of personal characteristics of the individual (e.g., mental health status) and look at the expectations and opportunities of the settings of which they are a part. For Veterans, this may mean examining the opportunity for Veterans to continue to actualize important values such as self-less service, loyalty, and duty.

Mutual aid theory is another relevant theory when working to better understand how a person functions within a group, and informed the addition of the “shared” component of the current study. Mutual aid theory is a process-focused theory that is often used within social work, examining what interactions occur among group members and how this impacts both individuals and the group itself (Garvin, Gutiérrez, & Galinsky, 2004, p. 3-4). It nicely complements the social-ecological approach, and the current study’s general approach, because the group process works to improve the fit between members’ needs and available resources and works to help “members feel less isolated, stigmatized, and pathologized” (Gitterman, 2004, p. 96 & 99). Mutual aid is thought to function outside of a traditional mental health model, with the emphasis being on members and taking action versus talking about action (Gitterman, 2004, p. 94).

The premise of this study was that military personnel are more likely to thrive in a group with a shared common goal that holds specific purpose and can be related to a greater purpose than the individual. They are able to acknowledge their own and others' special skills and abilities and understand how they function as a group. However, it can be more difficult to find this same sense of shared purpose within a group in non-military environments.

Shared sense of purpose and well-being were the key variables in this research. The idea was that many people once belonging to a formal service organization with a clear and strong sense of purpose, particularly shared sense of purpose and action-oriented purpose, experience a sense of "lostness" when they transition to settings in which such a sense of purpose is absent. This "lostness" is a gap that negatively impacts their well-being because the salience of purpose still exists despite its absence in one's current life. More concisely, shared sense of purpose has a large impact on well-being, particularly for those who have once experienced it and feel it is now missing.

A familiar and well-studied concept of purpose is people looking for their actions to hold some meaning in life. However, recent studies are examining if finding an appropriate outlet for purpose within a specific organization (including work) is related to greater well-being (Steger, Dik, & Duffy, 2012). Therefore, conceptualizing sense of purpose more broadly to include aspects that target shared and action-oriented purpose may help to better understand purpose in regard to social and physical environments. This study was designed to examine the idea of "shared" purpose being important. Shared was defined as finding a sense of camaraderie with others that hold similar values and are working toward a common goal (Lips-Wiersma & Wright, 2012). Adding the concepts of shared and action-oriented purpose put purpose within a specific context

which may capture the potential incongruence of having a sense of purpose but not being able to act upon it.

The study design also took into account other salient psychosocial variables, including stress, social support, and coping. Stress was included to capture the present level of stress potentially influencing well-being. Social support was included to account for the possibility that people with greater perceived social support have greater well-being whether or not they have a feeling of purpose. Coping was included to account for the possibility that people with good coping skills are likely to find groups with purpose and create life satisfaction for themselves (regardless of belonging to an organization or sharing purpose with others).

An anecdotal example of the idea of a shared sense of purpose resonating with others is The Mission Continues program. This program “awards community service fellowships to post-9/11 Veterans, empowering them to transform their own lives by serving others and directly impacting their communities” (The Mission Continues, 2013, para 1). The organization partners with well-established non-profit organizations actively working to improve educational, environmental, and social issues. Essentially, it is designed to match Veteran skills and purpose with organizations that could use additional support. Underlying this approach is the belief that many Veterans have a drive to serve a purpose greater than themselves, but lack a venue for pursuing this urge.

This research addressed an important gap by examining a special population (Veterans) with potentially unique needs. However, what those needs are, and how to attend to them, is still unclear. The addition of a cultural transition framework, to the well-needed identification of problems framework, may assist in understanding which aspects of community reintegration may

influence adjustment. The cultural transition framework may also make Veterans more receptive to intervention approaches than those that suggest that they have an individual, “psychological” problem.

### **Literature Review**

Literature on cultural transitions is vast. Most relevant to examining transitions within a military career are those that draw from community, social, intercultural, and cross-cultural psychology. These literatures examine how people adapt to different cultures in terms of their identity and roles as perceived by themselves, as well as within and between groups. Part of how a person adapts is the amount of stress they may or may not experience during the process. This is specifically relevant when thinking about the transitions from war to civilian societies in terms of returning from deployment and transitioning out of a military career.

### **Transitions**

**Acculturation.** Acculturation literature pulls from cross-cultural, social, and community psychology as well as other disciplines such as sociology and anthropology. Most relevant to this study is the focus on what might influence healthier transitions.

Acculturation focuses on the social and psychological processes that occur when people are adapting, both at the group and individual level of the transition experience (Berry, 2005; Lopez-Class, Castro, & Ramirez, 2011). However, there is a shift occurring calling for a more contextual ecological perspective to complement the more individually-focused notions of acculturation (Lopez-Class et al., 2011; Matsudaira, 2006). Acculturation has often been used within the context of immigration and globalization, but provides relevant insight for this particular study.

“Acculturation is the dual process of cultural and psychological change that takes place as a result of contact between two or more cultural groups and their individual members” (Berry, 2005, p. 698). Part of this experience is the stress and conflict that often occur. Sometimes acculturation happens smoothly, while other times there are culture conflicts that may result in acculturative stress (which has also been referred to as culture shock) (Berry, 2005; Lopez-Class et al., 2011). Berry (2005) explains why acculturative stress is more often used and is a more appropriate term than culture shock:

The notion of shock carries only negative connotations. While the notion of stress commonly connotes a negative experience, in the field of health psychology stress can vary from positive (eustress) to negative (dis-stress) in valence. Because acculturation has both positive (e.g., new opportunities) and negative (e.g., discrimination) aspects, the stress conceptualization better matches the range of affect experienced during acculturation. Moreover, shock has no cultural or psychological theory or research context associated with it, whereas stress has a place in a well-developed theoretical matrix (i.e., stress-coping-adaptation). Second, the phenomena of interest have their life in the intersection of two cultures; they are intercultural, rather than cultural in their origin. The term “culture” implies that only one culture is involved, whereas the term “acculturation” draws our attention to the fact that two cultures are interacting, and producing the stress phenomena. (p. 708)

How someone navigates the acculturation process depends on acculturation strategies. Acculturation strategies consist of two main components, attitudes and behaviors. Attitudes can be thought of as “an individual’s preference about how to acculturate” and behaviors as “a person’s actual activities”; both are found in the day-to-day process of adaptation (Berry, 2005, p. 704). Cultural maintenance, contact and participation, and the power to decide on how acculturation will take place are the core concepts within cultural strategies (Berry, 2005; Lopez-Class et al., 2011). The four strategies of acculturation are assimilation, separation, integration, and marginalization (Lopez-Class et al., 2011; Matsudaira, 2006):

1. Assimilation occurs when individuals do not wish to maintain their heritage cultural identity and seek daily interaction with other cultures, individuals prefer to shed their heritage culture, and become absorbed into the dominant society
2. Separation occurs when individuals place a value on holding on to their original culture, and at the same time wish to avoid interaction with others, individuals turn their back on involvement with other cultural groups, and turn inward toward their heritage culture
3. Integration occurs when there is an interest in both maintaining one’s heritage culture while in daily interactions with other groups, there is some degree of cultural identity maintained, and at the same time seeking, as a member of an ethno-cultural group, to participate as an integral part of the larger social network
4. Marginalization occurs when there is little possibility or interest in heritage cultural maintenance (often for reason of enforced cultural loss), and little interest in having

relations with others (often for reason of exclusion or discrimination) (Berry, 2005, p. 705)

All of these strategies occur for various reasons, and are not completely independent of each other. However, research among Irish immigrants and immigrant youth demonstrates that those who pursue integration appear to be better adapted (Berry, 2005, p. 709; Lopez-Class et al., 2011; Matsudaira, 2006).

The outcome of acculturation is the degree to which people achieve satisfactory adaptations. Adaptation refers to the relatively stable changes that take place in an individual or group in response to external demands; it may or may not improve the “fit” between individuals and their environments, and it may or may not involve resistance and attempts to change environments (Berry, 2005, p. 709). There are both psychological and socio-cultural adaptations. Psychological adaptations include both psychological and physical well-being and are often predicted by personality, life change events, and social support. Socio-cultural adaptations include the management of daily life in the new cultural context, and are often predicted by cultural knowledge, degree of contact, and positive intergroup attitudes (Berry, 2005, p. 209). The adaptation and experience differences among people, within individual people and between people and groups, lead to a range of adaptations that can occur. Some people adapt poorly and find it difficult to live day-to-day life and others may manage the changes very well.

These adaptations often manifest in behavioral shifts (stemming from the sub-processes: cultural shedding, cultural learning, and cultural conflict) resulting in adjustment. The term adjustment is applied to these behavioral shifts because most of the changes are occurring within

the acculturating individual and few among members of larger society. The conflicts that do occur at this stage are often “resolved by the acculturating person yielding to the behavioral norms of the dominant group” (Berry, 2005, p. 707). However, other outcomes of the conflict may be a person withdrawing, possibly mutual accommodation, or a person having to deal with this conflict as a daily part of life that with little to no resolution (Berry, 2005).

Acculturation concepts are often not directly applied to transitions that occur within a military career. However, they do provide support for the framing of reintegration as a cultural transition:

There is now widespread evidence that most people who have experienced acculturation actually do survive. They are not destroyed or substantially diminished by it; rather, they find opportunities, and achieve their goals sometimes beyond their initial imaginings. The tendency to “pathologize” the acculturation process and outcomes may be partly due to the history of its study in psychiatry and in clinical psychology. Researchers often presume to know what acculturating individuals want, and impose their own ideologies or their personal views, rather than informing themselves about culturally rooted individual preferences and differences. (Berry, 2005, p. 710)

Applying this perspective to transitions during a military career allows for incorporation of contextual factors such as reintegration resources and social support and the normalization of challenges that occur during these times.

**Reintegration as a cultural transition.** Life is full of transitions, each laden with unique challenges. For the purposes of this research, transitions were thought of in terms of the movement between immersive cultural environments.

Culture can be defined as the collection of values, attitudes, and beliefs which provide people with a common way of interpreting events. Military culture is a result of a combination of the above factors and describes a shared institutional ethos that influences the expectations regarding behavior in areas such as discipline, teamwork, loyalty, and selfless duty for those in the armed forces. Military culture has many positive effects on personnel, including maintaining and potentially increasing operational effectiveness and morale. However, cultural issues can also negatively affect personnel's well-being and effectiveness. This is especially problematic when the prevailing military culture of a deployed force clashes with other cultures with which its personnel interact [discussing both civilian stateside society and the civilian society where service members are deployed]. (Greene et al., 2010, p. 958)

When a person returns to a once familiar environment, the process of reestablishing day to day rhythm of life is considered reintegration. Reintegration itself is rarely framed as a cultural transition. By framing reintegration as a cultural transition it normalizes the natural process of adaptation that occurs after an immersive experience in another culture. Although some of the studied predictors seem to be related to community reintegration, such as social support, they have not necessarily been framed as such. Reframing the process of reintegration as a normal period of

transition may be able to add to the picture of what community reintegration entails, and how the process can be better understood.

There has been a considerable amount of research revolving around reintegration across a wide range of divergent populations, for example, corporate employees, refugees, diplomats, third culture kids (children who grow up in a variety of cultures, usually due to the employment obligations of a parent), humanitarian aid workers, development workers, and military service members. Studies of corporate employees, Peace Corps Volunteers, and military personnel suggest the process of “fitting in” upon return to a once familiar environment can present unanticipated difficulties (Adler, 1981; Gaw, 2000; Szkudlarek, 2010).

Frequently cited reintegration research conducted by Adler (1981) studied corporate employees returning from work abroad. She noted that after the first month of return, mood dropped and returnees tended to rate their levels of effectiveness lower for the first five months after return. Corporate employees were frustrated by the lack of acknowledgement that the abroad experience resulted in gains that could be shared with other employees (Adler, 1981). Additionally, upon return home Peace Corps Volunteers often struggle with materialism, waste of goods, indifference of home country citizens, fast pace of living, and changes experienced in regard to values (Brein & David, 1971; Haan, 1974; Szkudlarek, 2010). Research on divergent populations provides a broader context for the process of reintegration. Although the process of “returning home” may present seemingly similar challenges, the specific areas of conflict and tension may vary across populations.

**Unique aspects of military culture.** Although there are many aspects of transition that are common across groups, there are also many needs and challenges that are unique to, or more

pronounced with, Veterans. Unique aspects of military culture that may influence transitions identified in previous research include camaraderie (intense bonding), service, sense of importance of mission (life or death), and imposed and purposeful structure (Caplin & Lewis, 2011; Demers 2011; Doenges, 2011; Early, 2011; Osran et al., 2010).

The transition from the military to the civilian world not only includes leaving a job that has no real civilian equivalent, but also leaving a culture and a group of people with the knowledge to understand the experience of serving in the military. (Early, 2011, p. 4)

In military settings, particularly combat, the intense feelings of bonding, mission, and purpose are salient and often important to survival because service members in combat zones rely on each other for safety and protection (Osran et al., 2010). The transition to a setting where these unique aspects may no longer be as obviously present, or the feeling that they may never be replicated again, conceivably represents a distressing change in and of itself (because military service members may be acutely aware of these missing aspects) (Caplin & Lewis, 2011; Early, 2011; Osran et al, 2010). A loss of sense of purpose is a particularly pertinent aspect of military to civilian transitions identified in previous research (Caplin & Lewis, 2011). However, shared and action-oriented sense of purpose has not been looked at but seems especially important for transitions among military populations. Sense of purpose as a predictor of well-being is starting to be examined as important for military service members, specifically during times of transition and may help to reframe reintegration as a cultural transition. However, the impact of sense of purpose on well-being is vastly understudied.

**Well-being**

Well-being has most commonly been conceptualized and studied in global terms referring to one's overall sense of fulfillment and has been associated with positive outcomes in many studies. It has often been used as a concept that goes beyond the definition of physical health (implying the absence of negatives) and instead implies the idea of living well and thriving (Moore, Bates, Brierly-Bower, Taaffe, & Clymer, 2012). Well-being has been found to be associated with greater psychological satisfaction, physical health, self-esteem, and less depression (Moore et al., 2012). For example, well-being seems to play a role in the prevention of, and the recovery from, physical conditions and diseases, and possibly in contributing to an increased life-expectancy (Vázquez, Hervás, Rahona, & Gómez, 2009, p. 15). A 22-year longitudinal study of more than 22,000 participants found that well-being, as measured by life satisfaction, could predict mortality rates. This held true even after controlling for age, marital status, social status, smoking, alcohol intake, and physical activity (Koivumaa-Honkanen, Honkanen, Koskenvuo, Viinamäki, & Kaprio, 2002).

**Well-being among Veterans.** Well-being is also often studied in military personnel. It is considered particularly important within the military because of the desire for military members to be healthy and deployable; “well-being is linked to several aspects of health, including the psychological, spiritual, social, and physical, all components of [military] force readiness” (Moore et al., 2012, p. 3). Well-being is an important predictor in its own right, “a growing number of longitudinal studies confirm [well-being scales'] power to predict outcomes, for example, longevity, physical health, quality of life, criminality, drug and alcohol use, employment, earnings and prosocial behavior (e.g., volunteering)” (Friedli, 2009, p. 2). The many cycles of deployment,

the return home from combat, and transitioning from military to civilian life can be complicated, and the way these complicated experiences affect well-being of service members is multidimensional.

The military has recognized the complications of war time health among service members and shifted focus to redefine what is meant by health, and the goal is to “better understand and facilitate well-being ... to enhance fitness and readiness in service members and families” (Moore et al., 2012, p. 5). However, well-being as an outcome during times of transition is not as commonly researched, and well-being is often defined differently within research among people serving, or who have served, in the military. Additionally, the variables associated with well-being among the military have varied.

When examining job satisfaction among British military personnel, higher scores for social support and job satisfaction were related to greater reported well-being (Limbert, 2004). Social anxiety and post-traumatic stress among combat Veterans negatively impacts Veterans’ well-being (Kashdan, Julian, Merritt, & Uswatte, 2006). Among older Veterans, those that report greater self-efficacy, more personal resources, and are married (or have a significant other) tend to also report greater well-being (Seligowski et al., 2012). A longitudinal study among 1,927 male Veterans found that well-being (as measured by life satisfaction) tends to decline after age 65. However, higher scores of extraversion and Veterans who were married tended to report greater well-being (Mroczek & Spiro, 2005).

**Measuring well-being.** Previous research has defined well-being in Veterans in a variety of ways and there is no one agreed upon way, or “gold standard”, to capture well-being (McNeil et al., 2013; Moore et al., 2012; Vázquez et al., 2009; Winefield, Gill, Taylor, and Pilkington, 2012).

For example, well-being has been defined in terms of: emotional well-being, meaning the type of emotions regularly experienced [e.g., negative emotions (such as anxiety) or positive emotions (such as optimism)] (Fredrickson & Joiner, 2002; Spiro & Settersten, 2012); financial well-being, meaning “the ability to make ends meet, opportunities to grow financially through work, and possessing knowledge and judgment to make good money management decisions” (Edwards, 2012; Elbogen, Johnson, Wagner, Newton, & Beckman, 2012, p. 669); and subjective well-being, meaning,

All of the various types of evaluations, both positive and negative, that people make of their lives. It includes reflective cognitive evaluations, such as life satisfaction and work satisfaction, interest and engagement, and affective reactions to life events, such as joy and sadness. (Diener, 2006, p. 399)

Some other studies that have examined well-being among Veterans have defined it as quality of life (Yazicioğlu et al., 2006) or life satisfaction (Britton, Ouimette, & Bossarte, 2012; Seligowski et al., 2012; Skomorovsky & Sudom, 2011).

Although research has established well-being as important, there is not total agreement on what well-being means. There are two predominant concepts of well-being interwoven throughout the literature, hedonic and eudaimonic. The hedonic perspective of well-being is defined as the pursuit of pleasure (Moore et al., 2012, p. 3; Ryff, 1989, p. 1078-1079; Tennant et al., 2007, p. 2; Vázquez et al., 2009, p. 15). The eudaimonic perspective is thought to revolve around realizing one’s true and full potential. However, this process may be demanding, difficult,

and at odds with short-term happiness (Moore et al., 2012; Ryff, 1989; Tennant et al., 2007; Vázquez et al., 2009). “These different facets of well-being are posited to be related (e.g., one may be happy when reaching self-realization), but also to constitute separate factors of psychological well-being (e.g., one may be suffering while trying to reach one’s potential)” (Vallerand, 2012, p. 6).

Conceptualizations of well-being have also varied in whether they view the construct as uni-dimensional or multi-dimensional. Many well-being scales have multiple subscales that collect information on social support, coping, and work aspects; others have used a single item to capture a global measure of well-being. Common measures of well-being have included The General Health Questionnaire (GHQ-12); The Life Satisfaction Index (LSI-A, 20 items); Rosenberg Self-Esteem Scale (10 items); Satisfaction with Life Scale (SWLS, 5 items); State-Trait Anxiety Inventory (STAI, 20 items); Flourishing Scale (FS, 8 items), CDC Well-being Scale Brief (10 items); and WHO Quality of Life Indicator (WHOQOL-BREF, 26 items) (Moore et al., 2012; Schiaffino, 2003). Each of these scales has an appropriate place depending on the study purpose.

Well-being has often been measured by the Satisfaction with Life Scale (SWLS) among military service members (Robertson, 2013). For example, Skomorovsky and Sudom (2011) examined the influence of hardiness on psychological well-being among Canadian Officers. Hardiness seems to buffer against negative impacts of trauma on psychological well-being. Additionally, in a study among Veterans transitioning to second careers (i.e., nonmilitary jobs) confidence was shown to be positively correlated with life satisfaction (Robertson, 2013). As mentioned previously, life satisfaction has also been studied among older and aging Veterans.

Functional health and personal resources, even when stressors are reported, serve as protective factors in relationship to life satisfaction (Seligowski et al., 2012).

**Well-being in this study.** For the purposes of this study well-being is generally conceptualized as life satisfaction. Additionally, it is a specific goal of this study to control for stress, social support, and coping. Current stress level as a factor that could negatively impact well-being and social support and coping as factors that could lead to both a greater sense of purpose and well-being. For the purposes of this study, a commonly used single scale measure was selected to capture well-being.

One scale that has stood the test of time and has been found to have excellent reliability and validity is the Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985; Schiaffino, 2003). The SWLS is a five item scale developed as a global self-reported evaluation by an individual of her/his well-being (Appendix 1) (Robertson, 2013). The SWLS is often categorized as a measure of subjective well-being because “respondents [are asked] to evaluate their overall satisfaction based on the measures that they deem to be of value, as opposed to the measures that the researcher deems to be of value” (Robertson, 2013, p. 28). Subjective measures of well-being are often thought to be primarily hedonistic concept because they only measure satisfaction based on feeling positive about life (Ryan & Deci, 2001). This is different than the many well-being scales that include specific domains of well-being such as physical, emotional, and social health and economic stability. These scales tend to be lengthy and make measuring other variables as predictors, moderators, and mediators difficult because of measuring similar variables that exists within the detailed scale. However, global one-item satisfaction scales are

often too limiting. The SWLS is a brief five item scale that has been used in many populations, including military Veterans.

### **Sense of Purpose**

The focus of this study is sense of purpose and its predictive value above and beyond stress, social support, and coping. Therefore, more detail on sense of purpose as a meaningful predictor is provided. Stress, social support, and coping as predictors of well-being are also briefly reviewed.

Despite the fact that the literature base regarding life purpose and meaning is not as extensive as more commonly studied factors that influence well-being, the idea that these constructs impact our well-being have a long history (Doenges, 2011; Osran et al., 2010; Steger, Fraxier, Oishi, & Kaler, 2006; Vázquez et al., 2009). The concept of purpose and meaning making in social sciences stems from the experience of Victor Frankl, once imprisoned in a concentration camp during WWII, and his philosophical writings (Adler, 1997; Osran et al., 2010; Steger et al., 2006). His philosophy revolved around the idea that

Humans are characterized by a will to meaning, an innate drive to find meaning and significance in their lives, and that failure to achieve meaning results in psychological distress. Research has supported this proposed link between lack of meaning and psychological distress. Having less meaning in life has been associated with greater need for therapy (Battista & Almond, 1973), depression and anxiety (e.g., Debats, van der Lubbe, & Wezeman, 1993), and suicidal ideation and substance abuse (e.g., Harlow, Newcomb, & Bentler, 1986), as well as other forms of distress. Having more

meaning has been positively related to work enjoyment (Bonebright, Clay, & Ankenmann, 2000), life satisfaction (e.g., Chamberlain & Zika, 1988b), and happiness (Debats et al., 1993), among other measures of healthy psychological functioning. (Steger et al., 2006, p. 81)

Much of this literature is focused on the relationships of sense of purpose and meaning to physical health, trauma, and work. Among elderly women, those who reported higher levels of life purpose, feelings of personal growth, and better interpersonal relationships showed lower cardiovascular risk (Ryff, Singer, & Love, 2004; Ryff et al., 2006). Purpose and meaning also influence more general measures of well-being. Adolescents who reported greater sense of purpose also tended to report greater well-being, and greater well-being has been related to lower levels of stress, better health, more satisfying employment, and materials resources (Hill, Burrow, & Summer, 2013; Kahneman & Krueger, 2006). Indirectly, research is beginning to uncover the importance of purpose and meaning during military service and the transition home (Demers, 2011; Doenges, 2011; Early, 2011).

**Sense of purpose among Veterans.** “This bond arises out of the experience of reliance upon others for safety and protection, experiencing similar war-related stressors, and having a common, transcendent goal—a purpose larger than themselves that motivates them” (Osran et al., 2010, p. 210).

Much of the literature examining purpose among military service members is housed within positive psychology and post-traumatic growth. Post-traumatic growth (PTG) can be thought of as “positive personal changes resulting from [a person’s] struggle to deal with trauma

and its psychological consequences” (Tedeschi & McNally, 2011, p.137). The most recent research on PTG “supports the proposal that post-traumatic growth and event-related distress can coexist, and can independently affect levels of life satisfaction” and “even as people are appreciating how they have been positively changed by their struggle with a traumatic experience, they still may be dealing with the distress associated with the event itself” (Triplett, Tedeschi, Cann, Calhoun, & Reeve, 2012).

The Comprehensive Soldier Fitness (CSF) program was developed from the lens of PTG. Essentially the program is designed to transition military service members from deployment back to home and their stateside duty. Although the program is controversial, it is designed to increase well-being by decreasing stress pathologies through finding meaning from combat experience (Cornum, Matthews, & Seligman, 2011). As of August 2012, three studies examining the CSF program have been conducted and published. Overall the results seem to indicate that those with higher scores on resilience also have better psychological and behavioral outcomes, although it is still unclear how much of this is due to the CSF intervention [Eidelson & Soldz, 2012; Lester et al., 2011 (a, b, & c)].

Existing research does provide a foundation for cultural transition among military service members. However, the influence of sense of purpose on well-being, specifically among Veterans, is understudied. More research needs to be done focusing on purpose as an important aspect of well-being within the cultural transition framework and how this transition may be unique to military service members (Doenges, 2011, p. 12; Early, 2011).

Doenges (2011) observed that sense of purpose among Veterans has generally been understudied. He explored the importance of sense of purpose during transition to university

settings among Veterans. Doenges (2011) highlights the extent to which sense of purpose (defined by “calling” and “meaningful work”) and social support predict the well-being of Veterans that have returned to school through a mixed methods design. Qualitative research, conducted through open-ended questions included in an online survey, revealed several important themes (Doenges, 2011, p. 68-70). Most relevant to this research was the military impact on character development, which suggested that military experience:

1. Had a positive impact on participants, with particular emphasis on discipline, confidence, a value of hard work, a sense of honor and morals, and a more developed world view
  2. Promoted the development of stronger prosocial values among participants, such as wanting to help other people, improve one’s community, and help fellow Veterans.
- (Doenges, 2011, p. 68-70)

These themes support the idea that there is an action-oriented, shared sense of purpose that comes along with military service, which may play an important role in identifying ways to ease the cultural transition that military service members’ experience. The quantitative research revealed calling and social support to be strong predictors of well-being, and meaningful work to be a moderate predictor.

The goal of this research was to understand the relationship between purpose and well-being. As mentioned, Doenges (2011) found meaningful work to be a moderate predictor of well-being (as measured by a group of scales including the Satisfaction with Life Scale) within a

student Veteran population (meaningful work and SWLS,  $r = .31, p < .01$ ). In his research, Doenges (2011) mentions that there is range restriction on the total scores for the Work as Meaning Inventory (WAMI) among the sample (Veterans in a university setting), which may weaken correlations leading to difficulty detecting interaction effects. The WAMI total score can vary from 10-50 and for his sample ( $N = 137$ ) there was a mean score of 35.93 ( $SD = 7.06$ ), making most of the scores fall mid-range. Steger et al. (2012) tested the WAMI in 370 university employees and there was a mean score of 37.54 ( $SD = 8.84$ ), showing more well-distributed scores. Therefore, the noted range restriction by Doenges in regard to the WAMI seems to be more a function of sample than the scale itself. The study also lacked a non-Veteran comparison group.

Previous research demonstrates that sense of purpose is an important factor shaping one's experience of return from combat. However, previous operationalizations of sense of purpose have failed to include shared experience and action-orientation perspectives as an explicit part of the definition, or to situate sense of purpose within the theoretical framework of transitioning from one cultural context to another. Based on the contextual emphasis of the social-ecological perspective, changes in cultural context upon return home, such as a reduction in emphasis on shared, action-oriented purpose, could be important predictors of individual well-being. Shared and action-oriented experience in regard to sense of purpose characterizes the cultural values of the military:

Central to military culture are loyalty, teamwork, leadership, obedience, and hierarchy, although these values can be found to some extent, within nonmilitary

culture. However, military culture has an important distinctive feature: it demands subordination of the self to the group; military individuals must be willing to make sacrifices for others including, in extremis, giving their life if required. (Greene et al., 2010, p. 958)

Based on these values and the experiences they guide, sharing a sense of purpose that is action-oriented with a group of individuals may more accurately capture the idea of purpose as service members have come to experience it in the military.

The military's specific focus on structure and mission, everyone having their role to make the "machine" function effectively, and the idea that each part is vital, makes purpose and mission clear. This clarity may not always be present in civilian life, but if it is important, then there are implications for intervention design. In essence, it appears that the culture of the military is based more on shared and action-oriented goals than what might be seen in civilian life. This cultural transition military service members are experiencing is one from a culture that emphasizes these values to one that does not. Those that are able to find an outlet and maintain this shared and action-oriented sense of purpose in the civilian world will most likely have greater reported well-being than those that cannot find an outlet for these values.

**Measuring sense of purpose.** Sense of purpose has been defined and measured in multiple ways, such as calling, meaning making, and meaningful work. However, it is traditionally thought of at the individual level and in terms of spirituality and meaning (Damon, Menon, & Bronk, 2003; Mallow, Williams-Gray, Kelly, & Alex, 2011). Commonly used

measures of purpose are the Purpose in Life Test (PIL, 20 items); Life Purpose Questionnaire (LPQ, 20 items); the Life Regard Index (LRI, 28 items), and more recently Meaning in Life Questionnaire (MLQ, 10 items) (Lavigne, Hofman, Ring, Ryder, & Woodward, 2013; Steger et al., 2006). However, the measures seem to lack specific components that examine if sharing a purpose and acting upon it are important. More recently, purpose has been measured in the context of work, leading to the development of relatively new scales such as the Calling and Vocation Questionnaire (CVQ, 24 items) and Work as Meaning Inventory (WAMI, 10 items). Measuring more specifically how sense of purpose is anchored in values and experienced, as well as how it is acted upon and achieved, is important.

**Sense of purpose in this study.** Very recently research has begun to differentiate purpose from meaning. George and Park (2013) argue that meaning and purpose are distinct constructs that have different correlates and predictors. For their purposes they define meaning in terms of significance in life and purpose in terms of goals and direction in life. Although this type of research is limited, the authors' preliminary findings in longitudinal data among cancer survivors demonstrated that meaning and purpose are strongly correlated. However, meaning was predicted by spirituality and positively correlated with post-traumatic growth and negatively with post-traumatic stress. Purpose was predicted by social support and negatively correlated with intrusive thoughts. For the purposes of this study sense of purpose is conceptualized in terms of shared purpose that is action-oriented (Damon et al., 2003). Purpose is specifically differentiated from meaning,

Purpose is a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self. ... Purpose is a goal of sorts, but it is more stable and far-reaching than low-level goals such as “to get to the movie on time” or “to find a parking place in town today.” ... Unlike meaning alone (which may or may not be oriented towards a defined end), purpose is always directed at an accomplishment towards which one can make progress. This accomplishment may be material or nonmaterial, external or internal, reachable or non-reachable: its necessary characteristic is not its concreteness but the sense of direction that it provides in creating an objective for purpose. (Damon et al., 2003, p. 121)

The decision to focus conceptually on purpose versus meaning is based on the outlined values of military service and how these values may impact sense of purpose during times of transition. Additionally, sense of purpose is thought to be more than about the individual and can be about community and appropriate settings that provide an outlet for purpose, not just the individual's drive.

There is no existing scale that measures shared sense of purpose. Therefore, it was measured using an adapted version of the Work and Meaning Inventory (WAMI) (Appendix 2). The scale was developed to determine if people perceived their work as a way to live out their calling or purpose (Steger et al., 2012). The WAMI is a 10-item measure designed to capture the subjectively meaningful experience of work, and the perception of how that work is a part of a greater good (Steger et al., 2012, p. 1). Although this is a relatively new scale,

preliminary results are promising. This scale was specifically chosen due to its contextual nature that implies acting upon a goal.

This scale has been previously used and moderately correlated with well-being. Some precautions are being taken to better understand the predictive value of an adapted WAMI measure on the SWLS. The items have been adapted to read more broadly than work, incorporating any organization or group with which the participant is currently involved that could add purpose to his life. Furthermore, this study added a question to determine what entity is being called to mind when answering the WAMI questions, and questions to capture the shared nature of purpose. This is important because the author hypothesizes that if participants do not have a context to serve as their purpose outlet then this impacts their well-being negatively. Additionally, the student sample in Doenges' (2011) study reported feeling disconnected and unsupported, making a non-Veteran comparison group important to better understand the complex relationship between sense of purpose and well-being. Adding a non-Veteran comparison group can help determine if these feelings of purpose have a unique effect among Veteran populations or a more universal effect.

### **Stress, Social Support, and Coping**

A relationship between shared sense of purpose and well-being might be influenced a third variable. Stress, social support, and coping have been found to influence well-being. Therefore, this study controlled for these variables by including them as covariates and examined whether shared sense of purpose predicts variance in well-being above and beyond stress, social support, and coping.

**Stress.** Stress is an important covariate to include when working to understand what factors may be influencing well-being. For this study it is categorized differently than post-traumatic stress disorder. It is specifically referring to everyday feelings of stress, which may not be attached to any specific event.

It is clear that stress has the potential to negatively impact well-being, and many aspects of life. Greater levels of stress are related to greater levels of anxiety, depression, and alcohol and drug use, all shown to impact both physical and mental health (Harms, Krasikova, Vanhove, Herian, & Lester, 2013; Staufenbiel, Penninx, Spijker, Elzinga, & van Rossum, 2013; Wells et al., 2014). Specifically, in military populations stress has been linked to retention in military, military readiness, and home life within military families (Harms et al., 2013). Additionally, in both civilian and military populations, stress influences job performance and impacts overall well-being (Harms et al., 2013; Peltzer, Shisana, Zuma, Van Wyk, & Zungu-Dirwayi, 2009).

Stress is measured with the Perceived Stress Scale (PSS) and was included to capture the present level of stress potentially influencing well-being. The PSS measures global stress that is not event-specific. The scale focuses on perceived stress within a particular time period (Cohen, Kamarck, & Mermelstein, 1983).

**Social support.** Social support is commonly studied among military populations. It is an important covariate since higher levels of perceived social support are associated with greater well-being and Veterans who feel socially isolated have higher reported levels of psychological distress (Doenges, 2011; Early, 2011; Limbert, 2004; Seligowski et al., 2012; Yazicioğlu et al., 2006). Social support has been found to moderate the relationship between effects of combat and mental health, and serves as a protective factor against negative outcomes (Doenges, 2011; Early,

2011; Seligowski et al., 2012). It seems as though the type of social support received matters. In general, Veterans who have any type of social support have higher quality of life scores than those with no reported social support. However when measuring empathic, information, instrumental, and reassurance support, Veterans who report having empathic and informational social support reported greater quality of life than those that did not report having those types of social support (Yazicioğlu et al., 2006).

Social support has been defined in numerous terms; it is linked with many outcomes including well-being and physical health (Haber, Cohen, Lucas, & Baltes, 2007). Social support often falls into the categories of perceived or received support (Gottlieb & Bergan, 2010; Haber et al., 2007). Most relevant to this study is perceived social support. Perceived social support measures “assess recipients’ perceptions concerning the general availability of support and / or global satisfaction with support” (Sarason, Sarason, & Peirce, 1990, as cited in Haber et al., 2007, p. 133). There are drawbacks to using perceived social support because it does not necessarily reflect actual support given, more the judgment of the participant of supportive events. Nonetheless, it is still linked with positive outcomes such as well-being.

Social support is measured with the Multidimensional Scale of Perceived Social Support (MSPSS). The MSPSS measures perceived support from family, friends, and significant others, and is used as a single measure instead of as separate subscales (Zimet, Powell, Farley, Werkman, & Berkoff, 1990).

**Coping.** Coping is a commonly measured construct in the social sciences. Coping has been found to influence many aspects of human life, including well-being, but has been defined and measured in many ways (Folkman & Moskowitz, 2004). The two main types of coping are

emotion-focused and problem-focused coping (Graven & Grant, 2013). Emotion-focused coping primarily addresses the emotions associated with the stressor and problem-focused more directed toward addressing the stressor (Graven & Grant, 2013). Most relevant to this study is active coping, which can be thought of as taking action to address the stressor, and is considered to be an adaptive way to deal with stressors. Maladaptive coping, such as avoidant coping, has been associated with lower levels of psychological well-being among military personnel (Skomorovsky, 2013). Additionally, coping-efficacy among military personnel has been found to be important in regard to psychological distress (Smith, Benight, & Cieslak, 2013).

There is no best way of measuring coping. There is a debate about whether it is more important to measure dispositional coping strategies across varying life events or if it is more effective to measure coping specific to certain situations and events. Zautra, Sheets, and Sandler (1996) used the COPE Inventory (inventory of coping reactions) to examine event specific coping among divorced mothers. For this particular study, the researchers found avoidance coping was often associated with higher reported distress and active coping was associated with lower reported distress, reflecting the value of looking at more event –specific coping (Zautra et al., 1996).

Coping in the current study is measured using items from the Brief COPE. The Brief COPE was developed from the longer COPE through factor analysis and is specifically designed to assess coping reactions. One representative coping scale was desired as a covariate, rather than a full array of coping dimensions. In addition, inclusion of the entire COPE would have lengthened the survey and increased participant burden. Active coping was selected as the most relevant coping subscale (Carver, 1997).

### **Study Purpose**

The goal of this research project was to determine if shared sense of purpose has predictive value for well-being among Veterans above and beyond the more commonly studied predictors of stress, social support, and coping, and if Veteran status moderates this relationship. Research is beginning to focus on sense of purpose as an important part of the transitions military service members experience (Doenges, 2011). However, the idea of purpose may be different, or more important, for Veterans than their civilian counterparts. It is essential to identify incongruence as this has implications for easing the transitions frequently experienced by military service members and in determining if creating a shared sense of purpose is an essential part of well-being.

### **Hypotheses**

This study was designed to answer the overarching research question does Veteran / non-Veteran status moderate the relationship between shared sense of purpose and well-being?

Hypotheses included:

1. Shared sense of purpose is a significant positive predictor of well-being when controlling for stress, social support, and coping, as well as the potential covariates age, ethnicity, and marital status for all participants.
2. Veteran status moderates the relationship between shared sense of purpose and well-being, while controlling for stress, social support, and coping, as well as the potential covariates age, ethnicity, and marital status. More specifically, there is a stronger positive relationship between shared sense of purpose and well-being for Veterans than for non-Veterans.

## Method

**Design.** This study was a cross-sectional, correlational design to examine the predictive value of shared sense of purpose for well-being among Veterans above and beyond more commonly measured constructs of stress, social support, and coping. The goal was to test the theory that shared sense of purpose is more predictive of well-being among Veterans than non-Veterans. This is based on the assumption that military war service highlighted the importance of a shared sense of purpose.

### Procedures

The study was completed in three phases. Phase 1 was a pilot among a small group of Veterans used to inform survey readability and clarity from a Veteran perspective, specifically the shared sense of purpose items. Phase 2 was a pilot among introductory psychology students, designed to determine the psychometric properties of the adapted shared sense of purpose measure. Phase 3 was the full launch of the survey among a Veteran and non-Veteran comparison group using MTurk. For all phases, the survey was anonymous. The informed consent and survey had a Flesch-Kincaid grade level reading score of 10.

### Phase 1

**Participants and settings.** Phase 1 was a pilot among a small group of Veterans that the research team knows that have served, or are serving, in the military. The goal was to recruit approximately 7-15 participants. Nine people completed the on-line survey and four people attended the follow-up focus group.

*Inclusion criteria.* The only criterion for this pilot was having had some kind of military experience (either in the past or currently active duty).

*Setting.* Participants were contacted via email and directed to a survey link.

**Recruitment and data collection procedures.** Participants were recruited through personal social networks. The participants were contacted via an email that included the link to complete the entire survey, anonymously, within seven days and then participate in a focus group (Appendix 8). Included was a request to forward the email with the link to people the participants know that might have been willing to participate. Upon clicking on the survey link the participants were brought to the informed consent page. The consent page informed participants that the survey was voluntary, anonymous, and that they could refuse to answer any questions of their choosing, or discontinue the survey at any point. Additionally, the consent form explained that the primary purpose of participation was to improve the readability and clarity of the survey and that the results would not be discussed during the focus group. Participants were asked to acknowledge consent by clicking on a box provided, upon consent the participants were guided to the survey.

The Qualtrics parameters were designed so that no identifying information, including IP addresses, was collected. Additionally, due to the small number of participants, no demographic information was included in the survey. The survey took approximately 15-20 minutes to complete.

Once the survey closed, and prior to the focus group meeting, all participants who received the initial email were sent a follow-up email and asked to forward the second email to the same people as the first (Appendix 8). The follow-up email contained an electronic PDF copy of the full survey to review. Participants were informed the electronic copy could be used to write out points of discussion prior to the focus group meeting or they could wait

to receive the hardcopy and write out points upon arrival to the focus group. Additionally, those who were unable to attend the focus group were told they could provide feedback via email; no participants did this.

A small focus group was held approximately one week after the survey closed to determine if the questions were appropriately worded, using a modified version of cognitive interviewing (i.e., what did the respondents believe was being asked and what did specific words and phrases in the questions mean to the respondents). Participants were asked to review the survey and write out any additional points of discussion / questions / comments they wanted to discuss. The primary objective was to review the shared sense of purpose items. However, the participants were asked if there were any survey items that needed to be revisited in terms of wording and/or what they were asking. Notes were taken, but not in a way that would attribute these comments to any specific participant. The focus group was not audio or videotaped.

**Relevant findings from Phase 1.** Based on the information gathered from the Phase 1 pilot changes were made before the launch of the Phase 2 pilot. Although several small wording changes were made the most significant changes were the military experience and the shared sense of purpose questions.

During the focus group, participants expressed concern about the vague nature of the deployment experience questions. Therefore, changes were made to distinguish between types of service. Two questions were added. One question was about in country or out of country support during OEF/OIF to include those who may not have been specifically

located in Iraq or Afghanistan (e.g., drone operators). The second question specifically asked if the OEF/OIF deployment was a combat deployment.

The other changes to the military questions were in regard to Veteran status screening questions. Initially, there was one question asking to put officer ranks in order. During the focus group, a participant expressed a concern about people who were enlisted taking offense that enlisted ranks were not included. Therefore, a question to determine which branch of the military the participant served in was included. The branch response was linked to the enlisted ranks ordering question (enlisted ranks insignia differ from branch to branch) followed by the officer rank question (officer rank insignia are the same across branches). Finally, participants expressed concern about missing the Veteran status screening questions. One question asks, “What is the acronym for the locations where final physicals are taken prior to shipping off for basic training?” A participant said, “I served 20 years in the military and I missed that question”. There are various reasons a Veteran may not have attended basic training [e.g., went to a military academy or did Reserve Officers’ Training Corps (ROTC)]. This question was kept in the survey but further explanation on the use of screener questions is outlined in the discussion.

Finally, participants expressed concerns about the shared sense of purpose measure [adapted Work as Meaning Inventory (WAMI)]. The main concern was that if people were answering the questions with their military experience in mind versus what their purpose is now the answers may be totally different. Therefore, the shared sense of purpose measure was included a second time at the very end of the survey asking Veterans to “Please think back to your time in the military and rate the following statements based on your perception

of your military experience”. These questions were included to allow for exploratory analyses regarding changes in shared sense of purpose.

## **Phase 2**

Upon completion of the first pilot, edits were made to the survey items. These edits were submitted to the IRB via an IRB modification request. Upon approval the second pilot was conducted. The objective of the second pilot was to determine the psychometric properties of the shared sense of purpose measure [adapted Work as Meaning Inventory (WAMI)].

**Participants and settings.** This pilot was conducted among NCSU introductory psychology students via Experimentrix. The goal was to recruit approximately 100 students. A total of 98 students completed the survey. However, two participants missed both of the attention gauge questions and were removed from analyses. One additional participant left several questions blank and missed one attention gauge question, this participant was removed from data analyses. Finally, 11 participants missed one of the two attention gauge questions but their data were included in the analyses, resulting in total sample of  $N = 95$ . The goal of the attention gauge questions was to remove the data of those paying insufficient attention (Goodman, Cryder, & Cheema, 2013). More detail on the use of screener questions is provided in the results and discussion sections.

*Inclusion criteria.* The only criteria for this pilot were enrollment in an introductory psychology class and being at least 18 years of age.

*Setting.* Participants were recruited through introductory psychology courses at North Carolina State University (NCSU). At the beginning of the academic semester, students

attending introductory psychology classes were informed of the course requirements and given instructions on accessing the online system where participants can sign up for studies, which is called Experimentrix. Experimentrix is the online study management system used by the Psychology Department.

**Recruitment and data collection procedures.** Prior to the study, students were notified by their instructor of the class requirements, alternative methods of meeting the requirements, and procedures for participating in psychological studies via Experimentrix. The sign up procedure included a brief description of the study and eligibility requirements (Appendix 9). By completing the study participants earned one credit toward fulfillment of a course requirement by participating in the survey.

Participants that signed up for the study were directed to an external Qualtrics link that contains the electronic informed consent form. The consent form informed participants that the survey was anonymous, and that they may refuse to answer any questions of their choosing, or discontinue the survey at any point. Participants were asked to acknowledge consent by clicking on a box provided, upon consent the participants were guided to the survey. The survey took approximately 20 minutes to complete. To preserve anonymity but to assign credit, at the end of the last page, participants were given a link to an additional survey and informed that they must click on the link to receive course credit. The survey was completed when participants clicked on the link to the additional survey. This additional survey asked participants to provide their name and student identification number and informed participants that this information was being collected to allow participants to receive credit for completing the survey while their responses to the first survey would

remain anonymous. By providing their name and student identification number, participants received one credit to their Experimetrix account, which went toward fulfilling the course requirement.

**Relevant findings from Phase 2.** Exploratory factor analyses (EFA) were conducted to examine the structure of and relationship between the items / variables of shared sense of purpose because of the adapted language from the WAMI in the instructions and the items.

An EFA with a Promax rotation was conducted using the adapted WAMI items (13 items). With Kaiser's criteria of eigenvalue of  $> 1$ , three factors emerged (Factor 1 = 6.80; Factor 2 = 1.50; Factor 3 = 1.04) explaining a cumulative variance of 64%, with the first factor accounting for the greatest proportion of variance. An analysis of the Scree Plot suggested that one factor would be a reasonable conclusion.

More detailed interpretation of EFA results seems questionable for two reasons. First, the sample size of 95 is rather small for a factor analysis. Second, the perspectives of college students regarding shared sense of purpose may not represent the factor structure of sense of purpose among more mature adults, especially those having experienced deployment. Nonetheless, the emergence of at least one strong factor supported the use of this measure for the proposed hypotheses.

### **Phase 3**

Upon completion of the second pilot, edits were made to the survey items. These edits were reviewed and approved by an IRB officer. Upon approval the full launch of the survey was conducted.

**Participants and settings.** A convenience sample of Veterans and non-Veterans was recruited via Amazon Mechanical Turk (MTurk). The study was designed to reach two specific populations, Veterans who have experienced deployments during OEF/OIF (Operation Enduring Freedom/Operation Iraqi Freedom) and a non-Veteran comparison. Most of these Veterans are likely to be at least in their early 20's following years of deployment. For example, Pennell and Ryder-Burge found that in a sample of 51 Veterans who were students, 67% were between the ages of 26-35 and 20% between the ages of 18-25 (2011, p. 5 & 12). Additionally, according to the 2012 Department of Veterans Affairs (DoVA) health care use report, approximately 47% of OEF/OIF/OND (Operation New Dawn) using VA health services are 18-34, approximately 26% are 35-44, and the remaining over age 45. It was deemed important to have a comparison group relatively well-matched in age to control for maturational differences. Therefore, the non-Veteran comparison group was confined to age 25 and older.

*Inclusion criteria.* All participants were MTurk "workers" (Turkers) who had at least a 98% approval rating (showing that their work history was good) and had completed at least 1 other "job" (an extra check to try to lessen the chances of people creating a new account to take the survey several times). Veterans must have had deployment experience during OEF/OIF. Deployment experience was defined as any assignment that led to deployment in support of OEF/OIF. Individuals who were still on active duty were not eligible for participation because their military association may still be an outlet for their shared sense of purpose. The inclusion criterion for the non-Veteran comparison group was defined as being age 25 or older.

An important aspect of consideration during data collection is biological sex. There is difficulty in recruiting female Veterans to participate in research studies because of their underrepresentation within the military as a whole (Frayne et al., 2013). According to the 2012 DoVA health care use report, approximately 12% of OEF/OIF/OND using VA health services are women. In the research conducted at NCSU among student Veterans, out of 51 participants only eight were female (~16%) (Pennell & Ryder-Burge, 2011). The difficulty of recruiting female participants might lead to a situation where there would be few female Veteran participants, and not enough to do subgroup analyses to determine whether there might be gender differences in results. Therefore, the survey was open to only males.

*Setting.* Amazon Mechanical Turk (MTurk) is a crowdsourcing website designed to assist with task completion (e.g., data collection). The premise is that data collection can be framed within the context of an open online market place in which MTurk provides the workforce (Buhrmester, Kwang, & Gosling, 2011). Researchers comparing traditional online data collection with MTurk data collection procedures found that MTurk is a time and cost effective way to gather high-quality data (Buhrmester et al., 2011; Mason & Suri, 2011). Buhrmester et al. (2011) conducted a study examining the use of MTurk within social sciences fields, specifically psychology, and found (p. 3):

1. MTurk participants are slightly more demographically diverse than standard internet samples and are significantly more diverse than typical American college samples.

2. Participation is affected by compensation rate and task length, but participants can still be recruited rapidly and inexpensively.
3. Once individuals have enrolled in a study, variations in compensation rates do not affect data quality. [i.e., Buhrmester et al. (2011) examined compensation-level effects on data quality by computing alpha reliabilities for data collected at three levels of compensation in a set of six personality questionnaires. The mean alphas were within one hundredth of a point across the compensation levels, suggesting that payment levels do not seem to affect data quality (p. 4)].
4. The data obtained are at least as reliable as those obtained via traditional methods (e.g., surveys among standard internet samples).

The design of this exploratory cross-sectional survey study lends itself well to the MTurk format, including that MTurk participants were found to be older ( $M = 32.8$ ;  $SD = 11.5$ ) than standard internet samples ( $M = 24.3$ ;  $SD = 10$ ) which was the target non-Veteran comparison group (Buhrmester et al., 2011, p.4).

**Recruitment and data collection procedures.** The study was designed to reach two specific populations, Veterans who have experienced deployments during OEF/OIF and a non-Veteran comparison. The survey was posted as two different MTurk jobs with different requirements. The first job was dedicated to recruiting Veterans to participate, workers had to fulfill the following requirements: 1) Current country of residence is the US. 2) Have experienced military deployment in support of OEF/OIF. 3) Be male and 18 years of age or older. The second job was dedicated to recruiting a non-Veteran comparison group to

participate, workers had to fulfill the following requirements: 1) Current country of residence is the US. 2) Be male and 25 years of age or older.

Workers were notified by MTurk of the available Human Intelligence Task (HIT). A HIT is a brief description of the task and includes time and compensation rate. Workers were able to read a brief job description and then could opt to accept the task (Appendix 10). The MTurk job description and survey informed consent invited participants to complete an anonymous, voluntary survey about well-being. Upon acceptance the worker was redirected to an external Qualtrics survey. Upon clicking on the survey link the participants saw the informed consent. The consent informed participants that the survey was anonymous, and that they could refuse to answer any questions of their choosing, or discontinue the survey at any point. Participants were asked to acknowledge consent by clicking on a box provided and, upon consent, were guided to the survey. The use of MTurk allows for anonymity, although the participants were redirected to a survey through Qualtrics for easier informed consent and additional screening. The Qualtrics settings were such that no identifying information (including the users' IP address) was collected. Upon completion of the survey, the participant was given a completion code and redirected back to MTurk to submit task completion and receive compensation.

According to Buhrmester et al. (2011), a 30 minute survey is categorized as a long survey, with longer surveys tending to reduce participation. Compensation level typically influences the rate at which participants enroll, and with a \$0.50 incentive, researchers can expect approximately 16 participants per hour. Compensation level has not been found to influence the quality of the data collected (Buhrmester et al., 2011; Goodman et al., 2013).

However, based on anecdotal evidence from more recent experiences of colleagues, the current competitive incentive rate for a US population is \$1.00 for a survey that takes approximately 30 minutes. Additionally, the research team logged into MTurk as a worker and scanned seemingly similar HITs and found varying rates of monetary compensation; however several were listed at \$1.00. This survey took approximately 20-25 minutes to complete and the compensation level was set at \$1.00, to enhance speed of recruitment. However, the eligibility parameters (i.e., recruiting Veterans and only males) were expected to slow data collection progress.

The initial Veteran survey was launched on April 23<sup>rd</sup>, with a total of 20 available HITs. All 20 HITs were completed within one day. After the 20 HITs were completed the data were briefly screened to ensure collection was going as planned, no problems were detected and the remaining 280 HITs were posted on April 24<sup>th</sup>. Once the Veteran group completion reached 50% the non-Veteran HIT was posted. The surveys associated with the HIT were identical; therefore if a non-Veteran completed the Veteran HIT they were appropriately screened and allowed to complete the survey as a non-Veteran, and vice versa for Veterans completing the non-Veteran HIT. Data collection took a total of 26 days to reach an  $N$  of 828 (Veteran  $n = 286$ ; non-Veteran  $n = 542$ ) prior to data cleaning.

Some efforts have been made to examine the characteristics of participants recruited through MTurk. Goodman et al. (2013),

MTurk participants are less likely to pay attention to experimental materials, reducing statistical power. They are more likely to use the Internet to find answers, even with

no incentives for correct responses. MTurk participants have attitudes about money that are different from community sample's attitudes but similar to students' attitudes. Finally, MTurk participants are less extraverted and have lower self-esteem than other participants, presenting challenges for some research domains. (p. 213)

Despite the drawbacks, the researchers still state that MTurk is a valuable data collection tool but suggest that researchers: 1) Include screening questions that gauge attention and language comprehension. 2) Avoid questions with factual answers. 3) Consider how individual differences in financial and social domains may influence the results (social domains in regard to MTurk participants being less extraverted and having lower reported self-esteem) (Goodman et al., 2013, p. 213). Based on these suggestions, and the Buhrmester et al. (2011) suggestions, seven screener questions were included to gauge participation attention and verify Veteran status (Berinsky, Margolis, & Sances, 2014).

Two questions to gauge attention were included, one at mid-survey and the other close to the end of the survey (Appendix 7). The goal of these questions was to make sure that participants were reading the survey questions. For example, one question read "Please answer strongly agree for this question." Participants missing multiple attention gauge screener questions are those paying the very least attention to the survey questions and most researchers remove the associated data (Goodman et al., 2013). However, missing one screener question out of several does not necessarily predict quality of data (Berinsky et al., 2014). Therefore, if participants missed both attention gauge screener questions their data were removed, but the data were kept if participants missed one of the two questions.

To confirm participants' self-report of Veteran status, screener questions were located mid-survey as a validation check (Appendix 7). One question read, "What is the acronym for the generic term the military uses for various job fields?". Based on pilot one results (i.e., people having a long period of service and missing some of the Veteran status questions), if participants missed three or more out of the five Veteran status questions their data were removed.

Finally, a completion code was located at the end of the survey that participants had to submit via MTurk to receive compensation. The anonymous nature of the survey meant the screener questions could not be a source of rejecting MTurk workers' HITs. However, if they did not provide the correct completion code their work was rejected and they did not earn compensation. The rejection of work could potentially lower their MTurk approval rating score (a score documenting a workers work history). However, MTurk workers are allowed to inquire why their work was not approved. A total of six MTurk participants had their work rejected. None of the workers contacted the researcher about their rejected work.

**Response rate.** The goal for the research was to recruit at least 320 total MTurk workers (160 per group). A total of 1,333 MTurk workers accepted the HIT and consented to participate. However, many of these participants were screened out: 362 participants reported being female ( $N = 971$ ); 17 did not answer the biological sex question ( $N = 954$ ); 24 did not answer the deployment question ( $N = 930$ ); 20 reported currently being active duty ( $N = 910$ ); 70 reported being 24 years or less ( $N = 840$ ) and 13 did not answer the age question ( $N = 827$ ).

A total of 827 eligible MTurk workers completed the survey; 228 surveys were almost half or more incomplete ( $N = 599$ ); eight people missed both of the attention gauge questions and their data were removed from analysis ( $N = 591$ ). Seventeen people missed only the attention gauge question “Please answer the question strongly agree” and 19 people missed only the attention gauge question about decision making (11 did not answer other; seven answered other but did not type any text; one answered other but then did not answer the text question correctly), their data were included in the analyses. Of the remaining 591 participants 193 reported having deployed in support of OEF/OIF and the remaining 398 reported no experience in OEF/OIF.

To determine Veterans status, five screen questions were asked, and eligible participants needed to get at least two of the five questions for their data to be included in analyses. Among the 193 participants reporting experience in OEF/OIF, 12 did not get two out of the five Veteran status screener questions correct, these participants were removed from the data analyses. The final groups were Veteran group  $n = 181$  and non-Veteran group  $n = 398$ .

## Measures

### Outcome Variable

**Well-being.** Well-being is defined as the degree to which people perceive their life as aligning with their perception of where they should be. Well-being is explicitly not measured solely in terms of happiness because the researcher acknowledges that the “complexity of life and the idea that not all things that are good for us and help us to grow, learn, find purpose are all good

or all bad” (Vázquez et al., 2009, p. 19). The Satisfaction with Life (SWLS) Scale was used to measure well-being.

The SWLS instructions read “Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding”. The items are rated on a 1 to 7 Likert scale (1 = Strongly disagree; 2 = Disagree; 3 = Slightly disagree; 4 = Neither agree nor disagree; 5 = Slightly agree; 6 = Agree; 7 = Strongly agree). An example item is, “In most ways my life is close to my ideal” (Diener et al., 1985, p. 72).

Studies have been conducted validating the SWLS scale as “a single factor, multi-item measure of global life satisfaction, showing good internal consistency and reliability, and with content appropriate for a wide range of age groups” (Pavot, Diener, Colvin, & Sandvik, 1991, p. 150). The scale has had an average reported internal reliability score of Cronbach’s alpha of .87 and test-retest scores averaging approximately .82 (Robertson, 2013). The scale has also been shown to have good convergent validity with other measures of well-being, and often “serves as a criterion measures for testing new well-being scales” (Barile et al., 2013, p. 1203; Pavot et al., 1991).

A strength of this scale is its frequent use, making it easier to compare with existing research. “The SWLS is one of the most established and extensively used well-being instruments,” and the small number of items limit participant burden (Barile et al., 2013, p. 1202). In addition, the scale is used by the Centers for Disease Control (CDC) for Healthy People 2020 as a measure of well-being (Barile et al., 2013). Barile et al. (2013) evaluated the measurement

properties of three scales (SWLS, NIH PROMIS, and CDC Healthy Days) among a large nationally representative sample ( $N = 4,184$  adults), indicating that the SWLS was a good measure of well-being among a general population.

The scale was adapted to only include four items, removing “If I could live my life over, I would change almost nothing”. This item has been difficult to interpret in regard to content validity and removing the item from the scale does not significantly reduce the reliability of the four item scale (Barile, et al., 2013, p. 1203). See Appendix 1 for five item scale. The score is a sum of all items and higher scores indicate greater satisfaction with life. A mean score was also calculated for the purposes of common calculations among scales for analyses.

### **Predictor Variable**

**Shared sense of purpose.** Shared sense of purpose (SSOP) refers to actions with others around some shared goal that contributes to a feeling that they have a defined purpose and an appropriate outlet through which to manifest that purpose. Shared sense of purpose was measured using an adaptation of the Work as Meaning Inventory (WAMI). The WAMI instructions read “Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you and your work” (Steger, 2012). The items are rated on a 1 to 5 Likert scale (1 = Absolutely untrue; 2 = Mostly untrue; 3 = Neither true nor untrue; 4 = Mostly true; 5 = Absolutely true). An example of an item is, “I know my work makes a positive difference in the world”.

The scale was adapted to address shared sense of purpose in a variety of organizations and groups, as opposed to meaning specifically in a work setting. The adaptation to instructions includes the following: “Please think of the organizations or groups (work, school, or volunteer related) in which you are involved. Please select the one that gives you the most satisfaction and rate the statements using a 1-5 scale”. Each item has been adapted to shift the focus from work to a more broad definition of involvement in an organization or group which may include work, school, or volunteer activity. For example, “I know my work with this group makes a positive difference in the world”. See Appendix 2 for full scale and adaptations. A total scale score was used for this study. Item 3 is reverse scored and calculated by subtracting the rating from 6 (e.g., participant rated item number 3 at 2,  $6 - 2 = 4$ ). After item 3 is calculated then the total score is a sum of all items. Lower scores represent less work meaning. A mean score across items was also calculated.

As previously mentioned, this is a relatively new scale. Incremental validity analyses were conducted and found work meaning added unique variance when predicting job satisfaction, days reported absent, and general well-being (as measured by life satisfaction) above and beyond the established predictors of withdrawal intentions, organizational commitment, and presence of calling. The authors used subscales of positive meaning (PM), meaning making through work (MM), and greater good motivations (GG), as well as an overall meaningful work score. The Cronbach’s alpha was high for the overall scale at .93, as well as for the subscales PM = .89, MM = .82, and GG = .83 (Steger et al., 2012, p. 10).

It was appropriate to use this scale because it is action-oriented and conveys purpose through context. The main drawbacks were that the scale is oriented toward meaning and does

not include items specific to “shared” purpose. Therefore, three items were added to try to capture the idea of shared purpose. The other drawback is the relative newness of this scale; it has not been tested across a variety of populations to establish a more extensive record of reliability and validity.

### **Moderating Variable**

**War Veteran status.** War Veteran status is defined as people with any deployment experience during OEF/OIF who are not currently active duty. At the start of the survey all participants were asked:

Have you deployed in support of OEF/OIF? Followed by these questions:

- If yes are you currently active duty?
  - Yes=Not eligible for the study.
  - No=Continue with survey.
- If no are you 25 years or older?
  - Yes=Continue with the survey.
  - No=Not eligible for the study.

### **Covariates**

**Stress.** Stress is defined in global terms, focusing on the way global stressors (e.g., not associated with any particular event) are perceived. Stress was measured in terms of the frequency of which a person feels a particular way within the last month through the Perceived Stress Scale (PSS).

This scale is a 14 item scale that has been previously used among military populations. More recently, perceived stress (measured by the PSS) was found to be positively associated with

loneliness (Kuwert, Knaevelsrud, & Pietrzak, 2014) among older military Veterans. The instructions read:

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. (Cohen et al., 1983, p. 394)

The items are rated on a 0-4 Likert scale (0 = Never; 1 = Almost never; 2 = Sometimes; 3 = Fairly often; 4 = Very often). An item example is, "In the last month, how often have you been upset because of something that happened unexpectedly?" (Cohen et al., 1983, p. 394). The instructions, items, and response scale remained the same. See Appendix 3 for full scale. The score is the sum of all items and higher scores indicate greater stress. A mean score across items was also calculated.

The scale was developed to "tap the degree to which respondents found their lives unpredictable, uncontrollable, and overloading" (Cohen et al., 1983, p. 387). The original scale was tested among "three samples, two college students and one of a more heterogeneous community group" (Cohen et al., 1983, p. 387). Coefficient alphas scores

were .84, .85, and .86, and test re-test for student sample was .85 and .55 for the community group.

**Social support.** Social support is defined as the “process of interaction in relationships which improves coping, esteem, belonging, and competence through actual or perceived exchanges of physical or psychosocial resources” (Gottlieb, 2000, p. 28) and was measured in terms of social isolation through the Multidimensional Scale of Perceived Social Support (MSPSS).

This scale is a 12-item scale that has been commonly used within military populations. For example, military service members who report greater social support (measured by MSPSS) also tend to report fewer trauma symptoms (Fischer, Sherman, Han, & Owen, 2013). In a study among older Veterans with heart failure, higher scores on the MSPSS were related to higher coping scores (using the Brief COPE) (Pauker, Le Maire, & Cully, 2009).

The instructions read: “We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement”. The items are rated on a 1-7 point Likert scale (1 = Very strongly disagree; 2 = Strongly disagree; 3 = Mildly disagree; 4 = Neutral; 5 = Mildly agree; 6 = Strongly agree; 7 = Very strongly agree) (After Deployment, 2013). An item example is, “There is a special person who is around when I am in need”. The instructions, items, and response scale remained the same. See Appendix 4 for full scale. The score is an average of all items and higher scores indicate greater perceived social support.

The scale was developed using principal component and then confirmatory factor analysis and researchers conducted studies demonstrating good internal reliability ( $\alpha=.84$  to  $.92$ ), stability (test-retest $=.72$  to  $.85$ ), and construct validity (significant correlations with Hopkins Symptom

Checklist depression and anxiety subscales) (Zimet et al., 1990).

**Active coping.** Coping is defined as the most prominent way a person deals with challenges and difficulties and was measured using the active coping items from the Brief COPE (Carver, 1997). Active coping was measured with two items ( $\alpha = .68$ ): “I’ve been concentrating my efforts on doing something about the situation I’m in.” and “I’ve been taking action to try to make the situation better”. The instructions read “We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Then respond to each of the following items by blackening one number on your answer sheet for each, using the response choices listed just below. Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.” Items are rated on a 1-4 point Likert type scale (1 = I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot).

The active coping instructions were adapted to read: “We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. This questionnaire asks you to indicate what you generally do and feel when you experience stressful events. Obviously, different events bring out somewhat different

responses, but think about what you usually do when you are under a lot of stress. Then respond to each of the following items by using a 1-4 scale (1 = I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot). Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. Please answer every item. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.” See Appendix 5 for scale. The score is a sum of the two items and higher scores indicate greater coping. A mean score across items was also calculated.

Demographic covariates included age, ethnicity, and marital status.

**Age.** Age was provided by participants in numerical value using a dropdown menu: “Please enter your current numerical age”.

**Marital status.** Marital status was a fixed answer question: “Please indicate your current marital status: single, married, separated, divorced, remarried, and widowed.”

**Ethnicity.** The National Institutes of Health (NIH) guidelines were used for collecting data on ethnicity. This was a fixed choice question. “Please answer the following question using the ethnicity you most identify with. I consider myself: Hispanic / Non-Hispanic. My ethnicity is American Indian, Alaskan Native, Asian, African American or Black, Pacific Islander, European American or White.”

### **Descriptive Variables**

The following variables were used to be able to provide some description of the sample.

**Organization type.** Participants were asked to categorize the organization they were describing for shared sense of purpose. This was a fixed choice question with the following instructions and choices: “Please choose the answer that best categorizes the organization you are currently involved with: Charitable organization; Religious organization; Fraternal/social organization; School based organization; Your employment; and Other” (text entry).

**Military specific demographic characteristics.** Military specific demographics were designed to capture the approximate length of service, length of time since separation from the military, and time since return from last deployment.

*Length of military service.* How long was your service in the military? Please answer in terms of number of years and months. \_\_\_\_ Years \_\_\_\_ Months.

*Length of time since separation from the military.* How long ago did you separate from the military? Please answer in terms of number of years and months. \_\_\_\_ Years \_\_\_\_ Months.

*Time since return from last deployment.* How long ago did you return from your most recent deployment? Please answer in terms of number of years and months. \_\_\_\_ Years \_\_\_\_ Months.

**Depression.** Justifiably, a lot of the literature on combat Veterans’ return focuses on documenting and responding to psychopathology reaching levels of diagnosable mental illness. According to the House Committee on Veterans Affairs (HCVA), over the last few years record numbers of Veterans are returning from combat, and more than 43% experience diagnosable mental health disorders (Edwards, 2012; HCVA, 2013). Upon return many Veterans seek care for

mental health, and often Veterans leaving active duty find this care through the Veterans Affairs (VA) system. According to the US Department of Veterans Affairs (DoVA), from 2006 to 2010, approximately 2.1 million unique Veterans sought mental health care, the number progressively increasing each year (unique defined as Veterans that sought care during 2006-2010 only being counted once) (2012, p. 1). Commonly diagnosed mental health disorders include, depression, post-traumatic stress disorder (PTSD), and generalized anxiety disorder (GAD) (Beder, Coe, & Sommer, 2011; Bryan, Hernandez, Allison, & Clemans, 2013; Bush, Skopp, McCann, & Luxton, 2011; Cornum et al., 2011; Demers, 2011; Lerner & Blow, 2011; Melamed & Castro, 2011; Straits-Tröster et al., 2011a; Straits-Tröster et al., 2011b; Stecker, Forney, & Sherbourne, 2011; Taylor et al., 2011). Therefore, a measure of depression was included to gain a general sense of the mental health status of the participants for descriptive purposes.

Depression is defined as exhibiting symptoms of disinterest in and / or inability to conduct daily tasks and having a low-spirited mood. Depression was measured using the Patient Health Questionnaire - 9 (PHQ-9). The PHQ-9 was developed from the original and longer PHQ and is designed to assist with professional depressive disorder diagnoses as well as grade depressive symptom severity (Kroenk & Spitzer, 2002). However, it is a commonly used scale to determine general depressive mood without the determination of a clinical diagnosis. The instructions read, "Over the last 2 weeks, how often have you been bothered by any of the following problems" and the measure is rated on a 0-3 Likert type scale (0 = Not at all; 1 = Several days; 2 = More than half the days; 3 = Nearly every day). An example item is "Little interest or pleasure in doing things". The instructions and items were not adapted. See Appendix 6 for full scale. The score is single

sum score and higher scores indicate greater levels of depressive symptoms. A mean score across items was also calculated.

The PHQ-9 has been found to have good internal reliability ( $\alpha = .89$  and  $.86$ ). Additionally, a panel of providers interviewed patients which demonstrated criterion validity, to ensure the PHQ-9 was a good measure of depression. Construct validity was determined by comparing PHQ-9 scores to depression symptoms (e.g., functional status, disability days, and symptom-related difficulty). Finally, external validity was demonstrated in a replication study of 3,000 obstetrics-gynecology patients, but showed similar results among smaller more diverse patient populations (Kroenke, Spitzer, & Williams, 2001).

This scale has commonly been used among military populations and a variety of health care settings. The PHQ-9 has been adopted as the standard for depression screening among many health organizations, including the Department of Defense and the Department of Veterans Affairs (Spitzer et al., 2014, p. 247).

### **Power Estimate**

The moderating variable was categorical, which can influence power because of the lack of variance in responses. Therefore, special attention had to be paid to power. Aguinis (2004) provides the factors that influence power when conducting a moderated multiple regression (MMR) in order of importance: moderating effect magnitude, total sample size, sampling restriction on X, and measurement error, although it is noted that this may not be the case for every research project (p. 113). The author provides a table of power values ( $\alpha = .05$ ) based on four assumptions: 1) variance for X and Y are 1 in each of the groups (i.e., correlation coefficients equal regression coefficients) 2) sample size is equal across the groups 3) there are no sampling

restrictions on X, and 4) reliability is .80 for X and Y in each of the groups (Aguinis, 2004, p. 114). X represents the predictors in the regression equation and Y the outcome. The table shows,

... that for what seems to be a fairly typical sample size of 120 in several research domains, a difference of at least .5 in regression coefficients across groups is needed for MMR to achieve a power of .80 or higher. Considering a difference between regression coefficients of .3, the table indicates that sample size needs to be at least 300 for MMR to reach a power of .80 or higher. (p. 115)

Power is a function of sample size, effect size, alpha level, and standard deviation (distribution) (Shadish, Cook, & Campbell, 2002). Therefore, based on the work of Aguinis (2004) on MMR the alpha level was set at .05, previous research shows moderate correlations among both the general and military population between sense of purpose and well-being (Doenges, 2011). Therefore, a conservative power estimate would be a .2 difference between the Veteran and non-Veteran comparison group, but based on small adaptations outlined in the method section the investigator hypothesized a .3 difference (non-Veteran group = .2; Veteran group = .5). This means a total  $N$  of 320 ( $n = 160$  per group) was required to achieve a power of .82. The achieved  $N$  was 550 (Veteran  $n = 172$ ; non-Veteran  $n = 378$ ).

## Results

### Missing Data

Missing data were minimal among the predictor and outcome variables, ranging from no missing data for shared sense of purpose (SSOP), well-being (SWLS), and active coping (COPE),

to 3% for stress (PSS) and 1% for social support (MSPSS). Descriptive characteristics had missing data ranging from 2% for negative affect (NegPANAS), 2.5% for depression (PHQ-9), 3% for PTSD (PCL-C), to 3.5% for positive affect (PosPANAS). Finally, demographic variables had missing data ranging from no missing data for marital status to less than 1% for age and both components of ethnicity.

The following decisions were made for the scales containing missing data. For any scale missing data, a mean score across the non-missing items was calculated if at least 80% of data for the items comprising the scale were present. The stress scale (PSS) was computed for an individual if at least 11 of the 14 items were present. Seventeen individuals had scores calculated with one item missing, while one participant was missing two items. None were excluded. The social support scale (MSPSS) was computed for an individual if at least 10 of the 12 items were present. Six individuals had scores calculated with one item missing. None were excluded. The final sample with complete data for hypothesis analyses (i.e., complete data on the shared sense of purpose, well-being, stress, social support, and coping scales) was 550 (Veteran  $n = 172$ ; non-Veteran  $n = 378$ ).

The following decisions were made for the scales used for descriptive purposes. The depression scale (PHQ-9) was computed for an individual if at least seven of the nine items were present. Fourteen individuals had scores calculated with one item missing. None were excluded. The PTSD scale (PCL-C) was computed for an individual if at least 14 of the 17 items were present. Fifteen individuals had scores calculated with one missing item, two individuals had scores calculated with two missing items, and one individual did not have a score calculated because all 17 items were missing. The one case missing all items was excluded. The affect

scales (PANAS) were computed for an individual if at least eight of the 10 items were present. For the positive affect scale, 16 individuals had scores calculated with one missing item, one individual had a score calculated with two missing items, and two individuals did not have scores calculated because one person was missing three items, and one person was missing 10 items. The cases missing three and 10 items were excluded. For the negative affect scale, nine individuals had scores calculated with one missing item, two individuals had scores calculated with two missing items, and one individual did not have a score calculated because there were 10 missing items. The case missing 10 items was excluded. For descriptive analyses using the above measures a total of 4 cases were excluded.

### **Descriptive Statistics**

*Demographic variables.* The mean age of the sample was 34. The youngest reported participant was a 21 year old Veteran and the oldest was a 73 year old non-Veteran. There was one missing case for age. The majority of participants (82%) were in the 25-41 age range. The majority of the sample reported being non-Hispanic (92%) and European American or White (82%), there was one missing case for both components of ethnicity. Fifty-five percent of the participants reported being single and 38% reported being married (see Tables 1-2).

All of the military participants had experience in OEF/OIF. The reported location of experience was Iraq (41%), Afghanistan (37%), another overseas country (16%), and within the US (6%). One-hundred thirty five of the military participants (79%) reported their deployment was a combat deployment. The average time served in the military was seven years, average time since separated from the military was four years, and average time since

last deployment was five years. The majority of the participants served in the Army (55%) followed by the Air Force (18%) and Marine Corps (15%). There were no missing data for the military specific demographic variables (see Tables 3-4).

***Sample representativeness.*** This sample is a convenience sample, and the results cannot be generalized. However, the data can be compared to available norms to get a sense of sample representativeness. A Veteran profile of active duty service members, established by the National Center for Veterans Analysis and Statistics (2012), was used as the comparison. The sample as compared to the Veteran profile is as follows (the sample information is presented first, followed by the profile information in parentheses): 100% male (86.4% male and 14.6% Female); 82% (69.7%) European American or White, 8% (16.8%) African American or Black, 7% (3.7%) Asian, 2% (1.5%) American Indian or Alaska Native, 1% (1%) Native Hawaiian or Other Pacifica Islander, 4% (4.4%) missing (other / unknown), and 2.8% Multi-racial (Veteran Profile only category) (DoVA, 2012, p. 8). Although no data were collected on the socio-economic status of this sample, the MTurk forum has been criticized regarding its accessibility to those with a lower SES both in terms of computer and internet access and the complexity of the user interface (Khanna, Ratan, Davis, Thies, 2010).

***Scale characteristics of revised WAMI.*** Exploratory factor analysis (EFA) was conducted to examine the structure of and relationship among the items of the WAMI because of the adapted language in the instructions and the three items developed to capture the shared component of purpose. An EFA with Promax rotation was conducted using the 13 adapted WAMI items. The KMO measure of sampling adequacy was .93, above .60

indicating data were sufficient for EFA (Field, 2009). The measure of Bartlett's test of sphericity was significant  $\chi^2(78) = 4614.51, p < .01$ , which supports that there were patterned relationships between the items (Field, 2009). Finally, using Kaiser's criteria of eigenvalue  $> 1$ , there were two factors, (Factor 1 = 7.22; Factor 2 = 1.12), with Factor 1 explaining 55.56% of the variance and Factor 2 explaining 8.65% of the variance, the two factors explaining a cumulative variance of 64.21%. While the criteria of Eigenvalues suggested a two factor solution, an analysis of the scree plot supported a one-factor solution (see Table 5).

Examination of items indicated that the original 10 items from the WAMI loaded most highly on Factor 1, and the additional items developed to assess the shared nature of the group experience loaded most highly on Factor 2. A one-factor solution was selected to represent shared sense of purpose (SSOP). This decision was made based on the fact that the EFA scree plot point of inflexion indicated a one-factor solution, and the high correlation between Factors 1 and 2 ( $r = .74$ ). Conceptually, this also allowed the use of a single scale that contained items representing both "purpose" and the sense of something "shared". All 13 items were retained, resulting in a Cronbach's alpha of .93. This suggests high internal consistency (see Table 6).

***Internal consistency and descriptive statistics of predictor and outcome variables.***

The internal consistency scores for the scales are similar to those reported in previous research. The SSOP ( $\alpha = .93$ ), SWLS ( $\alpha = .94$ ), PSS ( $\alpha = .85$ ), MSPSS ( $\alpha = .94$ ), and COPE ( $\alpha = .81$ ), all had reasonable Cronbach's alpha scores demonstrating good internal consistency (see Table 6). The mean scores and standard deviations for the scales were as follows: SSOP ( $M = 3.93, SD = .73$ ), SWLS ( $M = 4.54, SD = 1.60$ ), PSS ( $M = 1.75, SD =$

.59), MSPSS ( $M = 5.38$ ,  $SD = 1.17$ ), and COPE ( $M = 3.08$ ,  $SD = .75$ ). There was variance for each of the scales and no obvious floor or ceiling effects. However, generally speaking the mean scores seem to reflect a fairly low stress, high purpose, overall well population that has social support.

**Data distribution.** Data screening procedures were followed based on recommendations of Tabachnick and Fidell (2013). To screen for univariate outliers, z scores were calculated. Very few z scores greater than 3.3 emerged, and none were among variables included in hypothesis-testing analyses. Next, a Mahalanobis distances analysis was conducted for the variables to be included in the hypothesis testing analyses to determine if there were any problematic multivariate outliers. The test indicated that there were a few potentially problematic multivariate outliers with scores over 25 [Barnett and Lewis (1978) (as cited in Field, 2009)]. In total, there were 22 cases with a Mahalanobis Distance of above 25. Each case was reviewed. There were extreme scores on some of the scales but nothing appeared particularly unusual (i.e., some participants had a perfect score on a scale one way or the other but then did not on other scales). The scatterplots were then reviewed, and none of the cases seemed isolated or discontinuous from the linear patterns in ways that warranted exclusion. Based on this review, none of the 22 cases were removed.

To review the normality of the data, a skewness test was conducted by dividing the skewness value by the standard error for skewness, creating a z score for skewness. If the score is greater than 3.3 then further examination is warranted (Tabachnick & Fidell, 2013). The same test was conducted for Kurtosis. There were a few scales with skewness and kurtosis scores that were potentially problematic.

Log and square root transformations were conducted. The log transformation was applied to the shared sense of purpose (SSOP) and social support (MSPSS) variables, and the square root transformation to the well-being (SWLS) variable. The hypothesis testing analyses were run with both the non-transformed variables and the transformations. Both sets of analyses resulted in similar patterns of results. For the purpose of interpretation, the non-transformed variable results are reported below.

### **Group Comparison: Veteran versus Non-Veteran**

The Veteran and non-Veteran sample seemed similar on demographic characteristics. The mean age of Veterans and non-Veterans was similar, 33.13 and 34.57 respectively. The majority of both Veterans and non-Veterans reported being non-Hispanic (92%; 93%) and European American or White (83%; 81%), and the majority of participants reported being single (47%; 59%); closely followed by married (45%; 35%). It was unclear if the group scores were significantly similar in regard to the variables used for hypothesis testing and additional measures used to provide fuller descriptions of the profiles of Veterans and non-Veterans. Veterans' scores were higher on shared sense of purpose (SSOP); well-being (SWLS); stress (PSS); active coping (COPE); while non-Veterans' scores were higher on social support (MSPSS) scale. Veterans' scores were higher on depression (PHQ-9), PTSD symptoms, (PCL-C), and positive and negative affect (PANAS). Multivariate analysis of variance (MANOVA) analyses were conducted to determine the significance of group differences.

In order to determine if the Veteran and non-Veteran groups significantly differed with respect to the five measures used in hypothesis testing (i.e., shared sense of purpose, well-being, stress, social support, and coping), the three demographic variables (i.e., age, ethnicity, and marital

status), and the four measures used to better understand the mental health of the sample (i.e., depression, PTSD, positive affect, and negative affect) a multivariate analysis of variance (MANOVA) was conducted. Homogeneity of variance and covariance were violated (Box's  $M = 140.13, p = .002$ ), so Pillai's Trace is reported instead of Wilks' Lambda. Multivariate results suggested that there were significant differences by Veteran status [Pillai's Trace = .14,  $F(13, 533) = 6.60, p < .01, \eta^2 = .14$ ].

Follow-up univariate analyses revealed no significant group differences across the five measures used in hypothesis testing: shared sense of purpose, well-being, stress, social support, and coping (all  $p$ 's  $> .05$ ). There were also no significant differences regarding age, ethnicity, and positive affect. However, ANOVA's revealed the groups significantly differed in regard to marital status [ $F(1) = 5.50, p = .02, \eta^2 = .01$ ], Veterans were more likely to married ( $M = .45, SD = .50$ ) than non-Veterans ( $M = .35, SD = .48$ ). Additionally, ANOVA's revealed the Veteran and non-Veterans significantly differed on scores of depression [ $F(1) = 10.23, p < .01, \eta^2 = .02$ ], PTSD [ $F(1) = 42.90, p < .01, \eta^2 = .07$ ], and negative affect [ $F(1) = 26.54, p < .01, \eta^2 = .05$ ]. Veterans were more likely to have higher levels of depression ( $M = .97, SD = .79$ ) than non-Veterans ( $M = .75, SD = .69$ ), higher levels of PTSD ( $M = 2.43, SD = 1.00$ ) than non-Veterans ( $M = 1.87, SD = .88$ ), and report higher levels of negative affect ( $M = 2.15, SD = .96$ ) than non-Veterans ( $M = 1.75, SD = .80$ ) (See Table 7).

In summary, there were no significant differences between groups on demographic and descriptive variables, except on marital status. There were no significant differences between groups with respect to the five measures to be used in hypothesis testing (i.e., shared sense of

purpose, well-being, stress, social support, and coping). There were significant differences on negative affect, depression, and PTSD.

### **Bivariate Correlations**

Pearson correlations were run to identify multicollinearity among the variables. All the variables were intercorrelated in directions that were consistent with previous literature and with hypothesized relationships (see Tables 8-9).

The hypothesized predictor was shared sense of purpose (SSOP), the moderator Veteran status, and the outcome well-being (SWLS). The hypothesized covariates were stress (PSS), social support (MSPSS), and active coping (COPE). The demographic variables hypothesized to have a potential influence were age, ethnicity, and marital status. Finally, depression (PHQ-9), PTSD (PCL-C), and affect (PANAS) were also examined to better understand the general reported mental health of the participants.

*Intercorrelations among predictor variables, covariates, and descriptive variables.* As expected shared sense of purpose was significantly negatively correlated with stress ( $r = -.21, p < .01$ ), depression ( $r = -.17, p < .01$ ), PTSD ( $r = -.12, p < .01$ ), and negative affect ( $r = -.09, p < .05$ ), and positively with social support ( $r = .43, p < .01$ ), active coping ( $r = .25, p < .01$ ), and positive affect ( $r = .51, p < .01$ ). Stress, coping, and social support were also significantly correlated: stress negatively with social support ( $r = -.40, p < .01$ ) and coping ( $r = -.09, p < .05$ ); and coping positively with social support ( $r = .17, p < .01$ ).

Social support and coping were negatively correlated with the mental health measures included to describe the sample. Social support and coping were negatively related to depression ( $r = -.39, p < .01$ ;  $r = -.02, p = .72$ , respectively) and PTSD ( $r = -.35, p < .01$ ;  $r = -.01, p = .84$ ),

while positively correlated with positive affect ( $r = .42, p < .01$ ;  $r = .28, p < .01$ ). Social support was negatively related to negative affect ( $r = -.26, p < .01$ ), however, coping had a non-significant positive relationship with negative affect ( $r = .07, p = .11$ ). Veteran status (i.e., being a Veteran) was significantly positively correlated with depression ( $r = .13, p < .01$ ), PTSD ( $r = .27, p < .01$ ), and negative affect ( $r = .21, p < .01$ ). No correlations were high enough to suggest problems with collinearity.

***Outcome variables, covariates, and descriptive variables.*** Well-being was significantly correlated with shared sense of purpose ( $r = .32, p < .01$ ). It was also significantly negatively correlated with stress ( $r = -.54, p < .01$ ) and significantly positively correlated with social support ( $r = .59, p < .01$ ) and active coping ( $r = .09, p < .05$ ). Finally, well-being was significantly negatively correlated with depression ( $r = -.50, p < .01$ ), PTSD ( $r = -.40, p < .01$ ), and negative affect ( $r = -.34, p < .01$ ), while significantly positively correlated with positive affect ( $r = .51, p < .01$ ).

Age, ethnicity, and marital status were not significantly correlated with the outcome variable, well-being. Therefore these hypothesized potential covariates were not included in the regression analyses.

### **Regression Analysis – Hypothesis Testing**

Multiple regression analyses were used to determine the predictive value of shared sense of purpose and to test the moderation effect of Veteran status on the relationship between shared sense of purpose and well-being. The mean centered score of shared sense of purpose was used in the following analyses.

**Hypothesis 1.** The hypothesis that shared sense of purpose is a significant positive predictor of well-being when controlling for stress, social support, and coping was supported. The variables were entered hierarchically into a regression analysis. The first block included predictors that have been related to well-being in past research and needed to be controlled for: stress, social support, and coping. The second block included the proposed predictor of shared sense of purpose. Controlling for stress ( $\beta = -.36, p < .01$ ), social support ( $\beta = .41, p < .01$ ), and coping ( $\beta = -.02, p = .46$ ), shared sense of purpose was a significant predictor of well-being ( $\beta = .08, p = .04$ ). Participants who reported greater shared sense of purpose also tended to report greater well-being than those who reported less shared sense of purpose. The regression model with all the predictors produced  $R^2 = .46, F(4, 545) = 114.10, p < .01$ . The first model accounted for 45% of the variance and the additional predictor increased the variance accounted for minimally (46%). However, adding the predictor of sense of purpose did significantly improve the ability to predict well-being ( $p = .04$ ) (see Table 10).

**Hypothesis 2.** The hypothesis that Veteran status moderates the relationship between shared sense of purpose and well-being, while controlling for stress, social support, and coping, was not supported. The variables were entered hierarchically into a regression analysis. The first block included predictors that needed to be controlled for: stress, social support, and coping. The second block included shared sense of purpose (predictor), Veteran status (moderator), and the interaction term of shared sense of purpose and Veteran status. Controlling for stress ( $\beta = -.37, p < .01$ ), social support ( $\beta = .41, p < .01$ ), and coping ( $\beta = -.03, p = .45$ ), the main effect of Veteran status ( $\beta = .08, p = .02$ ) and the main effect of sense of purpose ( $\beta = .10, p = .02$ ) were significant. However, the interaction term was not

significant ( $\beta = -.05, p = .23$ ). The regression model with all the predictors produced  $R^2 = .46, F(6, 543) = 77.89, p < .01$ . The first model accounted for 45% of the variance and the additional model increased the variance accounted for minimally (46%). The non-significant interaction results did not support the hypothesis that Veteran status moderates the relationship between shared sense of purpose and well-being, while controlling for stress, social support, and coping (see Table 11).

Special attention was paid to rule out possibility of multicollinearity. The collinearity statistics did not reveal any obvious problems: The Durbin-Watson scores were 2.002 (H1) and 2.006 (H2), meaning the assumption of independent errors holds [values less than one or greater than three are of concern (Fields, 2009, p. 236)]. The Variance Inflation Factor (VIF) scores were reasonably close to one, the tolerance scores were greater than .2, and there were no large variance proportions (Fields, 2009, p. 242). Four percent (21 cases) of all cases had standardized residuals less than negative two or greater than two, which falls within a reasonable expectation of cases to have standardized residuals, meaning it appears the sample conforms to what is generally expected for a reasonably accurate model (Fields, 2009, p. 244). A final check was conducted using Cook's Distance, Mahalanobis Distance, and the Centered Leverage value statistics. For Cook's Distances values that are greater than 1 are of concern. For the centered leverage statistic an average was calculated using  $(k+1/n)$  (6 predictors +1/550 = .013), scores that are 2 (.025) to 3 (.038) times large than this are of concern. For the Mahalanobis distance, values of 25 or over are of concern. Using the casewise diagnostic within the regression analysis conducted through SPSS 21 cases were identified for needing review. However, only one of these cases was outside of the

limits (centered leverage and Mahalanobis distance) and was cause for further review. After review, the case was left in the analyses because of no obvious error of reporting or data entry.

### **Discussion**

The military, especially within combat environments, socializes military personnel to value sense of purpose, commitment to mission, and loyalty to one's comrades (Caplin & Lewis, 2011; Demers 2011; Doenges, 2011; Early, 2011; Osran et al., 2010). Upon leaving the military, Veterans often enter environments where these values of purpose and solidarity may not be as highly valued. The absence of such shared sense of purpose might create a sense of loss for Veterans. Given these suppositions, it was hypothesized that shared sense of purpose would be more predictive of well-being for Veterans than for non-Veterans. This study was designed as a first step to test this theory through a Veteran and non-Veteran group comparison study of shared sense of purpose in non-military environments. The overarching research question was how shared sense of purpose impacts the well-being of Veterans in different non-military environments.

### **Role of Shared Sense of Purpose**

Shared sense of purpose was related positively to well-being, as well as to several other predictor variables as expected. Those who experienced greater shared sense of purpose also reported greater well-being, social support, and coping and less stress. Additionally, those who experienced greater shared sense of purpose also reported less depression, PTSD, negative affect, and more positive affect. This reinforces the fact that shared sense of purpose does have a relationship with more commonly studied variables that are related to mental health and well-being. Understanding how these relationships function is important to determine if shared sense of

purpose is a factor that can be a core element of interventions and programs geared toward easing reentry, reintegration, and transitions among military personnel.

Hypothesis 1 was supported, in that shared sense of purpose was a significant predictor of well-being even after controlling statistically for stress, social support, and coping. Although the overall model explained 46% of the variance in well-being, the addition of shared sense of purpose made only a marginal contribution. Despite having a moderate correlation with well-being at the bivariate level ( $r = .32, p < .01$ ), shared sense of purpose accounted for only an additional 1% of the variance when entered last in the regression equation.

Hypothesis 2 was not supported. Veteran status did not moderate the relationship between shared sense of purpose and well-being when controlling for stress, social support, and coping. When the interaction term (SSOP \* Veteran status) was included, it did not significantly add to the prediction of well-being. In this sample, shared sense of purpose was not more strongly related to well-being for Veterans than it was for non-Veterans.

There are many potential reasons why the relationship of shared sense of purpose was not more strongly related to well-being in these analyses, including issues related to measurement, sampling, and study design.

**Measurement of shared sense of purpose.** The use of an adapted scale to assess shared sense of purpose may have been limited by the item content as well as by the instructions for selecting the organization / group that the participants were asked to rate.

In terms of item content, the Work as Meaning Inventory was chosen because its implied action-oriented purpose, even if referring only to the work context. The scale was adapted to refer to contexts beyond work organizations. Additional items were created to capture the aspect of

having shared purpose. The adaptations were designed to try to capture the feeling of satisfaction coming from having a shared, action-oriented goal with a group of people through involvement in an organization or group.

Exploratory factor analysis was conducted to examine how these adaptations may have impacted the psychometric properties of the scale. The results were not definitive and could be interpreted as supporting either a one or two factor solution. As a two factor solution, the original WAMI items clustered in Factor 1, and the additional items regarding camaraderie and the “shared” nature of the experience clustered in Factor 2. In previous research the WAMI was considered to have three subscales (i.e., positive meaning, meaning making, and greater good motivations) as well as an overall meaningful work score. This was supported through both exploratory and confirmatory factor analysis (Steger et al., 2012). The ambiguous factor solution in this study may indicate that the adapted version of the Work as Meaning Inventory did not accurately capture shared sense of purpose, and / or shared sense of purpose is not a unitary construct. Although the WAMI is anchored in a context, it does not include aspects of shared purpose, nor does it include items that explicitly target specific action-oriented goals. The adaptations to the items may not have sufficiently created a unitary scale that adequately captures this “shared sense of purpose”.

Another measurement issue involved the potential source of shared purpose. Which organizations should one have participants rate in regard to shared sense of purpose? Should the focus be on organizations where participants spend the most time or settings where the participants find their greatest shared sense of purpose? Participants were asked to consider all the organizations or groups (work, school, or volunteer related) in which they were involved, and

select the one that gave them the most satisfaction. The intention was to make sure that the study erred in the direction of not missing any shared sense of purpose that the individuals experienced. It is possible that this resulted in selection of organizations (e.g., volunteering) where satisfaction was high, but involved only small amounts of the individual's time. It is unclear whether different instructions would have resulted in different results.

Surprisingly, there were few people at the lower end of the shared sense of purpose distribution. Five percent of the sample scored 2.5 or lower on a 1-5 scale (1 = Absolutely untrue; 2 = Mostly untrue; 3 = Neither true nor untrue; 4 = Mostly true; 5 = Absolutely true), leaving the other 95% scoring 2.6 or higher. A total of 50% of the sample scored four or higher. This negatively skewed data led to log and square root transformations for data analyses, but the transformations did not change the pattern of results. The high scores on shared sense of purpose may have been a reflection of the recruitment materials. The title of the study that appeared to MTurk participants was "20-30 minute study on well-being" and the brief description included the statement "We are conducting an academic survey about what influences your well-being. We are working to better understand how you participate in the organizations you are a part of and how supported you feel by your family and friends". This wording may have prompted those with higher sense of well-being and support that are involved in groups to complete the study, and possibly deterred those who felt otherwise.

**Sampling.** As a whole, it appears that this sample had relatively high sense of well-being, shared sense of purpose, positive affect, and social support; and relatively low stress, negative affect, and PTSD. However, the depression scores seemed to be slightly higher than indicated in previous research among Veterans.

*Veterans versus non-Veteran groups.* Overall, the Veteran sample was significantly different from the non-Veteran sample. However, the strongest differences were on the measures of PTSD symptoms and depressed mood, which was expected. Veterans actually showed slightly higher scores on a variety of psychosocial measures: well-being, shared sense of purpose, coping and positive affect, but there were no significant differences. There were also no significant univariate differences between the Veteran and non-Veteran groups for stress and social support. However, Veterans' were more likely to be married, and their scores were significantly higher on depression, negative affect, and PTSD.

As mentioned, these differences were expected and match what is seen in existing research. In a Veteran profile established by the National Center for Veterans Analysis and Statistics, male Veterans were more likely to be married than male non-Veterans (DoVA, 2012, p. 8). In regard to mental health, generally speaking, Veterans often have higher risks of depression, anxiety, suicidal ideation, anger, and PTSD as compared to the general population (Beder et al., 2011; Bush et al., 2011; Cornum et al., 2011; Demers, 2011; Lerner & Blow, 2011; Melamed & Castro, 2011; Straits-Tröster et al., 2011b; Stecker et al., 2011; Taylor et al., 2011).

*Veteran sample versus descriptions of Veterans in the literature.* Many of the studies of Veterans described in the literature involve individuals seeking or receiving treatment. How would one characterize the self-reported health of the sample of Veterans in this study? The Veteran sample seems fairly healthy as compared to some described in the literature, along the dimensions of well-being, negative affect, and PTSD. For example, in comparison to a large scale ( $N = 4184$ ) Centers for Disease Control (CDC) study among the general population, this sample's well-being scores seem comparable. When the CDC study and this study are compared on a similar seven

point scale, the measures are comparable, with means of 4.84 and 4.56 respectively.<sup>1</sup> Although the CDC study was not specifically among a military population, and limited information on the CDC study data does not allow for significance testing, it does serve as a good way to situate well-being scores, and provides a good comparison for the four item SWLS.

As compared to Veterans in a university setting ( $N = 137$ ), this sample's Veterans' well-being scores seem higher, and negative affect scores lower (Doenges, 2011). The average well-being score from Doenges seems comparable to that in this study, 4.42 and 4.6, respectively.<sup>2</sup> The sum average of negative affect was 20.36 ( $SD = 7.32$ , range = 0-50), for this study it was 21.44 ( $SD = 9.64$ , range 0-50). This study sample seems to report greater levels of well-being and negative affect, however t-test calculations did not reveal significant differences.

Negative affect scores and PTSD scores seemed markedly lower than scores among Veterans diagnosed with PTSD ( $N = 74$ ) (Vella, Milligan, & Bennett, 2013). The sum average negative affect score was 26.59 ( $SD = 7.87$ ), which is significantly higher than the 21.59 ( $SD = 9.60$ ) in the current study. Vella et al. (2013) used the military version of the PTSD Check List, the sum score average was 59.43 ( $SD = 13.55$ ). This study used the civilian version, the sum score average was 41.05 ( $SD = 17.09$ , range = 17-85). However, it is hard to find a comparison score for the civilian version of the PCL in military populations. The primary difference is the military version uses "stressful military experiences" as an anchor where the civilian version uses

---

<sup>1</sup> For the CDC study, the mean well-being score was 3.46 (1-5 scale), and for this study it was 4.56 ( $SD = 1.60$ , range = 1-7) [Veterans: 4.62; non-Veterans: 4.51] (Barile et al., 2013). This study used the original 1-7 Likert scale, and Barile et al. (2013) used a 1-5 Likert scale. The five point scale was converted to a seven point scale [ $(7/5) * 3.46$ ], therefore the CDC study mean could be estimated to be approximately 4.84 on a 1-7 scale, as compared to 4.56.

<sup>2</sup> The mean from Doenges was based upon a five item SWLS, while the mean for this study was based on a four item SWLS.

“stressful experiences” (Wilkins, Lang, & Norman, 2011). As expected, the Veteran sample in this study seems considerably psychologically healthier than the profiles of service personnel recruited in studies of individuals with diagnosable disorders.

Depression seemed to be a bit higher in this sample, but still falling in the mild depression range (5-9) as compared to Veterans being seen in primary care medical clinics ( $n = 68$ ), and those being seen in psychiatric clinics ( $n = 87$ ) (Kroenke & Spitzer, 2002; Wilkins et al., 2011). For this study the sum average score was 8.54 ( $SD = 6.95$ , range = 0-27). Among the primary care patients it was 6.93 ( $SD = 6.42$ , range = 0-27) and for the psychiatric clinic 8.49 ( $SD = 6.28$ , range = 0-27). However, t-test calculations did not reveal significant differences.

The intended sample was Veterans who were not specifically recipients of mental health services, or those with diagnosable psychiatric disorders. It was assumed that Veterans across the mental health spectrum could be experiencing some discomfort associated with the transition from a military career. The sampling goal was to purposely not tap into a population limited to diagnosable mental health disorders, because the theory was shared sense of purpose should be relevant for those without mental health diagnoses. This seems to have been achieved.

*Well-being and time since separation.* The study expected to capture those who still may be struggling with finding an outlet for shared sense of purpose. However, on average it had been four years since this Veteran sample separated from the military, and five years since the last deployment. This may be a population that has had time to reconnect to their community and find new outlets for shared sense of purpose. One possibility is that the power of shared sense of purpose might be strongest in Veterans who were most recently separated from military service. The range in time since separation was less than one year to over 20 years.

To test this, two analyses were performed. First, a regression analysis was conducted that assessed whether time since separation from the military moderates the relationship between shared sense of purpose and well-being. Although sense of purpose showed a significant positive relationship with well-being, the interaction term of purpose and time was not significant.

Second, a comparison of the shared sense of purpose and well-being correlation was conducted among those recently separated versus those whose separation was more distant. Although the previously described regression analysis would have revealed linear moderating effects of time, it would not necessarily have revealed more non-linear moderating effects. Therefore, a median split of the Veteran sample was done with the time since separation to create two time points, recently separated ( $\leq 3$  years) and not recently separated ( $> 3$  years). If time had a significant (and especially nonlinear) effect on the shared sense of purpose and well-being relationship, one would expect the correlations to be significantly different. This was not the case.

In summary, the supposition that time since separation might moderate the sense of purpose – well-being relationship seems plausible. However, post-hoc analyses in this sample showed no evidence of such a moderating effect.

**Cross-sectional design: Reciprocal processes.** The cross-sectional design of this study made it impossible to examine reciprocal influences among predictor variables, or changes in shared sense of purpose over time.

Stress, social support, and coping accounted for a lot of variance in well-being as previous research has indicated (Doenges, 2011; Harms et al., 2013; Peltzer et al., 2009; Seligowski et al., 2012; Skomorovsky, 2013; Smith et al., 2013; Staufenbiel et al., 2013; Wells et al., 2014). Shared sense of purpose was correlated with stress, social support, and coping. When controlling for these

variables, shared sense of purpose does not contribute much additional unique variance. It is important to note that the standardized beta weights for shared sense of purpose in the hypothesis testing indicate that it had a stronger association with well-being than coping, and a stronger relationship than might be implied just looking at the unique variance accounted for by shared sense of purpose. However, the minimal unique variance contributed by shared sense of purpose might be a result of shared sense of purpose having an indirect effect on well-being through its influence on stress, social support, and coping. Alternatively, shared sense of purpose might be influenced by these other constructs. It cannot be determined in this study. Longitudinal studies need to be conducted to better understand the direction and type of relationship with stress, social support, and coping, and these studies would also be better to show how changes in shared sense of purpose overtime affect well-being.

**Cross-sectional design: Estimated changes in shared sense of purpose.** One assumption of this study was that Veterans had indeed experienced high levels of shared sense of purpose during military service. To test this, post-hoc analyses were conducted. Veterans were retrospectively asked to consider their shared sense of purpose during their military career. At the end of the survey the Veteran participants were asked to think back on their military service and answer the shared sense of purpose questions again ( $n = 167$ ). The mean score was 4.04 ( $SD = .81$ , range 1-5), compared with a current shared sense of purpose score of 3.98 ( $SD = .78$ , range 1-5). According to t-test calculations these scores were not significantly different. It was expected that there would be a larger difference between the shared sense of purpose scores, because the underlying assumption is the military values shared sense of purpose more than civilian organizations. In fact, as described below, 38% of Veterans had a higher

current sense of shared purpose score. This may be another reflection of need for more research to better define and measure shared sense of purpose, or indicate that in fact many Veterans do find shared purpose outside of military organization which positively impacts their well-being.

It was considered possible that current shared sense of purpose might have the most influence among Veterans who experienced a loss of shared sense of purpose from the military to civilian life. For additional post-hoc analyses, a shared sense of purpose difference score was calculated by subtracting the current shared sense of purpose from the military shared sense of purpose. The range in difference between military shared sense of purpose and current shared sense of purpose ranged from -3.62 to 3.15. Twenty three Veterans (14%) had no change in score, 48% reported a higher military shared sense of purpose score, and 38% reported a higher current shared sense of purpose score. This indicates that 48% of this Veteran sample had a drop in shared sense of purpose and 38% had an increase. To test if change in shared sense of purpose influenced well-being, a regression analysis was conducted. Changes in shared sense of purpose were not significantly related to well-being after controlling for stress, social support, and coping. At least in this sample, there was no evidence that change in shared sense of purpose might better predict well-being than an absolute score of shared sense of purpose among Veterans.

One limitation of the above analyses is the use of a retrospective assessment of sense of purpose. First, Veterans were asked to assess sense of purpose over their military career. This may be a rather complex and lengthy period to assess with a single rating. In addition, the limits of retrospective recall are well known, leading to caution regarding the validity of the military sense of purpose score. All this underscores the need for longitudinal examination of the development and evolution of shared sense of purpose.

**Strengths**

This study had several strengths: a theoretical perspective that approached reintegration as a cultural transition, the use of well-developed measures, and an innovative approach to sampling Veterans.

The most prominent strength of this study was the unique theoretical approach that framed military reintegration as a cultural transition, which complements the commonly used mental health framework. This integrative framework has the potential to lead to a better understanding of the reintegration process that could result in broader and more inclusive interventions. Based on literature that focuses on transitions, it is clear that moving between immersive cultural environments can be distressing. If shared sense of purpose is a key element to making this transition more smoothly, interventions could be modified to take this into account. Although the unique percent of variance accounted for was small, shared sense of purpose was related to well-being, even after controlling for a range of other variables (i.e., stress, social support, and coping).

There is less research among military populations that focuses on the many difficulties associated with general reintegration into a once familiar community after a prolonged period of absence. Many people may be experiencing a range of normal reactions to the experience of a cultural transition that include dealing with stressors related to the general transition between cultures regardless of whether they are, or are not, experiencing diagnosable mental health illness. That is why outcomes from the mental health / illness framework were intentionally not the outcomes of this study, instead trying to focus on well-being and how someone thrives. This serves as a step toward going beyond looking at personal characteristics of the individual (e.g., mental health status) and trying to look at the expectations and opportunities of the settings of

which they are a part. For Veterans, this may mean examining the opportunity to continue to actualize important values such as self-less service, loyalty, and duty.

Second, the study used well-developed measures that have been used previously with Veterans. All predictor variables used in this study have been well-validated. The pattern of relationships are consistent with one would expect from previous literature. The one adapted measure, shared sense of purpose, was developed from a measure that had been used with Veterans in a university setting. As expected, individuals who reported higher levels of shared sense of purpose also reported higher levels of well-being and social support and lower levels of stress. This study presents the first empirical effort to develop a shared sense of purpose scale.

Third, the study used innovative techniques to sample and enroll Veterans. Amazon Mechanical Turk was the recruitment tool. It is an on-line crowdsourcing website that is becoming more commonly used in social science, but not often used to recruit a Veteran sample. To ensure Veteran status a series of screen questions were created.

Veteran status was defined as people with any deployment experience during OEF/OIF who were not currently active duty. Screening questions were developed to validate whether self-reported Veterans could provide information indicative of military service. Results indicated there were significant differences between groups on whether or not the Veteran status questions were answered correctly (see Table 12). This supports the conclusion that these questions seemed accurate at determining Veteran status, and increases the confidence that those reporting to be Veterans are actually Veterans.

Finally, this recruiting technique led to the sample size being above what was estimated as minimally required by power analysis. Based on the power analysis the minimum number of

participants needed was 320 (160 per group). For this study 550 complete cases were used for hypothesis analyses, and the smaller group of Veterans still exceeded the minimum requirement ( $n = 172$ ).

### **Limitations**

This study had limitations: the cross-sectional nature of the design and sampling strategies that may have resulted in a restricted range in shared sense of purpose.

The cross-sectional design limits the ability to infer the direction of the relationship between shared sense of purpose and well-being. The design of the study does not help answer the question of whether people in the military have higher shared sense of purpose than civilians, only if shared sense of purpose is more important to well-being among Veterans and non-Veterans. This study also has limited generalizability because of the use of a convenience sample and because all participants were male.

There was some range restriction for shared sense of purpose, which had a small standard deviation in relation to the range. This has the potential to weaken correlations between this variable and other variables, which in turn may weaken the power to detect interaction effects. In research among Veterans in a university setting, this same range restriction was detected (Doenges, 2011).

There were also some survey questions that should be improved in the future to more accurately capture the demographic information of the people participating. The inclusion criterion for the non-Veteran comparison group was defined as being age 25 or older. However, this could have possibly included ex-military who are not Veterans, by definition of this study (i.e., having had deployment experience during OEF/OIF). The way this survey was setup, there

was no way to distinguish such people. The focus was on trying to target those who had combat experience because of the idea that combat would increase the salience of an already salient shared sense of purpose. However, including a way to distinguish those who served in the military but never experienced deployment could help further unpack the complexity of shared sense of purpose. In the future a question asking if the participant ever had any military service could be included.

### **Implications for Future Research**

There is a need for more exploratory work on the relationship between shared sense of purpose and well-being. An immediate next step might be scale development. Since there is not a scale to measure shared sense of purpose, a starting point would be asking service members more questions about their reentry, reintegration, adjustment, and transition processes. This would help determine if shared sense of purpose is a critical component of these processes, and help work toward developing a more accurate construct definition. After construct specifications, the next basic steps would be to: generate an item pool, determine an appropriate Likert scale, develop instructions and page layout (i.e., order of instructions, scale, and items), go through a process of content-expert validation, pilot the scale, check the data, run appropriate analyses (e.g., Cronbach's coefficient alpha, factor analysis, and item analysis), revise scale, and pilot revisions. All of these iterative steps have many associated strategies and techniques and are designed to help establish a measure that demonstrates good reliability (e.g., internal consistency) and validity (e.g., content-validity, criterion-related validity, and construct validity) (Lounsbury, Gibson, & Saudargas, 2006).

Cultural identity could also be a potential area for future research. It might be important to understand how strength of cultural identification influences how someone adapts. If a person feels strongly about his / her military identity then it may be more difficult to adapt to a culture where such an identity is not as prominent (Berry, 2005).

Longitudinal studies with mixed methods approaches could help identify standard elements of these transition processes, as well as unique aspects between groups. This could inform programs and interventions specifically focused on times of transition associated with a military career. A program of research could examine shared and action-oriented sense of purpose as a distinct and meaningful construct; how shared sense of purpose may manifest in military communities (both within military and non-military environments); how shared sense of purpose impacts health and well-being; and how interventions may be designed to be more inclusive through the identification, maintenance, and actualization of a shared sense of purpose. This line of research may inform how and when to intervene to help people ease the transitions that are associated with a military career.

This could of course start with the scale development described above, followed by examination of longitudinal patterns of change. The scale could be administered prior to enrollment in the military, and then at a few important transition points. For example, prior to deployments, during deployments, immediately upon return from deployment, one year after deployment, five years after deployment, prior to transitioning out of the military, immediately upon transitioning out, one year after transition, five years after transition, and then longer term follow-ups. During each implementation of the scale, once the results are collected, face validity

of the scale would be measured by checking back in with the population to ensure the scale is accurately capturing shared sense of purpose.

Finally, there are practice and intervention implications that can come from this type of research. As is part of the mutual aid theory, mutual aid groups can be designed to enhance control, increase resilience, and facilitate participation among people who have shared experiences or shared problems. These groups have been shown to improve well-being and create stronger community ties, and evidence suggests that “sharing experiential knowledge and mutual support enables group members to think differently about their situation, take control over their lives, and move on. Agency and self-esteem replace passive and pathological attitudes” (Seebohm et al., 2013, p. 398). Identifying integral components of shared sense of purpose and then designing interventions that work to capitalize on this positive aspect of military service could then become a part of different aspects of military training. This has the potential to be a health promotion initiative seeking positive outcomes versus primarily working to avoid (or prevent) negative outcomes.

## REFERENCES

- Adler, N. J. (1981). Re-entry: Managing cross-cultural transitions. *Group & Organization Management, 6*, 341- 356.
- Adler, N. J. (1997). Research Psychosocial Notebook: Purpose in Life. Retrieved from <http://www.macses.ucsf.edu/research/psychosocial/purpose.php>
- After Deployment. (2013). Retrieved from <http://www.afterdeployment.org/sites/default/files/pdfs/assessment-tools/perceived-social-support-assessment.pdf>
- Aguinis, H. (2004). Computing statistical power. In *Regression analysis for categorical moderators* (97-116). New York, NY: The Guilford Press.
- Barile, J. P., Reeve, B. B., Smith, A. W., Zack, M. M., Mitchell, S. A., ... Thompson, W. W. (2013). Monitoring population health for Healthy People 2020: Evaluation of the NIH PROMIS® Global Health, CDC Healthy Days, and satisfaction with life instruments. *Quality of Life Research, 22*, 1201-1211.
- Beder, J., Coe, R., & Sommer, D. (2011). Women and men who have served in Afghanistan/Iraq: Coming home. *Social Work in Health Care, 50*, 515-526.
- Berinsky, A. J., Margolis, M. F., & Sances, M. W. (2014). Separating the shirkers from the workers? Making sure respondents pay attention on self-administered surveys. *American Journal of Political Science, 58*, 3, 739-753.
- Berry, J. W. (2005). Acculturation: Living successfully in two cultures. *International Journal of Intercultural Relations, 29*, 697-712.

- Bonar, T. C., & Domenici, P. L. (2011). Counseling and connecting with the military undergraduate: The intersection of military service and university life. *Journal of College Student Psychotherapy, 25*, 204-219.
- Brein, M. & David, K. H. (1971). Intercultural communication and the adjustment of the sojourner. *Psychological Bulletin, 76*, 215-230.
- Britton, P. C., Ouimette, P. C., & Bossarte, R. M. (2012). The effect of depression on the association between military service and life satisfaction. *Quality of Life Research, 21*, 1857-1862.
- Bryan, C. J., Hernandez, A. M., Allison, S., & Clemans, T. (2013). Combat exposure and suicide risk in two samples of military personnel. *Journal of Clinical Psychology, 69*(1), 64-77.
- Buhrmester, M., Kwang, T., & Gosling, S.D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Sciences, 6* (1), 3-5.
- Bush, N. E., Skopp, N. A., McCann, R., & Luxton, D. (2011). Posttraumatic growth as protection against suicidal ideation after deployment and combat exposure. *Military Medicine, 11*, 1215-1222.
- Caplin, D., & Lewis, K. K. (2011). Coming home: Examining the homecoming experiences of young Veterans. In D. C. Kelly, S. Howe-Barksdale, & D. Gitelson (Eds.), *Treating young Veterans: Promoting resilience through practice and advocacy* (101-124). New York, New York: Springer Publishing Company, LLC.
- Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the Brief COPE. *International Journal of Behavioral Medicine, 4* (1), 92-100.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress.

- Journal of Health and Social Behavior*, 24 (4), 385-396.
- Cornum, R., Matthews, M. D., & Seligman, M. E. (2011). Building resilience in a challenging institutional context. *American Psychologist*, 66, 1, 4-9.
- Damon, W., Menon, J., & Bronk, K. C. (2003). The development of purpose during adolescence. *Applied Developmental Science*, 7(3), 119-128.
- Demers, A. (2011). When Veterans return: The role of community in reintegration. *Journal of Loss and Trauma*, 16, 160-179.
- Department of Veterans Affairs. (2010). *M2I-IMR, Part III, subpart vi*. Retrieved from [http://www.index.va.gov/search/va/va\\_search.jsp?NQ=URL%3Ahttp%3A%2F%2Fwww.va.gov%2F&QT=Capitalizing+the+word+Veteran&submit.x=0&submit.y=0](http://www.index.va.gov/search/va/va_search.jsp?NQ=URL%3Ahttp%3A%2F%2Fwww.va.gov%2F&QT=Capitalizing+the+word+Veteran&submit.x=0&submit.y=0)
- Department of Veterans Affairs. (2012). *Profile of Veterans: 2011 Data from the American Community Survey*. Retrieved from [http://www.va.gov/vetdata/docs/SpecialReports/Profile\\_of\\_Veterans\\_2011.pdf](http://www.va.gov/vetdata/docs/SpecialReports/Profile_of_Veterans_2011.pdf)
- Diener, E. (2006). Guidelines for national indicators of subjective well-being and ill-being. *Journal of Happiness Studies*, 7, 397-404.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49 (1), 71-75.
- Doenges, T. J. (2011). Calling and meaningful work among student military Veterans: Impact on well-being and experiences on campus. Doctoral dissertation, Colorado State University. Retrieved from [http://digitool.library.colostate.edu//exlibris/dtl/d3\\_1/apache\\_media/L2V4bGlicmlzL2R0bC9kM18xL2FwYWNoZV9tZWVpYS8xMTQ4NzQ=.pdf](http://digitool.library.colostate.edu//exlibris/dtl/d3_1/apache_media/L2V4bGlicmlzL2R0bC9kM18xL2FwYWNoZV9tZWVpYS8xMTQ4NzQ=.pdf)

- Durdella, N., & Kim, Y. K. (2012). Understanding patterns of college outcomes among student Veterans. *Journal of Studies in Education*, 2 (2), p. 109-129.
- Early, J. M. (2011). Transition home: An exploratory study of the transition from military to civilian life among Veterans of Operation Enduring Freedom and Operation Iraqi Freedom. Master's thesis, Smith College School for Social Work: Northampton, MA. Retrieved from <https://dspace.smith.edu/bitstream/handle/11020/22974/Jillian%20Early%20Thesis%20Final.pdf?sequence=1>
- Edwards, R. D. (2012). Deployment, combat, and well-being in the 2010 National Survey of Veterans. Retrieved from <http://qcpages.qc.cuny.edu/~redwards/Papers/edwards-dc-jhe.pdf>
- Eidelson, R., & Soldz, S. (2012). Does Comprehensive Soldier Fitness Work? CSF Research Fails the Test. *Coalition for an Ethical Psychology* (May 2012 Working Paper No. 1). Retrieved from [http://www.ethicalpsychology.org/Eidelson-&-Soldz-CSF\\_Research\\_Fails\\_the\\_Test.pdf](http://www.ethicalpsychology.org/Eidelson-&-Soldz-CSF_Research_Fails_the_Test.pdf)
- Elbogen, E. B., Johnson, S. C., Wagner, R. H., Newton, V. M., & Beckham, J. C. (2012). Financial well-being and post deployment adjustment among Iraq and Afghanistan war Veterans. *Military Medicine*, 177, 669- 675.
- Field, A. (2009). *Discovering statistics using SPSS* (3<sup>rd</sup> ed.). Los Angeles, CA: Sage.
- Fischer, E. P., Sherman, M. D., Han, X., & Owen, R. R. (2013). Outcomes of participation in the REACH multifamily group program for Veterans with PTSD and their families. *Professional Psychology: Research and Practice*, 44 (3), 127-134.

- Folkman, S., & Moskowitz, J. T. (2004). Coping: Pitfalls and promise. *Annual Review of Psychology, 55*, 745-774.
- Frayne, S. M., Carney, M. A., Bastian, L., Bean-Mayberry, B., Sadler, A., ... Yano, E. M. The VA Women's Health Practice-Based Research Network: Amplifying women Veterans' voices in VA research. *Journal of General Internal Medicine, 28* (Suppl 2), 504-509.
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological Science, 13* (2), 172-175.
- Friedli, L. (2009). Mental health, resilience and inequalities. Copenhagen: World Health Organisation Europe.
- Garvin, C. D., Gutiérrez, L. M., & Galinsky, M. J. (2004). Introduction. In C. D. Garvin, L. M. Gutiérrez, & M. J. Galinsky (Eds.), *Handbook of social work with groups* (1-9). New York, NY: Guilford Press.
- Gaw, K. F. (2000). Reverse culture shock in students returning from overseas. *International Journal of Intercultural Relations, 24*, 83-104.
- George, L. S., & Park, C. L. (2013). Are meaning and purpose distinct? An examination of correlates and predictors. *The Journal of Positive Psychology, 8* (5), 365-375.
- Gitterman, A. (2004). The Mutual Aid Model. In C. D. Garvin, L. M. Gutiérrez, & M. J. Galinsky (Eds.), *Handbook of social work with groups* (93-110). New York, NY: Guilford Press.
- Goodman, J.K., Cryder, C. A., & Cheema, A. (2013). Data collection in a flat world: The strengths and weaknesses of Mechanical Turk Samples. *Journal of Behavioral Decision Making, 26*, 213-224.

- Gottlieb, B. (2000). Selecting and planning support interventions. In S. Cohen, L. Underwood, & B. Gottlieb (Eds.), *Social support measurement and intervention* (195-220). London: Oxford University Press.
- Gottlieb, B. H., & Bergan, A. E., (2010). Social support concepts and measures. *Journal of Psychometric Research*, *69*, 511-520.
- Graven, L. J., & Grant, J. S. (2013). Coping and health-related quality of life in individuals with heart failure: An integrative review. *Heart and Lung*, *42*, 183-194.
- Greene, T., Buckman, J., Dandeker, C., & Greenberg, N. (2010). The impact of culture clash on deployed troops. *Military Medicine*, *175*, 958-963.
- Haan, N. (1974). Changes in young adults after Peace Corps experience: Political-social views, moral reasoning, and perceptions of self and parents. *Journal of Youth and Adolescence*, *3*, 177-194.
- Haber, M. G., Cohen, J. L., Lucas, T., & Baltes, B. B. (2007). The relationship between self-reported received and perceived social support: A meta-analytic review. *American Journal of Community Psychology*, *39*, 133-144.
- Harms, P. D., Krasikova, D. V., Vanhove, A. J., Herian, M. N., & Lester, P. B. (2013). Stress and emotional well-being in military organizations. *Research in Occupational Stress and Well Being*, *11*, 103-132.
- Hayes, J., Wakefield, B., Andresen, E. M., Scherrer, J., Traylor, L., ... DeSouza, C. (2010). Identification of domains and measures for assessment battery to examine well-being of spouses of OIF/OEF Veterans with PTSD. *Journal of Rehabilitation Research and Development*, *47* (9), 825-840.

- Hill, P. L., Burrow, A. L., & Sumner, R. (2013). Addressing important questions in the field of adolescent purpose. *Child Development Perspectives*, 7, 4, 232-236.
- House Committee on Veterans Affairs. (2013). *Submission for the Record of Iraq and Afghanistan Veterans of America*. Retrieved from <http://Veterans.house.gov/submission-for-the-record/iraq-and-afghanistan-Veterans-of-america-0>
- Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic perspectives*, 20, (1), 3-24.
- Kashdan, T. B., Julian, T., Merritt, K., & Uswatte, G. (2006). Social anxiety and posttraumatic stress in combat Veterans: Relations to well-being and character strengths. *Behaviour Research and Therapy*, 44 (561-583).
- Khanna, S., Ratan, A., Davis, J., & Thies, W. (2010). Evaluating and improving the usability of Mechanical Turk for low-income workers in India. Retrieved from <http://research.microsoft.com/pubs/143361/dev2010-turk-final.pdf>
- Koivumaa-Honkanen, H., Honkanen, R., Koskenvuo, M., Viinamäki, H., & Kaprio, J. (2002). Life dissatisfaction as a predictor of fatal injury in a 20-year follow-up. *Acta Psychiatrica Scandinavica*, 105, 6, 444-450.
- Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: A new depression diagnostic and severity measure. *Psychiatric Annals*, 32 (9), 1-7.
- Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16, 606-613.
- Kuwert, P., Knaevelsrud, C., & Pietrzak, R. H. (2014). Loneliness among older Veterans in the

- United States: Results from the National Health and Resilience in Veterans Study. *American Journal of Geriatric Psychiatry*, 22, 6, 564-569.
- Larner, B., & Blow, A. (2011). A model of meaning-making coping and growth in combat Veterans. *Review of General Psychology*, 15, 187-197.
- Lavigne, K. M., Hofman, S., Ring, A. J., Ryder, A. G., & Woodward, T. S. (2013). The personality of meaning in life: Associations between dimensions of life meaning and the Big Five. *The Journal of Positive Psychology*, 8 (1), 34-43.
- Lester, P. B, Harms, P. D., Bulling, D. J., Herian, M. N., & Spain, S. M. (2011a). Evaluation of relationships between reported resilience and soldier outcomes - Report #1 negative outcomes (suicide, drug use and violent crime). Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA538618>
- Lester, P. B, Harms, P. D., Bulling, D. J., Herian, M. N., & Spain, S. M. (2011b). Evaluation of relationships between reported resilience and soldier outcomes - Report #2 positive performance outcomes in officers (promotion, selection, & professions). Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA542229>
- Lester, P. B, Harms, P. D., Herian, M. N., Krasikova, D. V. & Beal, S. J. (2011c). Report #3: Longitudinal analysis of the impact of Master Resilience training on self-reported resilience and psychological health data. Retrieved from <http://dma.wi.gov/dma/news/2012news/csf-tech-report.pdf>
- Limbirt, C. (2004). Psychological well-being and job satisfaction amongst military personnel on unaccompanied tours: The impact of perceived social support and coping strategies. *Military Psychology*, 16(1), 37-51.

- Lips-Wiersma, M., & Wright, S. (2012). Measuring the meaning of meaningful work: Development and validation of the Comprehensive Meaningful Work Scale (CMWS). *Group & Organization Management, 37*(5), 655-685. doi:10.1177/1059601112461578
- Lopez-Class, M., Castro, F. G., & Ramirez, A. G. Conceptions of acculturation: A review and statement of critical issues. *Social Sciences & Medicine, 72*, 1555-1562
- Lounsbury, J. W., Gibson, L. W., & Saudargas, R. A. (2006). Scale development. In F. T. L. Leong & J. T. Austin (Eds.), *The psychology research handbook* (2<sup>nd</sup> ed.) (125-146). Thousand Oaks, CA: Sage Publication, Inc.
- Mallow, A., Williams-Gray, B., Kelly, D. C., & Alex, J. (2011). Living beyond the intersection of war theater and home: Protective factors for healthy reintegration. In D. C. Kelly, S. Howe-Barksdale, & D. Gitelson (Eds.), *Treating young Veterans: Promoting resilience through practice and advocacy* (13-22). New York, New York: Springer Publishing Company, LLC.
- Mason, W., & Suri, S. (2011). Conducting behavioral research on Amazon's Mechanical Turk. *Behavioral Research, 44*(1), 1-23.
- Matsudaira, T. (2006). Measures of psychological acculturation: A review. *Transcultural Psychiatry, 43*, 462-487.
- McNeil, R. B., Thomas, C. M., Coughlin, S. S., Hauser, E., Huang, G. D., ... & Provenzale, D. T. (2013). An assessment of survey measures used across key epidemiologic studies of United States Gulf War I Era Veterans. *Environmental Health, 12* (4), 1-19.
- Melamed, B. G., & Castro, C. (2011). Observations and insights about Strengthening Our Soldiers (SOS). *Journal of Clinical Psychology in Medical Settings, 18*(2), 210-223.

- Moore, M., Bates, M., Brierly-Bower, P., Taaffe, P., & Clymer, R. (2012). Well-Being and its measurement. *Defense Centers of Excellence for Psychological Health and Traumatic Brain Injury*. Retrieved from [http://www.dcoe.health.mil/Content/Navigation/Documents/Well-being\\_and\\_Its\\_Measurement.pdf](http://www.dcoe.health.mil/Content/Navigation/Documents/Well-being_and_Its_Measurement.pdf)
- Mroczek, D. K., & Spiro, A. (2005). Change in life satisfaction during adulthood: Findings from the Veterans Affairs Normative Aging Study. *Journal of personality and Social Psychology*, 83 (1), 189-202.
- National Cancer Institute (NCI). (2005). Theory at a glance: A guide for health promotion (2<sup>nd</sup> ed.). Retrieved from <http://www.cancer.gov/cancertopics/cancerlibrary/theory.pdf>
- Office of the Deputy Assistant Secretary of Defense. (2012). 2012 Demographics: Profile of the Military Community. Retrieved from [http://www.militaryonesource.mil/12038/MOS/Reports/2012\\_Demographics\\_Report.pdf](http://www.militaryonesource.mil/12038/MOS/Reports/2012_Demographics_Report.pdf)
- Osran, H. C., Smee, D. E., Sreenivasan, S., & Weinberger, L. E. (2010). Living outside the wire: Toward a transpersonal resilience approach for OIF/OEF Veterans transitioning to a civilian life. *The Journal of Transpersonal Psychology*, 42 (2), 209-235.
- Pauker, A. L., Le Maire, A., & Cully, J. A. (2009). Predictors of depressive symptoms in older Veterans with heart failure. *Aging and Mental Health*, 13 (4), 601-610.
- Pavot, W., Diener, E., Colvin, & Sandvik, E. (1991). Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. *Journal of Personality Assessment*, 57 (1), 149-161.
- Peltzer, K., Shisana, O., Zuma, K., Van Wyk, B., & Zungu-Dirwayi, N. (2009). Job stress, job

- satisfaction and stress-related illnesses among South African educators. *Stress and Health, 25*, 247-257.
- Pennell, J., & Ryder-Burge, A. (2011). Wellness and student Veterans at North Carolina State University: Survey results, spring 2010. Retrieved from [http://cface.chass.ncsu.edu/documents/Wellness\\_and\\_Student\\_Veterans.Survey\\_Report.pdf](http://cface.chass.ncsu.edu/documents/Wellness_and_Student_Veterans.Survey_Report.pdf)
- Robertson, H. C. (2013). Income and support during transitions from military to civilian career. *Journal of Employment Counseling, 50*, 26-33.
- Ruggiero, K. J., Ben, K. D., Scotti, J. R., & Rabalais, A. E. (2003). Psychometric properties of the PTSD Checklist – Civilian Version. *Journal of Traumatic Stress, 16* (5), 495-502.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and Eudaimonic well-being. *Annual Review of Psychology, 52*, 141-166.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57* (6), 1069-1081.
- Ryff, C. D., Singer, B. H., & Love, G. D. (2004). Positive health: Connecting well-being with biology. *Philosophical Transactions of the Royal Society of London B, 359*, 1383-1394.
- Ryff, C. D., Love, G. D., Urry, H. L., Muller, D., Rosenkranz, M. A., ... & Singer, B. (2006). Psychological well-being and ill-being: Do they have distinct or mirrored biological correlates? *Psychotherapy and Psychosomatics, 75*, 85-95.
- Sarason, B. R., Sarason, I. G., & Pierce, G. R. (1990). Traditional views of social support and

- their impact on assessment. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view* (pp. 9–25). New York: Wiley.
- Schiaffino, K. M. (2003). Other measures of psychological well-being. *Arthritis and Rheumatism, 49* (S5), S165-S174).
- Schumm, J. A., Koucky, E. M., & Bartel, A. (2014). Associations between perceived social reactions to trauma-related experiences with PTSD and depression among Veterans seeking PTSD treatment. *Journal of Traumatic Stress, 27*, 50-57.
- Seebohm, P., Chaudhary, S., Boyce, M., Elkan, R., Avis, M., & Munn-Giddings, C. (2013). The contribution of self-help/mutual aid groups to mental well-being. *Health and Social Care in the Community, 21* (4), 391-401.
- Seligowski, A. V., Kaiser, A. P., King, L. A., King, D. W., Potter, C., & Spiro, A. (2012). Correlates of life satisfaction among aging Veterans. *Applied Psychology: Health and Well-being, 4* (3), 261-275.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin Company.
- Skomorovsky, A. (2013). Psychological well-being of Canadian Forces Officer Candidates: The role of personality and coping strategies. *Military Psychology, 25* (1), 3-12.
- Skomorovsky, A., & Sudom, K. A. (2011). Psychological well-being of Canadian Forces Officer Candidates: The unique roles of hardiness and personality. *Military Medicine, 176*, 389-396.
- Smith, A. J., Benight, C. C., & Cieslak, R. (2013). Social support and post deployment coping self-efficacy as predictors of distress among combat Veterans. *Military Psychology, 25*

- (5), 452-461.
- Smith-Osborne, A. M. (2012). Supporting resilience in the academic setting for student soldiers and Veterans as an aspect of community reintegration: The design of the Student Veteran Project Study. *Advances in Social Work, 13*, 1, 34-50.
- Spiro, A. III., & Settersten, R. A., Jr., (2012). Long-term implication of military service for later-life health and well-being. *Research in Human Development, 9* (3), 183-190.
- Spitzer, R. L., Williams, J. B., Kroenke, K. & Colleagues. (2014). Test review: Patient Health Questionnaire-9 (PHQ-9). *Rehabilitation Counseling Bulletin, 57* (4), p. 246-248.
- Staufenbiel, S. M., Penninx, B. W. J. H., Spijker, A. T., Elzinga, B. M., & van Rossum, E. F. C. (2013). Hair cortisol, stress exposure, and mental health in humans: A systematic review. *Psychoneuroendocrinology, 38*, 8, 1220-1235.
- Stecker, T., Fortney, J. C., & Sherbourne, C. D. (2011). An intervention to increase mental health treatment and engagement among OIF Veterans: A pilot trial. *Military Medicine, 176*, 613-619.
- Steger, M. F. (2012). WAMI: Instructions and questions. Retrieved from <http://www.michaelfsteger.com/wp-content/uploads/2012/08/WAMI.pdf>
- Steger, M. F., Dik, B. J., & Duffy, R. D. (2012). Measuring meaningful work: The Work and Meaning Inventory. *Journal of Career Assessment, 20* (3), 322-337.
- Steger, M. F., Frazier, P., Oishi, S., & Kaler, M. (2006). The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53* (1), 80-93.
- Straits-Tröster, K. A., Brancu, M., Goodale, B., Pacelli, S., Wilmer, C., Simmons, E. M., &

- Kudler, H. (2011a). Developing community capacity to treat post-deployment mental health problems: A public health initiative. *Psychological Trauma, Theory, Research, Practice, and Policy*, 3, 283-291.
- Straits-Tröster, K. A., Gierisch, J. M., Calhoun, P. S., Strauss, J. L., Voils, C., & Kudler, H. (2011b). Living in transition: Young Veterans' health and the post deployment shift to family life. In D. C. Kelly, S. Howe-Barksdale, & D. Gitelson (Eds.), *Treating young Veterans: Promoting resilience through practice and advocacy* (153-172). New York, New York: Springer Publishing Company, LLC.
- Szkudlarek, B. (2010). Reentry – A review of the literature. *International Journal of Intercultural Relations*, 34, 1-21.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6<sup>th</sup> ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Taylor, M. K., Stanfill, K. E., Padilla, G. A., Markham, A. E., Ward, M. D., Koehler, M. M., Angelero, A., ... & Adams, B. D. (2011). Effect of psychological skills training during military survival school: A randomized, controlled field study. *Military Medicine*, 176, 1362-1368.
- Tedeschi, R. G., & McNally, R. J. (2011). Can we facilitate posttraumatic growth in combat Veterans? *American Psychologist*, 66, 19-24.
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., ... & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): Development and UK validation. *Health and Quality of Life Outcomes*, 5 (63), p. 1-13.
- The Mission Continues. (2013). Retrieved from <http://missioncontinues.org/>

- Triplett, K. N., Tedeschi, R. G., Cann, A., Calhoun, L. G., & Reeve, C. L. (2012). Posttraumatic growth, meaning in life, and life satisfaction in response to trauma. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4, 4, 400-410.
- Vallerand, R. J. (2012). The role of passion in sustainable psychological well-being. *Psychology of Well-Being: Theory, Research, and Practice*, 2 (1), 1-21.
- Vázquez, C., Hervás, F., Rahona, J. J., & Gómez, D. (2009). Psychological well-being and health. Contributions of positive psychology. *Annuary of Clinical and Health Psychology*, 5, 15-27.
- Vella, E. J., Milligan, B., & Bennett, J. L. (2013). Participation in outdoor recreation program predicts improved psychosocial well-being among Veterans with post-traumatic stress disorder: A pilot study. *Military Medicine*, 178 (3), 254-260.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54 (6), 1063-1070.
- Wells, S., Tremblay, P. F., Flynn, A., Russell, E., Kennedy, J., ... Graham, K. (2014). Associations of hair cortisol concentration with self-reported measures of stress and mental-health related factors in a pooled database of diverse community samples. *Stress*, 17, 334-342.
- Wilkins, K. C., Lang, A. J., & Norman, S. B. (2011). Synthesis of the psychometric properties of the PTSD Checklist (PCL) Military, Civilian, and Specific Versions. *Depression and Anxiety*, 28 (7), 596-606.

- Winefield, H. R., Gill, T. K., Taylor, A. W., & Pilkington, R. M. (2012). Psychological well-being and psychological distress: Is it necessary to measure both? *Psychology of Well-Being: Theory, Research, and Practice*, 2 (3), 1-14.
- Yazicioğlu, K., Duyan, V., Karatas, k., Özgül, A., Yilmaz, B., ... & Aksu, S. (2006). Effects of socio-demographic characteristics, illness process, and social support on the levels of perceived quality of life in Veterans. *Military Medicine*, 171 (11), 1083-1088.
- Zautra, A. J., Sheets, V. L., & Sandler, I. N. (1996). An examination of the construct validity of coping dispositions for a sample of recently divorced mothers. *Psychological Assessment*, 3, 256-264
- Zimet, G. D., Powell, S. S., Farley, G. K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 55, 610-617.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G.K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52 (1), 30-41.

Table 1

*Distribution of Outcome, Predictor, Covariates, and Demographic Variables*

Variable	<i>N</i> =	<i>M</i>	<i>SD</i>	Variance	Skew	Kurtosis	Min	Max
<u>Outcome</u>								
Well-being (SWLS)	550	4.54	1.60	2.55	-.48	-.82	1.00	7.00
<u>Predictor</u>								
Shared Sense of Purpose (SSOP)	550	3.93	.73	.53	-.96	1.52	1.00	5.00
<u>Covariates</u>								
	550							
Stress (PSS)		1.75	.59	.35	.11	-.03	.29	3.64
Social Support (MSPSS)		5.38	1.17	1.37	-1.02	.18	1.00	7.00
Active Coping (COPE)		3.08	.75	.57	-.48	-.31	1.00	4.00
<u>Demographic</u>								
Age	549	34.12	9.27	85.93	1.43	1.86	21.00	73.00
<u>Descriptive</u>								
Depression (PHQ)	550	.82	.73	.53	.84	-.21	0.00	2.89
<u>Additional Descriptive Variables</u>								
PTSD (PCL-C)	549	2.04	.95	.91	.84	-.22	1.00	5.00
Affect (PANAS-POS)	548	2.95	.88	.78	.01	-.64	1.00	5.00
Affect (PANAS-NEG)	549	1.87	.87	.76	1.07	.49	1.00	4.90

Note. Higher scores indicate higher levels of a variable.

Table 2

*Categorical Variable Percentages*

Variable	Frequency	Percent (%)
<u>Demographic</u>		
Hispanic	45	8
Non-Hispanic	504	92
Missing	1	<1
Ethnicity		
American Indian	10	2
Asian	38	7
African American or Black	45	8
European American or White	448	82
Pacific Islander	5	1
Missing	4	<1
Marital Status		
Single	302	55
Married	208	38
Separated	7	1
Divorced	29	5
Remarried	3	1
Widowed	1	<1

Table 3

*Distribution of Military Specific Demographic Variables*

Variable	<i>n</i> =	<i>M</i> ( <i>SD</i> )	Variance	Skew	Kurtosis	Range
Length of Service (in years)	172	7.06 (4.73)	22.42	1.52	1.74	0-20
Time Separated from Military	169	3.93 (3.47)	12.03	1.73	.37	0-20
Time Since Last Deployment	172	4.80 (3.57)	12.78	1.39	2.86	0-20

Table 4

*Military Specific Demographic Categorical Variables*

Variable	Frequency	Percent (%)		
Location of OEF/OIF Experience				
Iraq	70	41		
Afghanistan	64	37		
Another overseas country	28	16		
Within the United States	10	6		
Reported Combat Deployment				
Yes	135	79		
No	37	21		
			2012 Branch Distribution*	
Branch of Service			Frequency	Percent (%)
Air Force	31	18	328,812	23
Army	94	55	546,057	38
Coast Guard	1	1	41,849	3
Marine Corps	27	15	198,820	14
Navy	19	11	314,339	22

Note. \* = Office of the Deputy Assistant Secretary of Defense. (2012). 2012 Demographics: Profile of the Military Community. Total = 1,429,877 typical pattern of largest to smallest percent: Army, Air Force, Navy, Marine Corps, and Coast Guard because. Current study pattern does not quite follow typical pattern: Army, Air Force, Marine Corps, Navy, and Coast Guard.

Table 5

*Factor Loadings of the Adapted WAMI with Promax Rotation*

Original Subscale		Factor 1	Factor 2
Positive Meaning	1. My involvement with this group is meaningful to me.	<b>.44</b>	.38
	4. I understand how my involvement with this group contributes to my life's meaning.	<b>.67</b>	.17
	5. I have a good sense of what makes my involvement with this group meaningful.	<b>.51</b>	.34
	8. I have discovered involvement with this group that has a satisfying purpose.	<b>.55</b>	.31
Meaning Making Through Work	2. I view my involvement with this group as contributing to my personal growth.	<b>.53</b>	.30
	7. My involvement with this group helps me better understand myself.	<b>.56</b>	.20
	9. My involvement with this group helps me make sense of the world around me.	<b>.82</b>	-.12
Great Good Motivations	3. My work really makes no difference to the world. (R)	<b>.40</b>	.02
	6. I know my involvement with this group makes a positive difference in the world.	<b>.79</b>	-.04
Shared	10. The involvement I have with this group serves a greater purpose.	<b>.86</b>	-.16
	11. My involvement with this group gives me a sense of camaraderie.	-.13	<b>.96</b>
	12. With this group I work as part of a team toward a common goal.	.01	<b>.77</b>
	13. Being involved with this group makes me feel like part of a team	-.05	<b>.90</b>

Note. This analysis was conducted with the M-Turk sample (N = 550). Factor loadings  $\geq .40$  are in boldface.

Table 6

*Psychometric Properties of Scales (N = 550)*

Variable	No. of Items	Likert Scale	Previously Reported $\alpha$	Current Study Reported $\alpha$
<u>Outcome</u>				
Well-being (SWLS)	4	1-7	.87 <sup>a</sup>	.94
<u>Predictors</u>				
Shared Sense of Purpose (SSOP)*	13	1-5	.93 <sup>b</sup>	.93
<u>Covariates</u>				
Stress (PSS)	14	0-4	.86 <sup>c</sup>	.85
Social Support (MSPSS)	12	1-7	.92 <sup>d</sup>	.94
Active Coping (COPE)	2	1-4	.68 <sup>e</sup>	.81
<u>Descriptive</u>				
Depression (PHQ-9)	9	0-3	.89 <sup>f</sup>	.91
PTSD (PCL-C)	17	1-5	.94 <sup>g</sup>	.96
Affect (PANAS)		1-5		
POS	10		.90 <sup>h</sup>	.92
NEG	10		.87 <sup>h</sup>	.94

Note. Based on the reported psychometric data some scales were adapted, the adaptations are outlined in the method section. Previously reported  $\alpha$  for SSOP = 10 items; Current study reported  $\alpha$  for SSOP = 13 items.

- a. Robertson, 2013
- b. Steger et al., 2012
- c. Cohen et al., 1983
- d. Zimet et al., 1990
- e. Carver, 1997
- f. Kroenke et al., 2001
- g. Ruggiero, Ben, Scotti, & Rabalais, 2003
- h. Watson, Clark, & Tellegen, 1988

Table 7

*Mean Comparisons for Veteran and Non-Veteran Groups*

	Veteran ( <i>n</i> = 172)					Non-Veteran ( <i>n</i> = 378)				
	<i>n</i> =	<i>M</i>	<i>SD</i>	Variance	Range	<i>n</i> =	<i>M</i>	<i>SD</i>	Variance	Range
Age	171	33.13	8.42	70.95	21.00-69.00	378	34.57	9.60	92.26	25.00-73.00
SSOP	172	3.98	.78	.61	1.00-5.00	378	3.91	.70	.49	1.00-5.00
SWLS	172	4.62	1.55	2.40	1.00-7.00	378	4.51	1.61	2.61	1.00-7.00
PSS	172	1.82	.61	.37	.57-3.64	378	1.72	.59	.34	.29-3.50
MSPSS	172	5.32	1.24	1.55	1.00-7.00	378	5.41	1.14	1.30	1.00-7.00
COPE	172	3.15	.76	.59	1.00-4.00	378	3.05	.74	.56	1.00-4.00
PHQ-9**	172	.96	.78	.60	0.00-2.89	378	.75	.69	.69	0.00-2.89
PCL-C**	172	2.42	1.00	1.00	1.00-5.00	377	1.87	.88	.77	1.00-4.76
PosPANAS	172	3.02	.87	.76	1.00-5.00	376	2.92	.89	.79	1.00-5.00
NegPANAS**	172	2.15	.96	.93	1.00-4.90	377	1.75	.80	.64	1.00-4.90

Note. \*\* = significant mean differences between groups,  $p < .01$ . PHQ-9 = Patient Health Questionnaire – 9 items (depression). PCL-C = PTSD Checklist – Civilian Version (PTSD). PANAS = Positive and Negative Affect Scale.

Table 8

*Correlations among Predictor, Outcome, Moderator, and Covariate Variables*

	SWLS	VS	PSS	MSPSS	COPE	AGE	Ethnicity	Marital Status
SSOP	.32**	.05	-.21**	.43**	.25**	.05	.02	.09*
SWLS	-	.03	-.54**	.59**	.09*	-.06	.01	.01
Veteran Status	-	-	.08	-.04	.06	-.07	.01	.09*
PSS	-	-	-	-.40**	-.09*	-.08	.03	.04
MSPSS	-	-	-	-	.17**	-.01	.05	.04
COPE	-	-	-	-	-	-.05	-.01	-.06
Age	-	-	-	-	-	-	.08	.31**
Ethnicity	-	-	-	-	-	-	-	.12**

Note. \* =  $p < .05$ . \*\* =  $p < .01$ . Sample size for these correlations ranged from  $n = 549$  to  $n = 550$ .

Table 9

*Correlations among Predictor, Outcome, Moderator, and Descriptive Variables*

	PHQ	Length	Sep	Deploy	PTSD	Pos	Neg
COPE	-.02	-.12	-.05	.02	.01	.28**	.07
SSOP	-.17**	.13	-.08	.00	-.12*	.32**	-.09*
SWLS	-.50**	.16*	-.21**	-.18*	-.50**	.51**	-.34**
Veteran Status	.13**	-	-	-	.27**	.05	.21**
PHQ-9	-	-.10	.08	.03	.84**	-.39**	.71**
Length of Service	-	-	.03	.12	-.14	.15	-.15
Time Since Separation	-	-	-	.87**	.05	-.06	.08
Time Since Last Deployment	-	-	-	-	.00	-.06	.03
PTSD	-	-	-	-	-	-.26**	.76**
PosPANAS	-	-	-	-	-	-	-.18**

Note. \* =  $p < .05$ . \*\* =  $p < .01$ . Sample size for these correlations ranged from  $n = 548$  to  $n = 550$  for and for the Veteran specific variable (i.e., length of service, time since separation, and time since last deployment) from  $n = 169$  to  $n = 172$ .

Table 10

*Results of Hypothesis 1 Testing: Hierarchical Multiple Regression to Predict Well-being using Mean Centered Shared Sense of Purpose as Predictor*

Variable	B	$\beta$	$R^2$	F	$R^2_{\text{change}}$	$F_{\text{change}}$
Step 1			.45	149.75**	.45	149.75**
Social Support	.60**	.44				
Stress	-.97**	-.36				
Coping	-.02	-.01				
Step 2			.46	114.10**	.01	4.36*
Social Support	.56**	.41				
Stress	-.96**	-.36				
Coping	-.05	-.02				
Sense of Purpose	.16*	.08				

Note. \* =  $p < .05$ . \*\* =  $p < .01$ .

Table 11

*Results of Hypothesis 2 Testing: Hierarchical Moderated Multiple Regression with a Categorical Moderator Analysis to Predict Well-being using Mean Centered Shared Sense of Purpose as Predictor*

Variable	B	$\beta$	$R^2$	F	$R^2_{\text{change}}$	$F_{\text{change}}$
Step 1			.45	149.75**	.45	149.75**
Social Support	.60**	.44				
Stress	-.97**	-.36				
Coping	-.02	-.01				
Step 2			.46	77.89**	.01	3.75**
Social Support	.56**	.41				
Stress	-.98**	-.37				
Coping	-.05	-.03				
Veteran Status	.26*	.08				
Sense of Purpose	.22*	.10				
Interaction	-.17	-.05				

Note. \* =  $p < .05$ . \*\* =  $p < .01$

Table 12

*Veteran Status Screening Questions Between Group Differences Pearson Chi-Square Analyses*

	Veterans	Non-Veterans	$X^2$	$\Phi$
	Frequency	Frequency		
Officer Rank			194.08**	.59**
Not Correct	59 (-6.00)	344 (4.00)		
Correct	113 (9.90)	34 (-6.70)		
MEPS			147.84**	.52**
Not Correct	29 (-6.80)	274 (4.6)		
Correct	143 (7.50)	104 (-5.00)		
MOS			168.27**	.55**
Not Correct	27 (-7.1)	283 (4.80)		
Correct	145 (8.1)	95 (-5.40)		

Note. Standardized residuals appear in parentheses next to group frequencies. \*\* =  $p < .01$ . There were a total of five Veteran status screening questions, only three of those five were asked to non-Veterans. All five screening questions are located in Appendix 7.

**APPENDICES**

Appendix 1: Satisfaction with Life Scale (SWLS) (Diener et al., 1985)

**Instructions:** “Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding”.

**Scale:** 1 to 7 Likert scale (1=Strongly disagree; 2=Disagree; 3=Slightly disagree; 4=Neither agree nor disagree; 5=Slightly agree; 6=Agree; 7=Strongly agree).

**Items:**

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. ~~If I could live my life over, I would change almost nothing.~~

**Scoring:** The score is sum of all items and higher scores indicate greater reported well-being.

Note. Item 5 of the SWLS was not used in this study.

## Appendix 2: Work as Meaning Inventory (WAMI) (Steger et al., 2012)

**Instructions:** “Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you and your work”.

**Scale:** 1 to 5 Likert scale (1=Absolutely untrue; 2=Mostly untrue; 3=Neither true nor untrue; 4=Mostly true; 5=Absolutely true)

### Items:

1. I have found a meaningful career.
2. I view my work as contributing to my personal growth.
3. My work really makes no difference to the world. (R)
4. I understand how my work contributes to my life’s meaning.
5. I have a good sense of what makes my job meaningful.
6. I know my work makes a positive difference in the world.
7. My work helps me better understand myself.
8. I have discovered work that has a satisfying purpose.
9. My work helps me make sense of the world around me.
10. The work I do serves a greater purpose.

\*R = reverse scored

**Scoring:** Item number 3 is reversed scored and is calculated by subtracting the participant rating from 6. After item 3 is calculated the score is a sum of all items. Lower scores indicate less reported work meaning.

### Adaptations

**Instructions:** “Please think of the organizations or groups (work, school, or volunteer related) in which you are involved. Please select the one that gives you the most satisfaction and rate the following statements using a 1-5 scale (1=Absolutely untrue; 2=Mostly untrue; 3=Neither true nor untrue; 4=Mostly true; 5=Absolutely true)”.

### Items:

1. My involvement with this group is meaningful to me.
2. I view my involvement with this group as contributing to my personal growth.
3. My involvement with this group really makes no difference to the world (R).
4. I understand how my involvement with this group contributes to my life’s meaning.
5. I have a good sense of what makes my involvement with this group meaningful.
6. I know my involvement with this group makes a positive difference in the world.
7. My involvement with this group helps me better understand myself.
8. I have discovered involvement with this group that has a satisfying purpose.
9. My involvement with this group helps me make sense of the world around me.
10. The involvement I have with this group serves a greater purpose.

11. Being involved with this group makes me feel like part of a team.
12. My involvement with this group gives me a sense of camaraderie.
13. With this group I work as a part of a team toward a common goal.

### Appendix 3: Perceived Stress Scale (Cohen et al., 1983)

**Instructions:** The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. For each question rate the frequency of your experience using a 0-4 scale (0 = Never; 1 = Almost never; 2 = Sometimes; 3 = Fairly often; 4 = Very often).

**Items:**

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. (R) In the last month, how often have you dealt successfully with irritating life hassles?
5. (R) In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
6. (R) In the last month, how often have you felt confident about your ability to handle your personal problems?
7. (R) In the last month, how often have you felt that things were going your way?
8. In the last month, how often have you found that you could not cope with all the things that you had to do?
9. (R) In the last month, how often have you been able to control irritations in your life?
10. (R) In the last month, how often have you felt that you were on top of things?
11. In the last month, how often have you been angered because of things that happened that were outside of your control?
12. In the last month, how often have you found yourself thinking about things that you have to accomplish?
13. (R) In the last month, how often have you been able to control the way you spend your time?
14. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

**Scoring:** PSS-14 scores are obtained by reversing the scores on the seven positive items, e.g., 0=4, 1=3, 2=2, etc., and then summing across all 14 items. Items 4, 5, 6, 7, 9, 10, and 13 are the positively stated items. PSS scale yields a single score with higher scores indicating greater levels of stress and lower scores indicating lower levels of stress. The PSS-14 has a possible range of scores from 0-56 (56-28 cut off value for upper bound = stressed; 27-0 lower bound not stressed)

Appendix 4: Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet, Dahlem, Zimet, & Farley, 1988)

**Instructions:** “We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement”.

**Scale:** 1-7 point Likert scale (1=Very strongly disagree; 2=Strongly disagree; 3=Mildly disagree; 4=Neutral; 5=Mildly agree; 6=Strongly agree; 7=Very strongly agree).

**Items:**

1. There is a special person who is around when I am in need.
2. There is a special person with whom I can share my joys and sorrows.
3. My family really tries to help me.
4. I get the emotional help and support I need from my family.
5. I have a special person who is a real source of comfort to me.
6. My friends really try to help me.
7. I can count on my friends when things go wrong.
8. I can talk about my problems with my family.
9. I have friends with whom I can share my joys and sorrows.
10. There is a special person in my life who cares about my feelings.
11. My family is willing to help me make decisions.
12. I can talk about my problems with my friends.

**Scoring:** The score is an average of all items and higher scores indicate greater reported social support.

### Appendix 5: Active Coping (COPE subscale) (Carver, 1997)

**Instructions:** We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. These questions ask you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Then respond to each of the following items using a 1-4 scale (1=I haven't been doing this at all; 2= I've been doing this a little bit; 3=I've been doing this a medium amount; 4= I've been doing this a lot). Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.

**Scale:** 1 = I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot

**Items:**

1. I've been concentrating my efforts on doing something about the situation I'm in.
2. I've been taking action to try to make the situation better.

**Scoring:** Single sum score with higher scores indicating greater levels of active coping and lower scores indicating lower levels of active coping.

Appendix 6: Patient Health Questionnaire - 9 (PHQ-9) (Kroenke et al., 2001)

**Instructions:** “Over the last 2 weeks, how often have you been bothered by any of the following problems?”

**Scale:** 0-3 Likert type scale (0=Not at all; 1=Several days; 2=More than half the days; 3=Nearly every day)

**Items:**

1. Little interest or pleasure in doing things
2. Feeling down, depressed, or hopeless
3. Trouble falling or staying asleep, or sleeping too much
4. Feeling tired or having little energy
5. Poor appetite or overeating
6. Feeling bad about yourself-or that you are a failure or have let yourself or your family down
7. Trouble concentrating on things, such as reading the newspaper or watching television
8. Moving or speaking so slowly that other people could have noticed. Or the opposite-being so fidgety or restless that you have been moving around a lot more than usual
9. Thought that you would be better off dead, or of hurting yourself
10. Additional question - If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people? Not difficult at all; Somewhat difficult; Very difficult; Extremely difficult

**Scoring:** The score is a sum of all items and higher scores indicate greater reported levels of depressive symptoms.

### Appendix 7: Manipulation Check Questions

1. Research in decision making shows that people, when making decisions and answering questions, prefer not to pay attention and minimize their effort as much as possible. Some studies show that over 50% of people don't carefully read questions. If you are reading this question and have read all the other questions, please select the box marked 'other' and type 'Decision Making' in the box below. Do not select "predictions of your own behavior." Thank you for participating and taking the time to read through the questions carefully! (Adapted from Goodman et al., 2013, p. 223)

What was the above study about?

- A. Predictions of your own behavior
- B. Lions
- C. Tigers
- D. Other \_\_\_\_\_

2. Please answer Strongly Agree for this question.

- A. Strongly Agree
- B. Agree
- C. Neutral
- D. Disagree
- E. Strongly Disagree

### Veteran Status Screening Questions

All participants were asked the following three questions:

1. What is the acronym for the locations where final physicals are taken prior to shipping off for basic training? (4 letters)  
A. \_\_\_\_\_
2. What is the acronym for the generic term the military uses for various job fields? (3 letters)  
A. \_\_\_\_\_
3. Military Status Question: Please put these Officer ranks in order:



Note: Using symbols, instead of words, because all symbols for officer ranks are the same across branches but not the names.

Only Veterans were asked the following branch specific questions. Veterans were asked to indicate the branch of the military they most recently served in and then appropriately directed to the question in the following two categories:

1. Enlisted ranks in order:

- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Air Force)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Army)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Coast Guard)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Marine Corps)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Navy)



2. Location specific questions:

- In which state is the west coast basic training base located? (if Marine Corps)  
\_\_\_\_\_ (text entry)
- In which state is the Army's academy located, if not skip? (if Army)  
\_\_\_\_\_ (text entry)
- In which state is the Navy's academy located? (if Navy)

- \_\_\_\_\_ (text entry)
- In which state is the Air Force's academy located? (if Air Force)  
\_\_\_\_\_ (text entry)
  - In which state is the Coast Guard's academy located? (if Coast Guard)  
\_\_\_\_\_ (text entry)

## Appendix 8: Phase 1 Survey Materials

### **Initial Contact Email:**

I hope you are well. My name is Brigid Lynn, I am a doctoral student at NC State (and Major Henry Lynn's wife), and I am contacting you to ask for your participation in providing feedback on a survey. I will be conducting research about the experiences of Veterans who have returned from combat and are no longer on active duty. My research focuses on ways to more adequately integrate Veterans into their communities after exiting the military. However, before I begin data collection I would like to be sure the survey is clearly written.

I am specifically asking you to:

- 1) Follow the link and complete the voluntary, anonymous survey within seven days of receiving this email (survey will close after seven days).
- 2) Forward the link to people you know that have deployment experience and might be willing to participate.
  - The link can be forwarded in a group email if you decide to help out. Please make note of the people you send the initial email to so you can accurately forward a second follow-up email. Whether or not people choose to participate, everyone who got the first email will get the second email because of the anonymous nature of the study.
- 3) Participate in a focus group approximately one week after the survey closes (we will have an informal discussion followed by a cook out – location TBD) and/or provide feedback via email.

Once the survey closes I will send a follow-up email with more details on the focus group.

This effort is designed to ultimately improve the readability and clarity of the survey. Specific answers to the questions will not be discussed, only the wording of survey questions.

I would greatly appreciate your help, participation, and feedback.

If you have any questions feel free to contact me via email [bmdonnel@ncsu.edu](mailto:bmdonnel@ncsu.edu) or [brigid.lynn@gmail.com](mailto:brigid.lynn@gmail.com)

Thank you for your help and I look forward to your participation.

Click \*\*\*HERE\*\*\* to complete the informed consent and survey.

Brigid

### **Follow-up Email (7 Days after survey opens):**

I hope you are well. This is the follow-up email concerning your efforts in improving my survey's wording. The survey link is now closed – thank you for your participation. Here is what I am asking now:

- 1) To provide feedback about the readability and clarity of the survey via email and/or a focus group
  - a. A PDF copy of the survey is attached and a hard copy will be provided at the focus group
- 2) Send me a quick email if you are able to attend the focus group, [bmdonnel@ncsu.edu](mailto:bmdonnel@ncsu.edu) or [brigid.lynn@gmail.com](mailto:brigid.lynn@gmail.com)
  - a. I will send you a reply with the time and location details

I understand the difficulty with scheduling, so if you cannot attend but have some feedback feel free to email it to me (email above). Upon arrival to the focus group snacks, beverages, and a hard copy of the survey will be provided. I will give an approximately 5 minute brief on the set-up and objectives of the meeting. Upon completion of the focus group (estimated time approximately 1 hour or less) there will be a cook out. Food and beverages will be provided.

Thank you again for your time and effort,

Brigid

## Appendix 9: Phase 2 Survey Materials

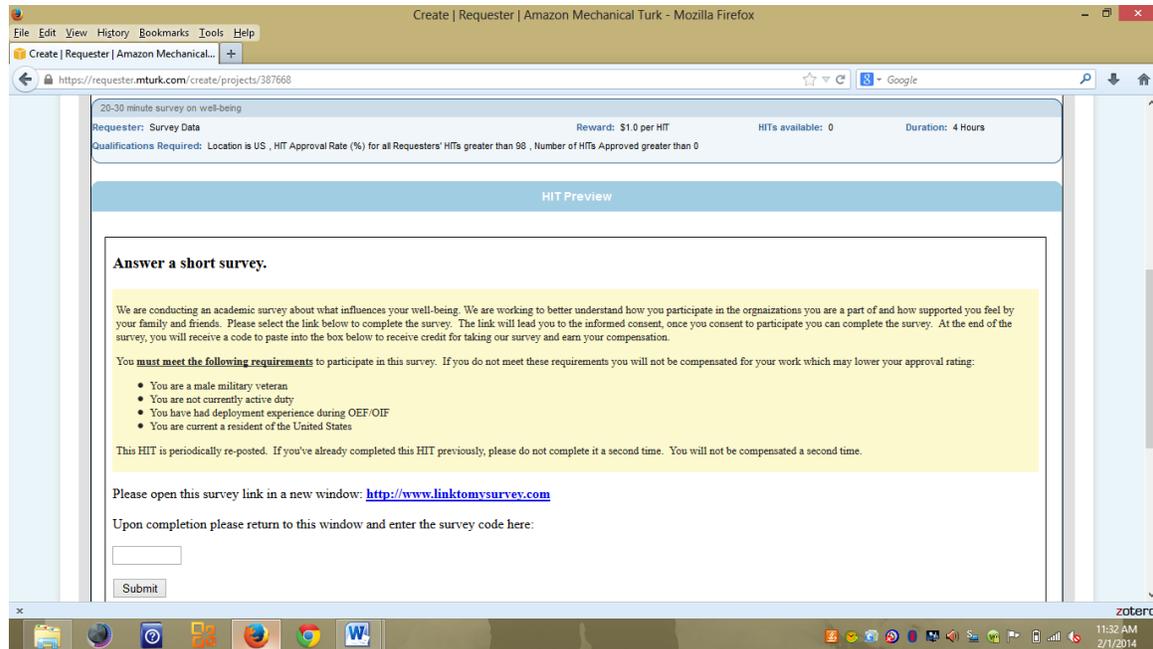
### **Brief description of the study for the Experimetrix website:**

We are conducting an academic survey about what influences your well-being. You must be 18 to participate. We are working to better understand how you participate in the organizations you are a part of and how supported you feel by your family and friends. The survey is voluntary and anonymous. Please select the link below to complete the survey. The link will lead you to the informed consent, once you consent to participate you can complete the survey. At the end of the survey, you will see another link. This link is for you to input your student information to receive credit for taking our survey, it is purposely separate to keep your survey answers anonymous.

## Appendix 10: Phase 3 Survey Materials

### MTurk Job Descriptions:

Screen shot of what the MTurk “worker” will see as the job description. Below the text is typed out for readability.



20-30 Minute survey on well-being

Requester: Survey Data

Qualifications Required: **Location is US, HIT Approval Rate (%) for all Requesters' HITs greater than 98, Number of HITs Approved greater than 0**

Reward: \$1.0 per HIT

HITs available: 0

Duration: 4 hours (This is the time the participant is allotted to complete the survey – this is important because a worker can accept the HIT saving his slot but then later decide not to complete the HIT, therefore workers can only save their slot for 4 hours)

**Answer a short survey.**

We are conducting an academic survey about what influences your well-being. We are working to better understand how you participate in the organizations you are a part of and how supported you feel by your family and friends. Please select the link below to complete the survey. The link will lead you to the informed consent, once you consent to participate you can complete the survey. At the end of the survey, you will receive a code to paste into the box below to receive credit for taking our survey and earn your compensation.

You **must meet the following requirements** to participate in this survey. If you do not meet these requirements you will not be compensated for your work which may lower your approval rating:

- You are a male military Veteran
- You are not currently active duty
- You have had deployment experience during OEF/OIF
- You are current a resident of the United States

This HIT is periodically re-posted. If you've already completed this HIT previously, please do not complete it a second time. You will not be compensated a second time.

Please open this survey link in a new window: <http://www.linktomysurvey.com>

Upon completion please return to this window and enter the survey code here:

Non-Veteran:

The only differences for the non-Veteran comparison group will be in the requirement section (highlighted above) which will state:

- Never have served in the military
- Age 25 years or older
- Current resident of the United States

**MTurk standard work not approved emails:**

Thank you for your inquiry. Your work was not initially approved because the questions designed to check participant attention and effort for reading and answering questions were answered incorrectly. If you feel this has been in error please provide a rationale as to why you may have missed these questions.

Thank you for your time and efforts,  
Survey Data

Thank you for your time providing a rationale. Your work has been approved and you will receive compensation within 3 days.

Take care,  
Survey Data

## Appendix 11: Informed Consent and Complete Survey

### **INFORMED CONSENT FORM FOR RESEARCH**

Study Name: Sense of Purpose and Well-Being

Principle Investigator: Brigid Lynn      Faculty Supervisor: Dr. Roger Mitchell

\*\*\* FEEL FREE TO PRINT A COPY OF THIS FORM FOR YOUR RECORDS \*\*\*

#### **What are some general things you should know about research studies?**

You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate, or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher to explain or for more information. If at any time you have questions about your participation, do not hesitate to contact the researchers named above.

#### **What is the purpose of this study?**

The purpose of this study is to learn more about what influences your well-being, how you participate in the organizations you are a part of, and how supported you feel by your family and friends. You will be asked questions about your mental health.

#### **What will happen if you take part in the study?**

If you agree to participate in this study, just click "I consent" below and continue with the survey. The survey will contain questions about your participation in organizations, your health, how supported you feel by your family and friends, and some general questions about your work, age, and ethnicity. The survey will take approximately 20 minutes to complete. Any information you provide will be anonymous.

#### **Risks**

There is minimal risk to this study. However, if at any point you are uncomfortable with a question, you may choose to skip it. As indicated in the MTurk job description you must meet the outlined requirements and only take the survey one time. Not meeting the requirements may result in disqualification and you will not receive your MTurk payment, this may influence your MTurk approval rating.

#### **Benefits**

Other than your \$1.00 MTurk payment, you will receive no direct benefits as a result of participating in this study. However, your responses may inform future research.

#### **Confidentiality**

The information you provide that will be in the study records is anonymous. Reports will provide information in aggregated form (i.e., mean of responses of participants). No reported information can be linked to participant identity. Therefore, if direct quotes are used no identifying information will be included or provided and no reference can be made in oral or written reports which could link you to the study.

**Compensation**

For participating in this study you will earn \$1.00 compensation via MTurk. When you exit the survey and submit your task completion code via MTurk you will receive notice of payment from MTurk within 5 days.

**What if you have questions about this study?**

If you have questions about the study or the procedures at any time, you may contact the researcher, Brigid Lynn, at 919-740-3790.

**What if you have questions about your rights as a research participant?**

If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Deb Paxton, Regulatory Compliance Administrator, Box 7514, NCSU Campus (919-515-4514).

**Consent To Participate**

**“I have read and understand the above information. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time however this may influence MTurk payment.”**

If you consent to participate please click “I Consent” below to continue with the survey. If you choose not to participate please click "Exit" and then the next page button to exit the survey and you will be guided back to the MTurk website.

Thank you for your time and consideration.

Welcome to the “Well-being” survey, we want to hear what you have to say!

Survey directions: The survey is broken down into sections and it should take approximately 20 minutes of your time. There is a progression bar located at the bottom of the page to let you know how far you have gotten.

We hope that you will answer the questions completely and to the best of your ability. However, if you are uncomfortable with any question, you may skip it and move on to the next question.

Thank you.

To begin please answer the following demographic questions.

- What is your biological sex?
  - Male
  - Female
- Have you deployed in support of OEF/OIF?
  - Yes
  - No
- If yes:
  - Are you currently active duty?

- Yes
- No
- If no:
  - Are you 25 years or older?
    - Yes
    - No
- Please enter your current numerical age.
  - \_\_\_\_\_ (text entry)
- Please indicate your current marital status:
  - Single
  - Married
  - Separated
  - Divorced
  - Remarried
  - Widowed

Please answer the following question using the ethnicity you most identify with.

- I consider myself:
  - Hispanic
  - Non-Hispanic
- My ethnicity is:
  - American Indian
  - Alaskan Native
  - Asian
  - African American or Black
  - European American or White
  - Pacific Islander

Please answer the following questions about your military experience

- Was your OEF/OIF deployment experience in:
  - Iraq
  - Afghanistan
  - Another overseas country
  - Within the United States
- Was your deployment considered a combat deployment?
  - Yes
  - No
- How long was your service in the military? Please answer in terms of number of years and months.
  - \_\_\_\_\_ Years \_\_\_\_\_ Months
- How long ago did you separate from the military? Please answer in terms of number of years and months.
  - \_\_\_\_\_ Years \_\_\_\_\_ Months

- How long ago did you return from your most recent deployment? Please answer in terms of number of years and months.

- \_\_\_\_ Years \_\_\_\_ Months

Please answer the following questions that involve military terminology.

- In what branch of the military did you serve?

- Air Force
  - Army
  - Coast Guard
  - Marine Corps
  - Navy

- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Air Force)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Army)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Coast Guard)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Marine Corps)



- Please put these Enlisted ranks in order, from most junior to most senior rank, by moving the images: (if Navy)



- Please put these Officer ranks in order, from most junior to most senior rank, by moving the images:



- What is the acronym for the locations where final physicals are taken prior to shipping off for basic training? (4 letters)
  - \_\_\_\_\_ (text entry)
- What is the acronym for the generic term the military uses for various job fields? (3 letters)
  - \_\_\_\_\_ (text entry)
- In which state is the west coast basic training base located? (if Marine Corps)
  - \_\_\_\_\_ (text entry)
- In which state is the Army's academy located, if not skip? (if Army)
  - \_\_\_\_\_ (text entry)
- In which state is the Navy's academy located? (if Navy)
  - \_\_\_\_\_ (text entry)
- In which state is the Air Force's academy located? (if Air Force)
  - \_\_\_\_\_ (text entry)
- In which state is the Coast Guard's academy located? (if Coast Guard)
  - \_\_\_\_\_ (text entry)

The following questions are about your experience with an organization or group. Please follow the instructions and answer to the best of your ability.

- Please think of the organizations or groups (work, school, or volunteer related) in which you are involved. Please select the one that gives you the most satisfaction and choose the answer that best categorizes this group:
  - Charitable (e.g., Red Cross, Food bank, and Salvation Army)
  - Religious (e.g., Faith-based Churches)
  - Fraternal/social (e.g., Kiwanis's Club, Rotary Club, Veterans of Foreign Wars, and Legion Riders)
  - School based (e.g., Greek Life Organizations)
  - Your employment
  - Other \_\_\_\_\_ (text entry)
- Please write in the name of the organization or group:
  - \_\_\_\_\_ (text entry)

- How long have you been involved with this group? Please answer in terms of number of years and months.
  - \_\_\_\_ Years \_\_\_\_ Months
- Still keeping in mind the group you selected, please rate the following statements using a 1-5 scale (1=Absolutely untrue; 2=Mostly untrue; 3=Neither true nor untrue; 4=Mostly true; 5=Absolutely true).
  - My involvement with this group is meaningful to me.
  - I view my involvement with this group as contributing to my personal growth.
  - My involvement with this group really makes no difference to the world.
  - I understand how my involvement with this group contributes to my life's meaning.
  - I have a good sense of what makes my involvement with this group meaningful.
  - I know my involvement with this group makes a positive difference in the world.
  - My involvement with this group helps me better understand myself.
  - I have discovered involvement with this group that has a satisfying purpose.
  - My involvement with this group helps me make sense of the world around me.
  - The involvement I have with this group serves a greater purpose.
  - Being involved with this group makes me feel like part of a team.
  - My involvement with this group gives me a sense of camaraderie.
  - With this group I work as part of a team toward a common goal.
- How much time do you spend with this group?
  - 40 hours or more a week
  - 20-39 hours a week
  - 10-19 hours a week
  - 5-9 hours a week
  - 1-4 hours a week
  - Less than 1 hour a week
- Do you have a leadership role in this group?
  - Yes
  - No
- Research in decision making shows that people, when making decisions and answering questions, prefer not to pay attention and minimize their effort as much as possible. Some studies show that over 50% of people don't carefully read questions. If you are reading this question, please select the box marked 'other' and type 'Decision Making' in the box below. Do not select "predictions of your own behavior." Thank you for participating and taking the time to read through the questions carefully!
  - What was the above study about?
    - Predictions of your own behavior
    - Lions
    - Tigers
    - Other \_\_\_\_\_

The following questions are about what you think about your social surroundings.

- We are interested in what you think about the following statements. Read each statement carefully. Please indicate how much you agree with each statement using a 1-7 scale (1=Very strongly disagree; 2=Strongly disagree; 3=Mildly disagree; 4=Neutral; 5=Mildly agree; 6=Strongly agree; 7=Very strongly agree):
  - There is a special person who is around when I am in need.
  - There is a special person with whom I can share my joys and sorrows.
  - My family really tries to help me.
  - I get the emotional help and support I need from my family.
  - I have a special person who is a real source of comfort to me.
  - My friends really try to help me.
  - I can count on my friends when things go wrong.
  - I can talk about my problems with my family.
  - I have friends with whom I can share my joys and sorrows.
  - There is a special person in my life who cares about my feelings.
  - My family is willing to help me make decisions.
  - I can talk about my problems with my friends.
  
- Below are four statements with which you may agree or disagree. Indicate your agreement with each item using a 1-7 scale (1=Strongly disagree; 2=Disagree; 3=Slightly disagree; 4=Neither agree nor disagree; 5=Slightly agree; 6=Agree; 7=Strongly agree). Please be open and honest in your responding.
  - In most ways my life is close to my ideal.
  - The conditions of my life are excellent.
  - I am satisfied with my life.
  - So far I have gotten the important things I want in life.

The following questions are asking about what your disposition has been recently.

- The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. For each question rate the frequency of your experience using a 0-4 scale (0 = Never; 1=Almost never; 2=Sometimes; 3=Fairly often; 4=Very often).
  - In the last month, how often have you been upset because of something that happened unexpectedly?
  - In the last month, how often have you felt that you were unable to control the important things in your life?
  - In the last month, how often have you felt nervous and "stressed"?
  - In the last month, how often have you dealt successfully with irritating life hassles?

- In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?
  - In the last month, how often have you felt confident about your ability to handle your personal problems?
  - In the last month, how often have you felt that things were going your way?
  - In the last month, how often have you found that you could not cope with all the things that you had to do?
  - In the last month, how often have you been able to control irritations in your life?
  - In the last month, how often have you felt that you were on top of things?
  - In the last month, how often have you been angered because of things that happened that were outside of your control?
  - In the last month, how often have you found yourself thinking about things that you have to accomplish?
  - In the last month, how often have you been able to control the way you spend your time?
  - In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
- We are interested in how people respond when they confront difficult or stressful events in their lives. There are lots of ways to try to deal with stress. These questions ask you to indicate what you generally do and feel, when you experience stressful events. Obviously, different events bring out somewhat different responses, but think about what you usually do when you are under a lot of stress. Then respond to each of the following items using a 1-4 scale (1=I haven't been doing this at all; 2= I've been doing this a little bit; 3=I've been doing this a medium amount; 4= I've been doing this a lot). Please try to respond to each item separately in your mind from each other item. Choose your answers thoughtfully, and make your answers as true FOR YOU as you can. There are no "right" or "wrong" answers, so choose the most accurate answer for YOU--not what you think "most people" would say or do. Indicate what YOU usually do when YOU experience a stressful event.
  - I've been concentrating my efforts on doing something about the situation I'm in.
  - I've been taking action to try to make the situation better.
- Please rate the following statements using a 0-3 scale (0=Not at all; 1=Several days; 2=More than half the days; 3=Nearly every day). Over the last 2 weeks, how often have you been bothered by any of the following problems:
  - Little interest or pleasure in doing things
  - Feeling down, depressed, or hopeless
  - Trouble falling or staying asleep, or sleeping too much
  - Feeling tired or having little energy
  - Poor appetite or overeating
  - Feeling bad about yourself or that you are a failure or have let yourself or your family down
  - Trouble concentrating on things, such as reading the newspaper or watching television

- Moving or speaking so slowly that other people could have noticed or the opposite-being so fidgety or restless that you have been moving around a lot more than usual
  - Thought that you would be better off dead, or of hurting yourself
- If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?
  - Not difficult at all
  - Somewhat difficult
  - Very difficult
  - Extremely difficult
- Please answer Strongly Agree for this question.
  - Strongly Agree
  - Agree
  - Neutral
  - Disagree
  - Strongly Disagree
- Below is a list of problems and complaints that people sometimes have in response to stressful life experiences. Please read each one carefully and indicate how much you have been bother by that problem in the last month using a 1-5 scale (1= Not at all; 2=A little bit; 3=Moderately; 4= Quite a lot; 5=Extremely).
  - Repeated, disturbing memories, thoughts, or images of a stressful experience from the past?
  - Repeated, disturbing dreams of a stressful experience from the past?
  - Suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)?
  - Feeling very upset when something reminded you of a stressful experience from the past?
  - Having physical reactions (e.g., heart pounding, trouble breathing, or sweating) when something reminded you of a stressful experience from the past?
  - Avoid thinking about or talking about a stressful experience from the past or avoid having feelings related to it?
  - Avoid activities or situations because they remind you of a stressful experience from the past?
  - Trouble remembering important parts of a stressful experience from the past?
  - Loss of interest in things that you used to enjoy?
  - Feeling distant or cut off from other people?
  - Feeling emotionally numb or being unable to have loving feelings for those close to you?
  - Feeling as if your future will somehow be cut short?
  - Trouble falling or staying asleep?
  - Feeling irritable or having angry outbursts?
  - Having difficulty concentrating?

- Being “super alert” or watchful on guard?
  - Feeling jumpy or easily startled?
  
- This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer. Indicate to what extent you have felt this way during the past few weeks using a 1-5 scale (1 = Very slightly or not at all; 2 = A little; 3 = Moderately; 4 = Quite a bit; 5 = Extremely).
  - interested
  - distressed
  - excited
  - upset
  - strong
  - guilty
  - scared
  - hostile
  - enthusiastic
  - proud
  - irritable
  - alert
  - ashamed
  - inspired
  - nervous
  - determined
  - attentive
  - jittery
  - active
  - afraid
  
- Please think back to your time in the military and rate the following statements based on your perception of your military experience using a 1-5 scale (1=Absolutely untrue; 2=Mostly untrue; 3=Neither true nor untrue; 4=Mostly true; 5=Absolutely true).
  - My involvement with this group is meaningful to me.
  - I view my involvement with this group as contributing to my personal growth.
  - My involvement with this group really makes no difference to the world.
  - I understand how my involvement with this group contributes to my life’s meaning.
  - I have a good sense of what makes my involvement with this group meaningful.
  - I know my involvement with this group makes a positive difference in the world.
  - My involvement with this group helps me better understand myself.
  - I have discovered involvement with this group that has a satisfying purpose.
  - My involvement with this group helps me make sense of the world around me.
  - The involvement I have with this group serves a greater purpose.
  - Being involved with this group makes me feel like part of a team.
  - My involvement with this group gives me a sense of camaraderie.

- With this group I work as part of a team toward a common goal.

Finally, we would like to know a little bit about your life experience. Only answer these questions if you are comfortable. Any insight you can give is greatly appreciated.

- From what activities do you currently get the greatest sense of purpose?
  - \_\_\_\_\_ (text entry)
- From what activities do you currently get the greatest sense of camaraderie?
  - \_\_\_\_\_ (text entry)

Your opinions are highly valued.

**DO NOT FORGET TO:**

Record this survey completion code: **1209**

Return to the MTurk window to enter the survey completion code to submit your task and earn compensation.

Thank you for your time and effort.