To the Graduate Council:

I am submitting herewith a dissertation written by Catherine Joan Herrera entitled, Relationships between Multicultural Personality, Hardiness, Morale, Distress and Cultural Stress in U.S. Service Members. I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Counseling Psychology.

_____
Gina P. Owens, Major Professor

We have read this dissertation
and recommend its acceptance:

_____
Brent Mallinckrodt

_____
Dawn M. Szymanski

_____
Joan R. Rentsch

Accepted for the Council:

_____
Carolyn R. Hodges
Vice Provost and Dean of the Graduate School

RELATIONSHIPS BETWEEN MULTICULTURAL PERSONALITY, HARDINESS, MORALE, DISTRESS, AND CULTURAL STRESS IN U.S. SERVICE MEMBERS

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Catherine Joan Herrera
December 2012

DEDICATION

This dissertation is dedicated to service members and their families who give so much every day, as well as to those who have dedicated themselves to giving back by ensuring the care of military personnel. I would like to sincerely thank my advisor, Dr. Gina Owens, for four years of absolutely invaluable and unwavering guidance and support and also express gratitude for the knowledge, help and encouragement I have received from the whole Counseling Psychology faculty and staff. I am also infinitely grateful for my husband and my family, for their love, support and patience throughout my program and the dissertation process.

ACKNOWLEDGEMENTS

I would like to acknowledge the work of researchers in military psychology as well as industrial organizational psychology for establishing the wealth of knowledge upon which this study is based. I would also like to acknowledge the immense help I received from my advisor as well as several military friends and colleagues who assisted me a great deal in spreading the word about my study to eligible participants. Their interest and sense of service provided such motivation.

ABSTRACT

Modern military missions place numerous demands on service members, pushing them to negotiate technical, tactical, personal as well as cultural challenges. Although research in other fields has explored the issue of intercultural stress and resilience, to the author's knowledge, none of these efforts have empirically examined these concepts in U.S. military samples, despite the frequent expatriation associated with a military career. The purpose of this study was to explore how factors of multicultural personality (Cultural Empathy, Open-Mindedness, Social Initiative, Emotional Stability, and Flexibility) as measured by the Multicultural Personality Questionnaire, relate to hardiness, morale, cultural stress as well as PTSD and general distress in service members. Correlational analysis results revealed that all five MPQ factors were significantly positively associated with hardiness and morale and significantly negatively associated with general distress. Four factors were also significantly negatively related to PTSD. Emotional Stability, Cultural Empathy, and Open-mindedness were significant predictors of PTSD in a regression model and Emotional Stability and Cultural Empathy were also significant predictors of general distress. Potential implications of these findings are discussed.

TABLE OF CONTENTS

Chapter Page

CHAPTER I – INTRODUCTION 1
Military Cultural Stress 2
Multicultural Personality 5
Hardiness 7
Morale 10
Purpose of the Study 11
CHAPTER II – METHOD 13
Participants 13
Measures 14
Procedure 19
Data Analysis 19
CHAPTER III – RESULTS 21
CHAPTER IV – DISCUSSION 23
Mental Health Symptoms and Independent Variable Means 23
Associations among Independent and Dependent Variables 24
Prediction of PTSD and Distress Severity 24
Limitations and Directions of Further Research 28
Conclusion 30
REFERENCES 32
APPENDIX 40
VITA 48

CHAPTER I – INTRODUCTION

In nearly a decade of war, on fronts in Iraq and Afghanistan, U.S. military personnel have faced unique, complex and continuous challenges. The operational tempo of the past several years also has placed consistent strain on service members' relationships and circumstances back home. Growing research has begun to paint a clearer picture of the mental health impact associated with these wars. A 2004 report estimated that roughly 16 - 17% of veterans of the Iraq war met screening criteria for Post Traumatic Stress Disorder (PTSD), depression or anxiety (Hoge et al., 2004). PTSD consists of three symptom clusters, including re-experiencing (e.g., nightmares, intrusive distressing thoughts), avoidance (e.g., disengagement from previous activities or relationships, restricted affect), and increased arousal (e.g., disrupted sleep, exaggerated startle response, difficulty concentrating) (American Psychiatric Association, 2000). Reducing PTSD severity is of utmost importance given its significant impact on social and occupational functioning. In a recent cross-sectional study including active and National Guard OIF veterans, prevalence rates of those who met criteria for depression or PTSD with some functional impairment ranged between 23% and 31% and, when using a stricter case definition with severe functional impairment, rates still ranged between 9% and 14%. Further, of those who met the strictest criteria for depression or PTSD, approximately half met criteria for alcohol misuse or aggressive behavior (Thomas et al., 2010).

Underscoring the mental health impact of combat experiences in Iraq and Afghanistan, an analysis of data from the mandated Post Deployment Health Assessment, a survey taken by all returning military personnel, showed that roughly one third of veterans returning from Iraq accessed mental health services within the first year after deployment (Hoge, Auchterlonie, &

Milliken, 2006). Results also showed combat duty in Iraq to be related not only to high levels of post-deployment mental health utilization, but also to attrition from military service, thus raising mental health as well as operational concerns. These findings signal a need for greater understanding of the psychological aspects of deployment. They present a challenge to current researchers to develop effective treatments and interventions for associated mental health problems as well as to identify the key stressors involved in deployment and factors which may help increase resilience for current and future service members.

Military Cultural Stress

One factor that may impact service members' psychological adjustment during and after returning from deployment is cultural stress. Modern warfare demands that service members not only navigate unfamiliar geographical terrain, but also negotiate an immensely diverse human landscape. The ongoing conflicts in Iraq and Afghanistan require military personnel to interact with, influence, and work alongside foreign community members as well as international forces in order to be successful in their missions, simultaneously dealing with issues of safety and security as well as social understanding. This emphasis is well captured in a list of observations made by General Petraeus in Iraq, which include the ideas that "everyone must do nation building," that "there is no substitute for flexible, adaptable leaders," and further that, "cultural awareness is a force multiplier" (as cited in Pierce & Dixon, 2006, pp. 8-9). Broader demands placed on all service members have certainly amplified the significance of multicultural competence military-wide. In a survey of recent Army company commanders, issues related to intercultural competence were among the most frequently cited wartime leadership challenges (as cited in Abbe, 2008). The necessity of cultural training above technical and tactical training

for advisors of indigenous forces who currently play a pivotal role overseas, has also been emphasized (Ramsey, 2006).

In recognition of the significance of cultural understanding for military operations, the Army Research Institute for the Behavioral Sciences (ARI) has conducted a number of workshops and studies on cultural competence and intercultural effectiveness in recent years. In an intensive study to determine the most crucial foci for multicultural training in the military, interpersonal skills, non-ethnocentric attitudes, and openness were identified as the greatest contributors to operational success in cross-cultural environments (Abbe, 2008). The researchers deemed the issue critical enough that they suggested that cross-cultural education be implemented at all levels of training "so that culture is seen as an integral consideration in full spectrum operations" (Abbe 2008, p. 10). Although these projects have not directly addressed the psychological implications of long term foreign cultural immersion and cultural transitions on individual soldiers, extant evidence suggests these may be important areas of study.

Although the concepts of "culture shock" (Oberg, 1960) and acculturative stress (Berry, 1970) have been investigated at length primarily in civilian populations, these constructs also are relevant for military personnel. Research with civilians suggests that positive intercultural experiences have been associated with aspects of personal growth, including increased self-efficacy (Milstien, 2005), and gains in self-confidence and interpersonal relationships (Matsumoto et al., 2001). Consequences of negative intercultural experiences, on the other hand, may include depression, anxiety, interpersonal difficulties, and decreased work and school performance (Matsumoto et al., 2001). Additionally, the experience of repatriation, or returning to one's country of origin, has been linked with potentially negative consequences. Repatriation has been associated with levels of psychological distress which may surpass those experienced

during expatriation and reach clinical levels (see Szkudlarek, 2010 for review). Research in international business has capitalized on this knowledge by investigating relevant antecedents of expatriate adjustment through exploring individual, environmental and socio-cultural variables (Aycan, 1997; Mendehall, & Oddou, 1985). For example, research has supported that ethnocentrism is negatively related to aspects of expatriate effectiveness and, alternatively, that cultural flexibility as well as Big Five traits such as emotional stability, agreeableness and extroversion are positively related to aspects of expatriate effectiveness (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006). This research with civilian populations has implications for military personnel since these aspects of cross cultural experiences may apply to deployment and post deployment reintegration.

Providing further evidence for the relevance of these issues, Azari, Dandeker, and Greenberg (2010) suggest the need for increased research on the impact of cultural stress on military personnel. The authors cited several accounts of cultural stress and fatigue experienced by deployed service members in past as well as current conflicts. For example, they discussed anger and decreased motivation related to cultural stress in Vietnam and Korean veterans as well as a recent report from a former Military Transition Team advisor which emphasized his repeated frustration in daily interactions with Iraqi counterparts (Azari et al., 2010). Differences in culture have even been proposed as one of the stressors potentially contributing to the misconduct of young soldiers at Abu Ghraib (cited in Bartone, 2008). Furthermore, many of the five psychological stress dimensions shown to be fundamental during deployment (Isolation, Ambiguity, Powerlessness, Boredom, and Workload) (Bartone, Barry, & Armstrong, 2009) coincide with the nature of cultural stress and may clarify how it contributes to the cumulative stress experienced by service members. Bartone (2005) specifically identified a lack of cultural

understanding as potentially adding to feelings of isolation, ambiguity and powerlessness in soldiers during deployment.

Military cultural stress, due to its ongoing nature, interaction with the distinct culture of military units, and relation to other forms of combat stress, presents a unique area of study with both mental health as well as operational implications (Azari et al., 2010). Although immersion in and reentry from a foreign culture is an explicit aspect of modern military deployments, and despite the recognition of an operational need for greater multicultural competence, cultural stress and adaptation within a military context remain relatively unexplored domains (Azari et al., 2010). As prior research has investigated in the civilian business sector (e.g., Aycan, 1997; Mendehall, & Oddou, 1985; Shaffer et al., 2006), examining associations between such factors as multicultural effectiveness and psychological adjustment in a military context may provide important directions for military selection, training and preparation.

In light of the need for greater cultural competence and potential consequences of cultural stress in the military, more research is needed to identify characteristics which may help mitigate the impact of cultural stress on individual service members and units and aid overall adjustment. Such an approach would add to existing strength-based research, which has been suggested as uniquely applicable to military psychology (Matthews, 2008). Multicultural personality is one construct which may provide a helpful avenue through which to approach multicultural stress and adjustment in military populations.

Multicultural Personality

The construct of Multicultural Personality, which encompasses aspects of multicultural adaptability and intercultural effectiveness (Ponterotto et al., 2007), has become an important focus in expatriate research and also may influence service members' deployment-related

psychological adjustment. Modern globalization has spurred a growing interest in cultural competence within the field of psychology, specifically industrial organizational psychology, prompting the development of several measures of multicultural personality. Although considerable research has been dedicated to the assessment and identification of multiculturally effective civilian expatriates who may adapt well or even thrive in foreign cultures (Aycan, 1997; Shaffer et al., 2006) no research has yet examined the applicability of such knowledge in a military context.

The Multicultural Personality Questionnaire (MPQ) (Van der Zee & Van Oudenhoven, 2000; 2001) is one well-validated, trait-based measure of multicultural personality that has been frequently used with civilian populations. The MPQ consists of five distinct domains (cultural empathy, open-mindedness, emotional stability, social initiative, and flexibility). Cultural empathy describes a person's ability to empathize with the thoughts, feelings, and behaviors of those from varying cultural backgrounds. Open-mindedness indicates an individual's tendency to hold an open, unprejudiced mind-set toward different groups, values and cultural norms. . Social initiative describes a tendency to actively approach social situations and take initiative. Emotional stability depicts the propensity to maintain calm as opposed to exhibiting strong emotional reactions during high stress situations. Finally, flexibility is the propensity to adjust to new, unknown situations and view them as challenges (Van der Zee & Van Oudenhoven, 2001).

In reviewing 15 studies which utilize the MPQ, Ponterotto (2008) found support for the validity of MPQ factors in predicting psychological as well as physical well being and life satisfaction in international workers. Dimensions of the MPQ also have shown positive correlations with aspects of well-being among university students (Ponterotto et al., 2007) and have been predictive of levels of personal, social and professional adjustment among expatriate

workers (Van Oudenhoven, Mol, & Van der Zee, 2003). Furthermore, the MPQ has demonstrated greater predictive variability than the Big Five in international orientation and interest in an international career (Van der Zee & Van Oudenhoven, 2000), supporting the idea that more narrow, rather than broad traits are superior predictors of human behavior in sociocultural contexts (see also Paunonen, Haddock, Forsterling, & Keinonen, 2003; Ponterotto, 2010). Another study conducted with 160 Dutch college students found that those with higher scores on the MPQ appraised potentially threatening intercultural situation scenarios more positively and had fewer negative reactions to the situation than those with lower scores (Van der Zee, Van Oudenhoven, & Grijs, 2004). Thus, although deployment is qualitatively different than other types of expatriation and the cultural demands placed on service members are coupled with the potential of life threat, extant research on the MPQ suggests it may be an informative tool in assessing the construct of multicultural personality in military personnel and characteristics which may benefit service members in dealing with cultural stress during deployment.

Hardiness

Another construct that has been associated with positive psychological adjustment in service members is hardiness. Hardiness has been proposed to be related to the three components of commitment, control, and challenge, attitudes which have been shown to buffer against physiological and psychological consequences of stress (Maddi, 2002). Commitment has been described as a tendency to be involved with, rather than detached and isolated from, one's context, including the people and objects in one's environment. Control signifies one's striving to have an influence on external outcomes, contrasting with attitudes of passivity or powerlessness. Challenge describes a desire to learn from both positive and negative experiences as opposed to avoiding risks and uncertainties (Maddi, 2002).

The concepts of multicultural personality and hardiness have been linked in previous research. For example, in a sample of 124 undergraduates, having a universal-diverse orientation, an underlying component of multicultural personality, was shown to be positively related to psychological hardiness among other aspects of well-being (Brummett, Wade, Ponterotto, Thombs, & Lewis, 2007). In a recent overview of the topic of multicultural personality, Ponterotto (2010) hypothesized that multicultural personality should predict significant variance in such factors as self-efficacy, empathy, resiliency and psychological hardiness. Moreover, conceptually, it seems that an openness to or interest in new cultural experiences, distinctive of multicultural personality, may provide another potential avenue from which to frame or derive meaning from difficult experiences, a practice identified with hardiness that has been suggested as crucial for service member well-being (Bartone, 2005; Britt, Adler, & Bartone, 2001).

The construct of hardiness has become recognized as an important measure of resilience in military populations. For example, evidence has shown that veterans who develop symptoms of posttraumatic stress disorder (PTSD) following combat exposure have significantly lower levels of hardiness than those who do not develop the disorder (Bartone, 2005). In a study designed to assess military-specific hardiness in which service members' commitment, challenge and control were framed specifically in terms of their work experiences, military hardiness was found to moderate the effect of deployment stressors on depression post-deployment, with soldiers scoring higher in military hardiness reporting lower levels of depression (Dolan & Adler, 2006). Also, military cadets higher in hardiness have been shown to be more successful in developing as transformational leaders following a stressful training exercise, supporting an association between hardiness and greater readiness to derive growth through adverse situations (Eid, Johnsen, Bartone, & Nissestad, 2008). Interestingly, hardiness also has been found to

predict soldiers who successfully complete Special Forces selection (Bartone, Roland, Picano, & Williams, 2008), the first gate of entry into a military role which requires considerable flexibility and adaptability, especially in differing cultural contexts. Military leaders high in hardiness are thought to be more likely to approach ambiguous, stressful situations more creatively and may be uniquely capable of reframing stressful situations and positively influencing their units (Bartone, et al., 2009). The precise mechanisms which contribute to hardiness are not fully understood although the importance of identifying these mechanisms and how they may be increased in individuals has been recognized (Bartone 1999; Bartone, et al., 2009).

While hardiness is associated with resilience to military stress, multicultural personality represents what may be conceived as a comprehensive and targeted type of resilience that is particularly salient during overseas deployment. Examining relationships between multicultural personality, hardiness, and distress in service members may help clarify how these variables may contribute to deployment-related adjustment. The significance of investigating these relationships can be viewed from the potential mental health as well as operational consequences of cultural stress, including depression, anxiety, frustration and a compromised ability to carry out ones' mission. Within the military, cultural stress concerns are compounded by the existence of service obligations which limit the ability for service members to leave jobs that do not feel like a good fit. This is an issue not shared by the civilian sector where individuals can generally choose to change jobs at will.

Morale

Morale is another factor which may relate to multicultural personality for individuals with culturally demanding roles. Morale is an important construct in military life and has been supported as such in military psychology research despite difficulties in developing a unified definition and method of measurement (Motowidlo et al., 1976). Although there have been various definitions of morale, Britt and Dickinson (2006) recently have defined morale as a motivation and enthusiasm for accomplishing mission objectives and, within a military context, the authors describe it as a "positive motivational state that should be related to superior performance under stress, adaptive responding to operational demands, and positive job attitudes" (Britt & Dickinson, 2006, p. 159). Some researchers purport that "morale is best predicted by work conditions and leadership behaviors that provide the individual with purpose, meaningfulness, confidence, and/or optimism" (Britt & Dickinson, 2006, as cited in Britt, Dickinson, Moore, Castro, & Adler, 2007, p. 36). This conceptualization appears consistent with findings from research with Army peacekeepers deployed to Kosovo where positive military experiences, general military stressors while overseas, and post-deployment unit cohesion predicted post-deployment morale (Maguen & Litz, 2006). Evidence suggests that morale is significantly related to global satisfaction with a military lifestyle (Motowidlo & Borman, 1978) and morale assessed during deployment has been associated with perceived benefits of deployment six months later (Britt et al., 2007).

Based on the literature review above and considering the demands of the current military operating environments, conceptually, it would seem that those scoring higher in multicultural personality factors would be less negatively impacted by the cultural complexities and challenges of their role. Further, the conceptual basis of multicultural personality suggests that those high in

this construct may not only adapt more easily, but may also derive satisfaction and meaning from their multicultural experiences. Thus, these relationships suggest that multicultural personality characteristics may contribute to one's sense of morale and will be explored in the current study.

In light of the current operational needs of the military and the mental health impact resulting from the current wars, additional knowledge which may inform issues of performance or resilience is needed as these factors are not only important on their own, but are also inextricably linked. Although the indices measured by the Multicultural Personality Questionnaire are framed as trait-based, it has been suggested that more research is needed to investigate if perhaps these factors may have only a slight dispositional component, and thus significant aspects of them of may be responsive to training (Abbe, Gulick, & Herman, 2007). Research applying this framework to a military population may provide needed information about how this multicultural personality conceptualization fits within a military context and how it relates to factors of resilience and distress. In addition, it may inform processes of prevention and selection and help provide relevant groundwork for future military training research.

Purpose of Study

Given the relevance of multicultural stress to a military career and research which suggests that certain personality factors may help buffer the effects of this stress, it is surprising that limited research has examined multicultural personality characteristics among military personnel. To address this gap in the literature, the purpose of the present study is to examine the relationships between multicultural personality characteristics, hardiness, morale, cultural stress and psychological distress (general distress and PTSD severity) in service members who have been deployed. Based on the available research literature, we propose the following hypotheses.

Hypothesis 1: We hypothesize that dimensions of multicultural personality (cultural empathy, open-mindedness, social initiative, emotional stability, and flexibility) will be positively associated with levels of hardiness and morale in service members, and negatively related to perceived cultural stress associated with deployment, general distress, and PTSD severity. Individuals having higher levels of cultural empathy, open-mindedness, social initiative, emotional stability, and flexibility also will have higher levels of hardiness, higher levels of morale, and have lower reported levels of cultural stress associated with deployment, general distress, and PTSD. Also, we hypothesize that respondents reporting higher levels of hardiness will be more likely to report higher morale and less likely to report higher levels of general distress, PTSD, and cultural stress. We also expect that greater combat exposure will be significantly related to greater levels of PTSD and general distress severity.

Hypothesis 2: When controlling for combat exposure, indices of Multicultural Personality (cultural empathy, open-mindedness, social initiative, emotional stability, and flexibility), morale, and hardiness will be significantly associated with levels of general distress and PTSD severity. More specifically, individuals with higher levels of multicultural personality domain scores, morale, and hardiness will have lower levels of general psychological distress and PTSD severity.

CHAPTER II: METHOD

Participants

One-hundred and forty-five service members who had deployed at least once to Iraq or Afghanistan since 2001, completed an online survey described as a study of aspects of mental health and resilience among military personnel. Ages of respondents ranged from 21 to 54 and the mean age was 33. In regards to race and ethnicity, 87% of participants self-identified as White, about 7% Hispanic or Latino, 4% Asian, 3% black or African American, and about 1% American Indian or Alaska Native, 1% Native Hawaiian or Other Pacific Islander and 1% identified as "other." Participants could indicate more than one category for race or ethnicity. As the original concept for this study was to examine only combat arms branches, for which respondent sex would have been all male, the author erred in not adding a question about sex after the concept was expanded to include all service members. Thus, percentages of males and females completing the survey could not be determined. The sample was made up of about 66% officers, 33% enlisted personnel and just under 1% warrant officers. Participants ranged in their number of previous deployments with 40% having deployed once, 31% having deployed twice, 20% having deployed 3 times and 9% having deployed more than 3 times. A large majority of respondents were members of the Army (94%), followed by the Air Force (3%), Marine Corps (2%), and Navy (1%). In terms of duty status, most service members were Active Duty (65%), followed by Reserve (18%), National Guard (14%) and Active Guard (2%) and 2 respondents did not answer.

Respondents were also asked specific questions about cultural training and exposure. In regards to participants' levels of cultural or language training prior to deployment, about 10% of respondents indicated receiving more than 40 hours of cultural or language training, 43%

indicated receiving 10-40 hours, 30% indicated receiving 10 or fewer hours and 17% indicated receiving no such training. In terms of what priority cultural or language training was given among respondents' pre-deployment tasks, about 8% reported such training was given highest priority, 7% reported above average, 32% reported average, 34% reported below average, 16% reported it was given lowest priority, and 3% indicated it was not a priority. Regarding the depth of respondents' interactions with foreign personnel during deployment, about 52% indicated having extensive interactions (i.e., interactions or communication with foreign personnel were a primary part of one's role during deployment), 20% indicated having significant interactions (i.e., had several significant interpersonal interactions with foreign personnel which required lengthy or repeated communications), 16% indicated having somewhat significant interactions (i.e., had some significant interpersonal interactions with foreign personnel which required lengthy or repeated communications) and about 12% indicated having minimal interactions (i.e., had few interactions with foreign personnel or interactions were very brief or not in-depth).

Measures

The survey with all measures included is in the Appendix.

Demographic Items. The demographic portion of the survey included questions about age and racial and/or ethnic identification as well as information related to participants' branch of service (Army, Marines, Navy, Air Force); duty status (Active, Reserve, National Guard, Active Guard); rank; number of previous deployments as well as the extent and nature of their multicultural training and multicultural exposure during deployment. Specific questions regarding prior training and exposure include: "Did you have cultural or language training (civilian or military) prior to deployment?" "On average, what priority was cultural training

given among your pre-deployment tasks?" (Azari et al., 2010) and "On average, how would you describe the depth of your interactions with foreign personnel during your deployment(s)?

Multicultural Personality Questionnaire. (MPQ; Van der Zee & Van Oudenhoven, 2001) The MPQ is a likert-type scale designed to measure multicultural effectiveness. There are 91- and 78-item versions, the latter of which was used in this study. Five dimensions are assessed by the scale: Cultural Empathy, Open-Mindedness, Social Initiative, Emotional Stability, and Flexibility. Respondents are asked to rate to what extent each statement applies to him or her on a five-point scale, ranging from 1 (*Not at all applicable*) to 5 (*Totally applicable*). Example items include, "Tries to understand other people's behaviors" (Cultural Empathy), "Is intrigued by differences," (Open-Mindedness), "Makes contacts easily" (Social Initiative), "Considers problems solvable" (Emotional Stability), and "Changes easily from one activity to another" (Flexibility). Internal consistency for scales on the 78-item version of the MPQ (Van der Zee & Van Oudenhoven, 2001) ranged from .74 (Flexibility) to .91 (Emotional Stability) (Van der Zee & Van Oudenhoven, 2001). Construct validity has been demonstrated through expected correlations between dimensions of the MPQ and other personality factors such as the Big Five personality traits (Van der Zee & Van Oudenhoven, 2000). MPQ scores have been shown to discriminate between students with and without international aspirations. Internal consistency reliabilities for scales in the current study were: .86 (Cultural Empathy), .88 (Open Mindedness), .88 (Social Initiative), .84 (Emotional Stability), .69, (Flexibility).

Dispositional Resilience Scale (DRS; Bartone, 1995) The DRS is a 15-item measure intended to gauge hardiness or resilience in three domains: commitment, control, and challenge. Respondents are asked to rate how much each statement is true for them on a four point scale ranging from 0 *(Not at all true)* to 3 *(Completely true)*. Higher scores indicate higher levels of

hardiness. Sample items include "Most days, life is really interesting and exciting for me" (commitment), "My choices make a real difference in how things turn out in the end" (control) and "It bothers me when my daily routine gets interrupted" (challenge). Internal consistency reliability for the total DRS has been reported at .82, with reliability for subscales at .77 (commitment), .68 (control), and .69 (challenge) (Bartone, 1999). In a sample of 104 military academy cadets, three week test-retest reliability was .78 (Bartone, 2007).The DRS has been used extensively with military populations and has demonstrated good criterion-related validity across various samples (as cited in Bartone et al., 2008). Internal consistency reliability for the current study was .82.

Combat Exposure Scale. (CES; Keane et al., 1989). The Combat Exposure Scale is a 7-item measure designed to evaluate respondents' exposure to various combat situations. Responses are rated on a 5-point scale with item-specific anchors. Total scores indicate the degree of combat exposure, with higher scores denoting higher rates of exposure. Example items include: "Did you ever go on combat patrols or have other dangerous duty?" and "How often did you see someone hit by incoming or outgoing rounds?" Internal consistency reliability (coefficient alpha = .85) and test-retest reliability over a one week time span (r = .97) have been high. Keane et al. (1989) demonstrated the validity of the CES among groups of Vietnam veterans, showing scores to be significantly related to levels of PTSD and able to differentiate between groups with and without a PTSD diagnosis. Internal consistency reliability for the current study was .82.

PTSD Checklist-Military version. (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-M is a 17-item measure of current PTSD symptomatology according to DSM-IV criteria (American Psychiatric Association, 2000). Respondents are asked to rate how much

they have been troubled by a particular problem in the past week on a five-point scale ranging from 1 (*Not at all*) to 5 (*Extremely*). Total scores range from 17 to 85, with higher scores indicating greater PTSD symptom severity. Example items include "Repeated, disturbing memories, thoughts, or images about the stressful experience" and "Avoiding thinking or talking about the stressful experience." Scores of 50 or above indicate clinically significant PTSD (Weathers et al., 1993). Validity has been supported by correlations in expected directions between the PCL and other measures of PTSD and internal consistency reliability and test-retest reliability with military samples were .94 and .96 respectively (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Weathers et al., 1993). Internal consistency reliability for the current study was .94.

Hopkins Symptom Checklist-21. (Deane, Leathem, & Spicer, 1992). The HSCL is a 21-item self-report inventory created to assess symptoms of psychological distress. It is a shortened version of the Hopkins Symptom Checklist (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). Participants are asked to rate how often they have experienced symptoms on three 7-item subscales including general feelings of distress, somatic distress, and performance difficulty, over the past seven days. Items are rated from 1 (*Not at all*) to 4 (*Extremely*). Example items include, "Feeling inferior to others," "Pains in the lower part of your back," and "Trouble remembering things." The total score on the HSCL-21 indicates a respondent's level of general psychological distress, with higher scores suggesting higher distress. Internal consistency reliability (r=.89) was high for the total score and construct and concurrent validity have been supported for the measure with positive correlations shown between HSCL scores and measures of anxiety and global pathology (Deane et al., 1992). Various studies have used the HSCL to measure general psychological distress in veteran populations (e.g., Dobscha, Corson, & Gerrity,

2007; Gray, Kaiser, Hawksworth, Hall, & Barrett-Connor, 1999). Internal consistency reliability for the current study was .93.

Morale. To measure morale, participants were asked to respond to the statement, "Please rate your level of morale in regards to accomplishing your major work objectives." They were then asked to rank their perceived morale from *(Very low)* to (*Very high).* This morale item was developed from research by Britt (1997) and versions of it have been used in Army Mental Health Advisory Team research as well as in other military psychology studies (e.g., Britt & Dawson, 2005; Britt et al., 2007). Construct validity has been supported by negative correlations between this measure of morale and depression, as well as positive correlations between this measure and engagement in meaningful work and confidence (Britt et al., 2007).

Perceptions of Cultural Stress. There is currently no official, validated measure for perceptions of cultural stress during deployment or upon return home. These factors will be measured by items adapted from research questions by Azari et al. (2010) as well as through some items designed by the author. Respondents will be asked, "How much did cultural factors negatively impact your ability to accomplish your mission?" (Azari et al., 2010) and answers will be rated on a four-point scale: 1 *(not at all),* 2 *(a little bit),* 3 *(a moderate amount),* and 4 *(very much so).* Other questions will include "How would you describe your adjustment to cultural differences during your deployment?" and "How would you describe your adjustment to cultural differences after returning home?" Responses for these final two items will also be rated on a four-point scale: 1 (*Not at all difficult*), 2 (*A little bit difficult*), 3 (*Somewhat difficult*), and 4 (*Extremely difficult*). These questions were used to create a deployment-related cultural stress index by summing item responses. Internal consistency reliability was .48. Since reliability was low, the scale was not used in analyses but individual item correlations were examined.

Validity Items. Two items were added to the survey in order to check for valid responding. They requested that participants respond to statements with either "True," "False" or "I don't know." These items were as follows, "I have never ever actually worn a military uniform," and "I have never received any pay for any military service." No participants responded in an invalid manner (i.e., choosing either "False" or "I don't know.")

Procedure

An internet survey was used to collect data for the current study. Participants were recruited via email announcements (see Appendix) sent through Army Knowledge Online, the primary intranet system for the Army; veteran listserves and interest groups; as well as through personal contacts of the first author. Participants used a hypertext link to connect to the survey web site where an informed consent with further information about the study was provided (see Appendix). Potential participants were informed that the purpose of this study was "to obtain information regarding attitudes and characteristics related to resilience and mental health." Participants indicated their consent to participate by checking a box and were then directed to the survey items. The use of a hypertext link to access the survey was chosen to protect confidentiality and to ensure data integrity. Data was collected and stored through a secure, firewall-protected server. All procedures were approved by the university Institutional Review Board.

Data Analysis

Statistics were computed using SPSS software (version 17.0, SPSS Inc.). Means, standard deviations, internal consistency reliability estimates, and inter-correlations among all continuous variables were conducted. To investigate hypothesis 1, a Pearson r correlational analysis was conducted to determine significant associations between psychological distress, PTSD severity,

multicultural personality factors (cultural empathy, open-mindedness, social initiative, emotional stability, and flexibility), hardiness, morale, levels of cultural stress, and combat exposure. To investigate hypothesis 2, two simultaneous linear regression analyses were performed to assess predictors of general distress and PTSD severity. Levels of combat exposure were entered as control variables for both regressions. We predicted that multicultural personality factors, morale, and hardiness would be significantly associated with general psychological distress as well as PTSD severity. Thus, individuals with higher levels of multicultural personality domains, morale, and hardiness would have lower levels of general distress and PTSD.

CHAPTER III: RESULTS

Mean scores were used to calculate bivariate correlations and linear regressions. Means, standard deviations, and correlations between the measures using mean scores are presented in Table 1. The mean for PTSD severity on the PCL-M using sum scores was 31.88, with about 11% of the sample scoring at or above 50, the recommended cut-off for a probable PTSD diagnosis (Weathers et al., 1993). The mean for general distress was 37.21 with a total possible score of 84. The mean on the CES (M = 18.62) designates a moderate level of combat exposure.

To test Hypothesis 1, correlational analyses were conducted to determine significant relationships between PTSD and distress severity, MPQ factors, hardiness, morale, perceived cultural stress associated with deployment and combat exposure. As predicted, all five factors of the Multicultural Personality Questionnaire were significantly positively associated with hardiness and morale in regards to accomplishing one's major work objectives. Four MPQ scales (Cultural Empathy, Social Initiative, Emotional Stability, and Flexibility) were significantly negatively correlated with PTSD severity. All five MPQ scales were significantly negatively associated with general psychological distress. In terms of individual cultural stress items, how much one perceived cultural factors to have negatively impacted one's ability to accomplish one's mission was significantly negatively correlated with emotional stability and flexibility. Difficulty adjusting to cultural differences while deployed was significantly negatively correlated with open-mindedness and emotional stability. These results provided partial support for Hypothesis 1. In regards to the prediction about hardiness, as expected, hardiness was significantly positively correlated with morale and negatively correlated with PTSD and general distress. Contrary to our hypothesis, hardiness was not significantly correlated with the

individual cultural stress items. As predicted, combat exposure was significantly positively related to both PTSD and general distress in our sample.

Also of note, although not included in our hypothesis, are significant correlations found between cultural stress items and distress measures. How much one perceived cultural factors to have negatively impacted one's ability to accomplish one's mission was significantly positively correlated with PTSD. Items related to difficulties adjusting to cultural differences during deployment as well as after returning home were significantly positively associated with PTSD and general distress.

To test Hypothesis 2, two linear regressions were performed to determine predictors of PTSD (Table 2) and general distress (Table 3). Prior to analyses, independent variables were checked for their appropriateness for multivariate analyses. Skewness, kurtosis, and multicollinearity were in acceptable ranges. Combat exposure was entered first in the model to control for its effects. Other independent variables included in the models were the five MPQ factors, hardiness, and morale. Results provided partial support of Hypothesis 2. In terms of PTSD, combat exposure, cultural empathy, open-mindedness, and emotional stability emerged as significant predictors ($R^2 = .38$, ($F (8, 136) = 10.37$, $p < .01$)). Higher cultural empathy and emotional stability were associated with lower PTSD severity, while higher combat exposure and, contrary to predictions, higher open-mindedness, were associated with higher PTSD severity. For general distress, combat exposure, cultural empathy, and emotional stability were significant predictors ($R^2 = .45$, ($F (8, 136) = 13.83$, $p < .01$)) with higher combat exposure and lower cultural empathy and emotional stability associated with higher levels of general distress.

CHAPTER IV: DISCUSSION

The current study examined multicultural personality characteristics in relation to measures of resilience and distress in service members. Relationships among these factors were examined through correlational analyses and also by conducting two linear regressions to determine what factors may be significant predictors of PTSD and general distress severity. Both of the study hypotheses were partially supported.

Mental Health Symptoms and Independent Variable Means

The percentage of personnel meeting the suggested cut-off score of 50 for PTSD in the current sample (11.2%) is somewhat similar to stricter post-deployment population estimates by Hoge et al. (2004) where the DSM criteria scoring method and 50 point cutoff were combined (Army rates after Afghanistan = 6.2%, after Iraq, 12.9%; Marines after Iraq, 12.2%). The mean score of for general distress (37.21) is slightly higher than that of a non clinical sample of civilian nurses (35.58) assessed in the development of the HSCL-21 (Deane et al., 1992) but lower than the mean for their civilian treatment-seeking sample (44.32). The mean combat exposure score (18.62) is indicative of a moderate level of combat exposure. Service member mean MPQ factor scores, calculated using mean scores (Cultural Empathy, 3.60; Open-Mindedness, 3.58; Social Initiative, 3.73; Emotional Stability, 3.36; Flexibility, 3.22) were somewhat similar though all slightly lower than those assessed in a group of western civilian expatriates working in Taiwan (Cultural Empathy, 3.86; Open-Mindedness, 3.91; Social Initiative, 3.77; Emotional Stability, 3.48; Flexibility, 3.29) (Van Oudenhoven, Mol, & Van der Zee, 2003). Compared to the mean hardiness score of a group of Army Special Forces candidates (34.07) (Bartone, et al, 2008) the mean hardiness score for the current sample (31.32) was

somewhat lower. This difference makes sense given that Special Forces candidates are a self-selected group of soldiers volunteering for a uniquely challenging role.

Associations among Independent and Dependent Variables

In correlational analyses (Hypothesis 1), all five MPQ factors were significantly positively related to hardiness and morale, which have both been previously associated with positive adjustment in service members (Bartone, 2005; Britt et al., 2007; Dolan & Adler, 2006; Motowidlo & Borman, 1978). Further, significant negative associations were found between nearly all MPQ factors and distress measures, with open-mindedness and PTSD being the only non-significant negative relationship. Although a current dearth of research on multicultural personality characteristics applied in a military context prevents an extensive analysis of our findings compared to others within the field of military psychology, our results appear largely consistent with research suggesting links between MPQ factors and aspects of well-being and adjustment in civilian populations (Ponterotto et al., 2007; Ponterotto, 2008; Van Oudenhoven, Mol, & Van der Zee, 2003). While our cultural stress items were not standardized and could not be used as a scale due to low reliability, it is interesting to note that emotional stability, flexibility and open-mindedness were each significantly negatively associated with one or more of the individual cultural stress items. Hardiness, however, was not significantly related to our cultural stress items, which may reflect the fact that MPQ subscales are uniquely related to intercultural adaptability, whereas hardiness is not.

Prediction of PTSD and Distress Severity

In terms of linear regression analyses (Hypothesis 2), because MPQ factors have not been examined previously among U.S. service members, we included all five subscales in our PTSD and general distress models to explore any significant relationships. The current results provide

support for the relevance of certain multicultural personality characteristics for service member mental health, partially supporting Hypothesis 2. Interestingly, higher levels of combat exposure and open mindedness and lower levels of emotional stability and cultural empathy predicted higher PTSD severity in our sample. In terms of general distress, lower emotional stability and lower cultural empathy were associated with higher psychological distress. These results suggest that emotional stability and cultural empathy may potentially serve as protective factors for current service members against distress or PTSD and thus may have implications for more focused military resilience training and selection. Our findings also suggest a possible mental health benefit of current operational goals (Abbe, 2008; Abbe et al, 2007; Abbe & Halpin 2010) to increase multicultural competence military-wide, which is especially intriguing in light of the mental health impact of OIF and OEF.

The finding that emotional stability was a predictor in the regressions for both PTSD and general distress makes sense in light of the fact that it is the most directly linked to the concept of mental health of all of the MPQ scales. Emotional stability, which describes the tendency to maintain calm rather than exhibiting strong emotional reactions during high stress situations, has been shown to be the most significant predictor of adjustment compared to the other MPQ scales (Oudenhoven, Mol, & Van der Zee, 2003). Van Oudenhoven and Van der Zee (2002) have suggested that emotional stability may be the most salient factor upon one's initial entrance into a foreign culture while the remaining factors may become increasingly important for adjustment over time, after the initial culture shock has decreased.

Although our study did not assess these factors over time, the significance of cultural empathy, the subscale most specifically related to culture, as a predictor for both PTSD and general distress lends support to the idea that one's ability to empathize with the thoughts,

feelings, and behaviors of those from varying cultural backgrounds may aid the adjustment of service members, as has been found for other types of expatriates (Van Oudenhoven & Van der Zee, 2002; Ponterotto et al., 2007). Our finding that the Open-Mindedness subscale was a significant positive predictor of PTSD was surprising and not consistent with our predictions. Open-mindedness is conceptually and empirically (Van der Zee & Van Oudenhoven, 2000) related to the personality trait openness to experience, which has been suggested in prior research to potentially influence one's likelihood of exposure to traumatic events throughout life (Jang, Stein, Taylor, Asmundson, & Livesley, 2003). Although military samples, by nature, generally already have some degree of trauma exposure, possibly open-mindedness influences other factors such as prior lifetime trauma exposure or even MOS choice in ways that may further affect risk for PTSD. It may also be that one's openness to a new culture can also potentially operate as a risk factor during deployment. For example, perhaps an initial openness to a culture leaves one more vulnerable to stress related to destruction within the culture or disappointed expectations related to their intercultural experiences. As with all of our findings, further research, possibly investigating multicultural personality traits longitudinally, is needed to better illuminate the nature of this relationship.

Interestingly, neither hardiness nor morale was a significant predictor of PTSD or general distress in either of our models, which is somewhat inconsistent with the aforementioned research. It may be that, comparatively, emotional stability and cultural empathy are more directly related to symptoms of psychological distress whereas hardiness and morale may relate more directly to measures of adjustment or performance than distress. Our findings may also speak to a superior predictive ability of more narrow, compared to more broad measures of personality traits.

Literature on resilience to trauma suggests it is a multifaceted process which likely involves various factors such as one's cognitive appraisals of the stressor(s), activation of particular personality variables, and capacity for affect regulation (Agaibi & Wilson, 2005). There appear to be significant conceptual links between MPQ factors and aspects of resilience to trauma. For example, emotional stability, or the propensity to maintain calm during high stress situations, encompasses the concept of affect regulation. Cultural empathy may have implications for how one appraises cultural differences (e.g., more or less threatening), the meaning one assigns to different culture-related stressful events, interpersonal ease or stress, or how likely one is to utilize or approach unfamiliar yet potentially helpful coping resources. As aspects of multicultural personality may indeed be trainable (Abbe, Gulick, & Herman, 2007), military training which incorporates knowledge, skills and abilities related to emotional stability and cultural empathy may help bolster resilience and help mitigate the effects of compound stress during deployment.

In describing the need for more cultural competency training in the Army, Abbe and Halpin (2010) discuss how existing training and education can be leveraged to incorporate cultural competency skills and affect because of the significant overlaps between these competencies and generalized leadership concepts that are already a part of Army training and culture. The authors use the example of flexibility as a trait serving both leadership and cultural effectiveness. In this same spirit, perhaps such a merging of initiatives could exist between military operational goals and mental health needs. When mental health initiatives can double as more traditionally known "force multipliers" this may provide a less stigmatized avenue through which to engender healthy or resilient attitudes, skills and behaviors. Ideally, while service members learn to be more culturally adept and effective, their skills could serve to bolster their

cultural as well as overall resilience in a more holistic approach to service member fitness. This strategy is consistent with the Army's newly implemented Comprehensive Soldier Fitness Program. The program is founded on evidence which supports that positive traits are linked with improved performance, that positive psychology interventions are related to improved emotional health, and that an emphasis on prevention and risk management, rather than traditional reactive treatment models is more efficient and congruent with the spirit of the Army (Cornum, Matthews & Seligman, 2011).

Finally, we asked three questions related to cultural training and exposure which may have implications for our findings and are important to consider. Correlational analysis revealed that higher priority of cultural training was significantly associated with higher cultural empathy. Also, more in depth intercultural interactions were significantly associated with more open-mindedness. Importantly, both of these cultural items were also significantly positively associated with combat exposure, indicating that those with more cultural training and interactions in this sample may have been those with more high risk combat roles. This makes sense as greater cultural preparation likely corresponds with one's anticipated level of immersion in a culture or time outside of an operating base, and thus those with higher preparation may have had "boots on the ground" in more vulnerable situations.

Limitations and Directions for Further Research

The current findings should be considered in light of several limitations of this study. Since this is correlational research, causation cannot be determined. While MPQ factors have been shown to positively affect adjustment in other studies, further research in military samples could help determine whether the negative relationships found between MPQ factors and distress in the current study reflect actual protective effects or if, rather, these factors are negatively

affected by trauma and distress. Also, since self-report measures were used in this study, the possibility exists that social desirability influenced participant's responses. Although relatively high reliability was evidenced for each of the subscales and validity was supported by relationships with other measures in expected directions, further research may be needed to assess the cultural appropriateness of the MPQ for military use. For example, some items in the flexibility subscale (e.g., "Likes to work on his/her own"; "Works mostly according to a strict scheme") may pick up on the nature of the highly structured work environment or other inherent aspects of the military more than one's individual tendencies.

Although we tried to assess for different levels of cultural training and exposure as well as cultural stress, we did not do so with previously validated measures since none were available, thus weakening the strength of the conclusions which may be drawn from these items. We also did not assess for particular military occupational specialty or whether service members were a part of combat arms versus combat support or service and support. Although the modern battlefield is much less linear than in previous eras, assessing for service members' specific role during deployment may be important for a better understanding of how these traits may be differentially valuable depending upon one's role. For example, a Special Forces operator training foreign units would likely require more cultural savvy than a mechanic whose role may require less interaction with the local populace. Thus, one's role undoubtedly influences the extent and nature of cultural training they receive pre-deployment and lacking multicultural competencies may affect each individual's stress levels differently.

Another important limitation of this study is that we did not assess how long it had been since service members had returned from deployment, which may have influenced distress measures and recall. Future research may benefit from examining specific units at isolated times,

before and after deployment or if possible, at different times during deployment. This way, the relative importance of different MPQ factors over time could be assessed. Also, anecdotal evidence suggests that some service members gain or lose appreciation for the host culture as a result of their deployment experience. It may be interesting to explore these differing responses. Finally, in addition to exploring how multicultural personality competencies influence intercultural adjustment and stress in foreign environments, with an increasingly diverse military force, it would likely be meaningful to examine the influence of these factors within military units, for example, by looking at how they relate to cohesion, morale or even leadership style.

Conclusion

Although the argument for the applicability of studies on expatriate managers and study abroad students to a defense context has been made (Abbe & Halpin, 2010), relatively little research has empirically explored this link. Abbe and Halpin (2010) discuss the "cultural imperative" of modern military training for its operational value while other authors have illustrated the important mental health implications of cultural stress (Matsumoto, 2001; Azari et al., 2010). The present study has begun to connect these two paradigms by illuminating how aspects intercultural effectiveness, theorized to predict success in foreign environments, are associated with general mental health outcomes and resilience in service members who have deployed to Iraq or Afghanistan. Specifically, multicultural personality factors are associated in generally expected directions with hardiness and morale as well as measures of distress. Emotional stability, open-mindedness and cultural empathy appear to have particularly significant implications for service member mental health. This research sheds light on concepts which may, simultaneously, influence service member effectiveness and resilience and inform initiatives in prevention, training and selection.

References

Abbe, A. (2008). *Building Cultural Capability for Full-Spectrum Operations*. Arlington, VA.: U.S. Army Research Institute for the Behavioral and Social Sciences.

Abbe, A., Gulick, L. M. V., Herman, J. L. (2007). *Cross-Cultural Competence in Army Leaders: A Conceptual and Empirical Foundation*. Arlington, VA.: U.S. Army Research Institute for the Behavioral and Social Sciences.

Abbe, A., Halpin, S.M. (2010). The cultural imperative for professional military education and leader development. *Parameters,* 20-31.

Agaibi, C. E., & Wilson, J. P. (2005). Trauma, PTSD, and resilience: A review of the literature. Trauma Violence Abuse, 6, 195-216.

American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders: DSM-IV-TR (Revised 4th ed.). Washington, DC.

Aycan, Z. (1997). Expatriate adjustment as a multifaceted phenomenon: individual and organizational level predictors. *The International Journal of Human Resource Management, 8*, 434-456.

Azari, J., Dandeker, C., & Greenberg, N. (2010). Cultural stress: How interactions with and among foreign populations affect military personnel. *Armed Forces and Society*, 1-19.

Bartone, P. T. (1995, July). *A short hardiness scale*. Paper presented at the 103rd Annual Convention of the American Psychological Association, New York, NY.

Bartone, P. T. (1999). Hardiness protects against war-related stress in Army reserve forces. *Consulting Psychology Journal, 51,* 72–82.

Bartone, P.T. (2005). The Need for Positive Meaning in Military Operations: Reflections on Abu Ghraib. *Military Psychology, 17*, 315–324.

Bartone, P.T. (2007). The test-retest reliability of the dispositional resilience scale-15, a brief hardiness scale. *Psychological Reports, 101*, 943-944.

Bartone, P.T. (2008). Lessons of Abu Ghraib: Understanding and preventing prisoner abuse in military operations. *Defense Horizons, 64*, 1-8.

Bartone, P.T., Barry, C. L., Armstrong, R. E. (2009). To build resilience: Leader Influence on mental hardiness. *Defense Horizons, 69*, 1-8.

Bartone, P.T., Roland, R. R., Picano, J.J., & Williams, T.J. (2008). Psychological Hardiness Predicts Success in US Army Special Forces Candidates. *International Journal of Selection and Assessment, 16*, 78-81.

Berry, J. W. (1970). Marginality, stress and ethnic identification in an acculturated Aboriginal community. *Journal of Cross-Cultural Psychology, 1*, 239-252.

Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD checklist (PCL). *Behavioral Research and Therapy, 34*, 669–673.

Britt, T. W. (1997, October). What do soldiers think of morale, unit cohesion, and esprit de corps? Paper presented at the Research Committee on Armed Forces and Conflict Resolution, International Sociological Association Interim Meeting, Modena, Italy.

Britt, T. W., Adler, A. B. & Bartone, P. T. (2001). Deriving benefits from stressful events: The role of engagement in meaningful work and hardiness. *Journal of Occupational Health Psychology, 6*, 53-63.

Britt, T. W., & Dawson, C. R. (2005). Predicting work–family conflict from workload, job attitudes, unit attributes, and health: A longitudinal study. *Military Psychology, 17,* 203–228.

Britt, T. W., & Dickinson, J. M. (2006). Morale during military operations: a positive psychology approach. In T.W. Britt, A.B. Adler & C.A. Castro (Eds.), Military Life: The Psychology of Serving in Peace and Combat: Vol. 1. Military Performance (pp. 157-184). Westport, CT: Praeger Secrutity International.

Britt, T. W., Dickinson, J. M., Moore, D., Castro, C. A. & Adler, A. B. (2007). Correlates and consequences of morale versus depression under stressful conditions, *Journal of Occupational Health Psychology, 12*, 34-47.

Brummett B. R., Wade, J. C., Ponterotto, J. G., Thombs, B., Lewis, C. (2007). Psychosocial well-being and a multicultural personality disposition. *Journal of Counseling & Development, 85*, 73 – 81.

Cornum, R., Matthews, M.D., Seligman, M.E.P. (2011). Comprehensive soldier fitness: Building resilience in a challenging institutional context. *The American Psychologist, 66*, 4-9.

Deane, F. P., Leathem, J., & Spicer, J. (1992). Clinical norms, reliability and validity for the Hopkins Symptom Checklist-21. *Australian Journal of Psychology, 44*, 21-25.

Derogatis, L. R., Lipman, R. S., Rickels, K., Uhlenhuth, E. H., & Covi, L. (1974). The Hopkins Symptom Checklist: A self-report symptom inventory. *Behavioral Science, 19,* 1-15.

Dobscha, S. K., Corson, K., Gerrity, M. S. (2007). Depression Treatment Preferences of VA Primary Care Patients. *Psychosomatics, 48,* 482-488.

Dolan. C. A., Adler, A. B. (2006). Military Medicine. Military Hardiness as a Buffer of Psychological Health on Return from Deployment, 171, 2:93.

Eid, J., Johnsen, B. H., Bartone, P. T., & Nissestad, O. A. (2008). Growing transformational leaders: exploring the role of personality hardiness. *Leadership & Organization Development Journal, 29*, 4-23.

Gray, G. C., Kaiser, K. S., Hawksworth, A. W., Hall, F. W., & Barrett-Connor, E. (1999). Increased postwar symptoms and psychological morbidity among U.S. navy gulf war veterans. *American Journal of Tropical Medicine and Hygiene, 60,* 758-766.

Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. Journal of the American Medical Association, 295, 1023–1032.

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine, 351,* 13-22.

Jang, K.L., Stein, M.B., Taylor, S., Asmundson, G.J.G., Livesley, W.J. (2003). Exposure to traumatic events and experiences: aetiological relationships with personality function, *Psychiatry Research, 120,* 61–69.

Keane, T. M., Fairbank, J. A., Caddell, J. M., Zimering, R. T., Taylor, K. L., Mora, C. A. (1989). Clinical evaluation of a measure to assess combat exposure. *Psychological Assessment: A Journal of Consulting and Clinincal Psychology, 1,* 53–55.

Maddi, S. R. (2002). The Story of Hardiness: Twenty years of theorizing, research and practice *Consulting Psychology Journal: Practice and Research, 54*, 175–185.

Maguen, S. & Litz, B. T. (2006). Predictors of morale in U.S. peacekeepers, *Journal of Applied Social Psychology,* 36 (4), 820 – 836.

Matthews, M. D. (2008). Toward a positive military psychology. *Military Psychology, 20*, 289 – 298.

Matsumoto, D., LeRoux, J., Ratzlaff, C., Tatani, H., Uchida, H., Kim, C., & Araki, S. (2001). Development and validation of a measure of intercultural adjustment potential in Japanese sojourners: The Intercultural Adjustment Potential Scale (ICAPS). *International Journal of Intercultural Relations, 25*, 483-510.

Mendenhall, M., & Oddou, G. (1985). The dimensions of expatriate acculturation: A review. *The Academy of Management Review, 10, 39*-47

Milstein, T. (2005). Transformation abroad: Sojourning and the perceived enhancement of self-efficacy. *International Journal of Intercultural Relations, 29*, 217–238.

Motowidlo, S. J., & Borman, W. C. (1978). Relationships between military morale, motivation, satisfaction, and unit effectiveness, *Journal of Applied Psychology, 63*, 47-52

Motowidlo, S. J., Dowell, B. E., Hopp, M. A., Borman, W. C., Johnson, P. D., & Dunnette, M.D. (1976). *Motivation, satisfaction, and morale in Army careers: A review of theory and measurement* (ARI Tech. Rep. TR-76-A7). Arlington, Va.: U.S. Army Research Institute for the Behavioral and Social Sciences. (NTIS No. AD-AO36390)

Oberg, K. (1960). Culture shock: Adjustment to new cultural environments. *Practical Anthropology, 7,* 177-182.

Paunonen, S.V., Haddock, G., Forsterling, F., & Keinonen, M. (2003). Broad versus narrow personality measures and the prediction of behaviour across cultures. *European Journal of Personality, 17,* 413–433.

Pierce, L., & Dixon, M. (2006). Improving Multicultural Teamwork to Combat Terrorism. In *Tactical Decision Making and Situational Awareness for Defense Against Terrorism* (pp.

9-1 – 9-14). Meeting Proceedings RTO-MP-SCI-174, Paper 9. Neuilly-sur-Seine, France: RTO.

Ponterotto, J. G. (2008). Theoretical and empirical advances in multicultural counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (4th ed., pp. 121-140). Hoboken, NJ: Wiley.

Ponterotto, J. G. (2010). Multicultural Personality: An Evolving Theory of Optimal Functioning in Culturally Heterogeneous Societies. *The Counseling Psychologist, 38,* 714-758.

Ponterotto, J. G., Costa-Wafford, C. I., Brobst, K. E., Spelliscy, D., Kacanski, J. M., & Scheinholtz, J. (2007). Multicultural personality dispositions and psychological well-being. *The Journal of Social Psychology , 147,* 119–135.

Ramsey, R., D. (2006). *Advising Indigenous Forces: American Advisors in Korea, Vietnam, and El Salvador.* Fort Leavenworth, KS: Combat Studies Institute Press, 2006, 27-29.

Shaffer, M. A., Harrison, D. A., Gregersen, H., Black, J. S., & Ferzandi L. A. (2006). You can take it with you: Individual differences and expatriate effectiveness. *Journal of Applied Psychology, 91,* 109-125.

Szkudlarek, B. (2010). Reentry - A review of the literature. *International Journal of Intercultural Relations 34*, 1-21.

Thomas, J. L., Wilk, J. E., Riviere, L. A., McGurk, D., Castro, C. A., Hoge, C. W. (2010). Prevalence of mental health problems and functional impairment among active component and National Guard soldiers 3 and 12 months following combat in Iraq. *Archives of General Psychiatry, 67,* 614-623.

Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993, October). *The PTSD checklist: Reliability, validity, and diagnostic utility*. Paper presented at the Annual Meeting of the International Society for Traumatic Stress Studies, San Antonio, TX.

Van der Zee, K. I., & Van Oudenhoven, J. P. (2000). The Multicultural Personality Questionnaire: A multidimensional instrument of multicultural effectiveness. *European Journal of Personality, 14,* 291–309.

Van der Zee, K. I., & Van Oudenhoven, J. P. (2001). The Multicultural Personality Questionnaire: Reliability and validity of self- and other ratings of multicultural effectiveness. *Journal of Research in Personality 35,* 278–288.

Van der Zee, K. I., & Van Oudenhoven, J. P., & de Grijs, E. (2004). Personality, threat, and cognitive and emotional reactions to stressful intercultural situations. *Journal of Personality, 72,* 1069–1096.

Van der Zee, K. I., Zaal, J. N., & Piekstra, J. (2003).Validation of the Multicultural Personality Questionnaire in the context of personnel selection. *European Journal of Personality, 17,* 77–100.

Van Oudenhoven, J. P., Mol, S., Van der Zee, K. I. (2003). Short note: Study of the adjustment of western expatriates in Taiwan ROC with the Multicultural Personality Questionnaire. *Asian Journal of Social Psychology, 6,* 159–170.

APPENDIX

Survey

Demographic Items:

1. Please indicate your age in years:

2. Please indicate your racial/ethnic identification(s) (check all that apply)
    1) American Indian or Alaska Native
    2) Asian
    3) Black or African American
    4) Native Hawaiian or Other Pacific Islander
    5) White
    6) Hispanic or Latino
    7) Other

3. Please List your branch of Service
    1) Army 2) Navy 3) Marine Corps. 4) Air Force

4. Current Duty Status:
    1) Active Duty
    2) Reserve
    3) National Guard
    4) Active Guard

5. Please list your current rank:

6. Please list your number of previous deployments:
    1) 1 2) 2 3) 3 4) More than 3

For the following questions, please consider your overall deployment experience(s):

7. Did you have cultural or language training/instruction (civilian or military) prior to your major deployment(s)?

    3) Yes, A good deal (More than 40 hours) *2) Yes, Some (10-40 hours)*
    1) Yes, Minimal (10 or fewer hours) *0) No*

8. On average, what priority was cultural training given among your pre-deployment tasks?

    5) Highest 4) Above Average 3) Average 2) Below Average 1) Lowest 0) Not a priority

9. On average, how would you describe the depth of your interactions with foreign personnel during your deployment(s)?

    1) Minimal (i.e., you had few interactions with foreign personnel or your interactions were very brief or not in-depth)

2) *Somewhat Significant (i.e., You had some significant interpersonal interactions with foreign personnel which required lengthy or repeated communications*

3) *Significant (i.e., You had several significant interpersonal interactions with foreign personnel which required lengthy or repeated communications)*

4) Extensive (i.e., interactions or communication with foreign personnel was a primary part of your role during deployment).

10. How much did cultural factors negatively impact your ability to accomplish your mission?
1) Not at all 2) A little bit 3) A moderate amount 4) Very much so

11. How would you describe your adjustment to cultural differences during your deployment(s)?

1) Not at all difficult 2) Somewhat difficult 3) Difficult 4) Extremely Difficult

12. How would you describe your adjustment to cultural differences after returning home?

1) Not at all difficult 2) Somewhat difficult 3) Difficult 4) Extremely Difficult

Below are statements about life that people often feel differently about. Please show how much you think each one is true about you. Give your own honest opinions . . . There are no right or wrong answers!
0 = Not at all true 1= A little true 2= Quite true 3= Completely True

	Not at all true……..Completely True			
1. Most of my life gets spent doing things that are meaningful……	0	1	2	3
2. By working hard you can nearly always achieve your goals……...	0	1	2	3
3. I don't like to make changes in my regular activities……..	0	1	2	3
4. I feel that my life is somewhat empty of meaning…….……	0	1	2	3
5. Changes in routine are interesting to me…….…….……..	0	1	2	3
6. How things go in my life depends on my own actions…….……	0	1	2	3
7. I really look forward to my work activities…….……...	0	1	2	3
8. I don't think there is much I can do to influence my own future…….	0	1	2	3
9. I enjoy the challenge when I have to do more than one thing at a time	0	1	2	3
10. Most days, life is really interesting and exciting for me…….…….	0	1	2	3
11. It bothers me when my daily routine gets interrupted…….……	0	1	2	3
12. It is up to me to decide how the rest of my life will be……...	0	1	2	3
13. Life in general is boring for me…….…….…….……...	0	1	2	3

14. I like having a daily schedule that doesn't change very much……..…..0 1 2 3

15. My choices make a real difference in how things turn out in the end…0 1 2 3

1. As a validity check, please respond to the following statement. I have never, ever actually worn a military uniform.

1) True 2) False 3) I don't know

Here is a list of problems and complaints that people sometimes have in response to stressful military experiences. Please read each one carefully, and then indicate, using the numbers to the right, how much you have been bothered by that problem <u>IN THE PAST WEEK</u>.

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

Not at all……..Extremely

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

To what extent do the following statements apply to you?

(Please circle the answer that is most applicable to you)

		totally not applicable	hardly applicable	moderately applicable	largely applicable	completely applicable
1.	Likes low-comfort holidays	1	2	3	4	5
2.	Takes initiative	1	2	3	4	5

3.	Is nervous	1	2	3	4	5
4.	Makes contacts easily	1	2	3	4	5
5.	Is not easily hurt	1	2	3	4	5
6.	Is troubled by conflicts with others	1	2	3	4	5
7.	Finds it difficult to make contacts	1	2	3	4	5
8.	Understands other people's feelings	1	2	3	4	5
9.	Keeps to the background	1	2	3	4	5
10.	Is interested in other cultures	1	2	3	4	5
11.	Avoids adventure	1	2	3	4	5
12.	Changes easily from one activity to another	1	2	3	4	5
13.	Is fascinated by other people's opinions	1	2	3	4	5
14.	Tries to understand other people's behavior	1	2	3	4	5
15.	Is afraid to fail	1	2	3	4	5
16.	Avoids surprises	1	2	3	4	5
17.	Takes other people's habits into consideration	1	2	3	4	5
18.	Is inclined to speak out	1	2	3	4	5
19.	Likes to work on his/her own	1	2	3	4	5
20.	Is looking for new ways to attain his/ her goal	1	2	3	4	5
21.	Dislikes traveling	1	2	3	4	5
22.	Wants to know exactly what will happen	1	2	3	4	5
23.	Remains calm in misfortune	1	2	3	4	5
24.	Waits for others to initiate contacts	1	2	3	4	5
25.	Takes the lead	1	2	3	4	5
26.	Is a slow starter	1	2	3	4	5
27.	Is curious	1	2	3	4	5
28.	Takes it for granted that things will turn out right	1	2	3	4	5
29.	Is always busy	1	2	3	4	5
30.	Is easy-going in groups	1	2	3	4	5
31.	Finds it hard to empathize with others	1	2	3	4	5
32.	Functions best in a familiar setting	1	2	3	4	5
33.	Radiates calm	1	2	3	4	5
34.	Easily approaches other people	1	2	3	4	5
35.	Finds other religions interesting	1	2	3	4	5
36.	Considers problems solvable	1	2	3	4	5
37.	Works mostly according to a strict scheme	1	2	3	4	5
38.	Is timid	1	2	3	4	5
39.	Knows how to act in social settings	1	2	3	4	5
40.	Likes to speak in public	1	2	3	4	5
41.	Tends to wait and see	1	2	3	4	5
42.	Feels uncomfortable in a different culture	1	2	3	4	5
43.	Works according to plan	1	2	3	4	5
44.	Is under pressure	1	2	3	4	5

45.	Sympathizes with others	1	2	3	4	5
46.	Has problems assessing relationships	1	2	3	4	5
47.	Likes action	1	2	3	4	5
48.	Is often the driving force behind things	1	2	3	4	5
49.	Leaves things as they are	1	2	3	4	5
50.	Likes routine	1	2	3	4	5
51.	Is attentive to facial expressions	1	2	3	4	5
52.	Can put setbacks in perspective	1	2	3	4	5
53.	Is sensitive to criticism	1	2	3	4	5
54.	Tries out various approaches	1	2	3	4	5
55.	Has ups and downs	1	2	3	4	5
56.	Has fixed habits	1	2	3	4	5
57.	Forgets setbacks easily	1	2	3	4	5
58.	Is intrigued by differences	1	2	3	4	5
59.	Starts a new life easily	1	2	3	4	5
60.	Asks personal questions	1	2	3	4	5
61.	Enjoys other people's stories	1	2	3	4	5
62.	Gets involved in other cultures	1	2	3	4	5
63.	Remembers what other people have told	1	2	3	4	5
64.	Is able to voice other people's thoughts	1	2	3	4	5
65.	Is self-confident	1	2	3	4	5
66.	Has a feeling for what is appropriate in another culture	1	2	3	4	5
67.	Gets upset easily	1	2	3	4	5
68.	Is a good listener	1	2	3	4	5
69.	Worries	1	2	3	4	5
70.	Notices when someone is in trouble	1	2	3	4	5
71.	Has good insight into human nature	1	2	3	4	5
72.	Is apt to feel lonely	1	2	3	4	5
73.	Seeks contact with people from different backgrounds	1	2	3	4	5
74.	Has a broad range of interests	1	2	3	4	5
75.	Is insecure	1	2	3	4	5
76.	Has a solution for every problem	1	2	3	4	5
77.	Puts his or her own culture in perspective	1	2	3	4	5
78.	Is open to new ideas	1	2	3	4	5

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

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

1	2	3	4	5
No	1-3 times	4-12 times	13-50 times	51 or more

2. Were you ever under enemy fire?

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

3. Were you ever surrounded by the enemy?

1	2	3	4	5
No	1-2 times	3-12 times	13-25 times	26 or more

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

1	2	3	4	5
None	1-25%	26-50%	51-75%	76% or more

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

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

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

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

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

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

1. **Please rate your morale in regards to accomplishing your major work objectives.**

Very Low Low Medium High Very High

1. As a validity check, please answer the following question. I have never received any pay for any military service.

1) True 2) False 3) I don't know

How have you felt during the past seven days, including today? Use the following scale to describe how distressing you have found these things over time.

		Not at all	A little	Quite a bit	Extremely
1.	Difficulty in speaking when you are excited	1	2	3	4
2.	Trouble remembering things	1	2	3	4
3.	Worried about sloppiness or carelessness	1	2	3	4
4.	Blaming yourself for things	1	2	3	4
5.	Pains in the lower part of your back	1	2	3	4
6.	Feeling lonely	1	2	3	4
7.	Feeling blue	1	2	3	4
8.	Your feelings being easily hurt	1	2	3	4

9.	Feeling others do not understand you or are unsympathetic	1	2	3	4
10.	Feeling that people are unfriendly or dislike you	1	2	3	4
11.	Having to do things very slowly in order to be sure you are doing them right	1	2	3	4
12.	Feeling inferior to others	1	2	3	4
13.	Soreness of your muscles	1	2	3	4
14.	Having to check and double check what you do	1	2	3	4
15.	Hot or cold spells	1	2	3	4
16.	Your mind going blank	1	2	3	4
17.	Numbness or tingling in parts of your body	1	2	3	4
18.	A lump in your throat	1	2	3	4
19.	Trouble concentrating	1	2	3	4
20.	Weakness in parts of your body	1	2	3	4
21.	Heavy feelings in your arms or legs	1	2	3	4

Table 1 Means, Standard Deviation, and Correlations for Study Variables.

	M	*SD*	2	3	4	5	6	7	8	9	10	11	12	13
1. Cultural Empathy	3.60	.55	.58**	.54**	.30**	.21**	.37**	-.00	.30**	-.16	-.07	-.15	-.31**	-.23**
2. Open-Mindedness	3.58	.63		.54**	.24**	.38**	.42**	.01	.32**	-.16*	.08	-.07	-.18*	-.03
3. Social Initiative	3.73	.52			.56**	.49**	.59**	.04	.28**	-.12	.01	-.13	-.41**	-.30**
4. Emotional Stability	3.36	.49				.46**	.51**	.09	.29**	-.26**	-.14	-.20*	-.57**	-.48**
5. Flexibility	3.22	.48					.54**	.03	.24**	-.10	-.01	-.17*	-.37**	-.30**
6. Hardiness	2.10	.38	.					.04	.36**	-.06	.02	-.10	-.25**	-.36**
7. Combat Exposure	2.67	.85							.02	.15	.28**	.23**	.22**	.26**
8. Morale	3.77	.94								-.07	-.08	-.12	-.29**	-.16
9. Cult. Stress Dep.	0.63	.68									.29**	.25**	.16*	.19*
10. Cult. Stress Home	0.72	.82										.19*	.44**	.50**
11. Mission Impact	1.20	.86											.12	.19*
12. HSCL	1.79	.56												.80**
13. PCL	1.88	.79												

Note. *N* = 145. Cult. Stress Dep. = Difficulty adjusting to cultural differences during deployment, Cult. Stress Home = Difficulty adjusting to cultural differences after return home, Mission Impact = Negative impact of cultural factors on mission accomplishment, HSCL = Hopkins Symptom Checklist, PCL = PTSD Checklist-Military version

**$p < .01$ *$p < .05$

Table 2 Linear Regression Results: Prediction of Post Traumatic Stress Disorder

Predictor (N=144)	b	SE B	β
Combat Exposure	.28	.06	.30**
Hardiness	.09	.19	.04
Morale	-.03	.06	-.03
Cultural Empathy	-.28	.13	-.20*
Open-Mindedness	.34	.12	.27**
Social Initiative	-.09	.16	-.06
Emotional Stability	-.68	.14	-.42**
Flexibility	-.28	.14	-.17

Note, Adjusted R^2 = .379, **p<.01 *p<.05

Table 3 Linear Regression Results: Prediction of General Distress

Predictor (N=144)	b	SE B	β
Combat Exposure	.17	.04	.27**
Hardiness	.02	.13	.15
Morale	-.07	.04	-.11
Cultural Empathy	-.17	.09	-.17*
Open-Mindedness	.13	.08	.14
Social Initiative	-.06	.10	-.06
Emotional Stability	-.53	.20	-.46**
Flexibility	-.15	.10	-.13

Note, Adjusted R^2 = .449, **p<.01 *p<.05

VITA

Catherine Joan Herrera was born in Atlanta, Georgia on December 19, 1984. She was raised in Georgia then Michigan before returning to Dahlonega, Georgia to finish high school and begin her undergraduate studies. She participated in the corps of cadets at North Georgia College and State University and earned an Army commission in May of 2007, graduating with a bachelors of science in Psychology and a minor in Studio Art. Having received an educational delay in active duty Army service to pursue her doctorate, she entered the doctoral program in Counseling Psychology at the University of Tennessee in Knoxville, TN in the fall of 2007. As a doctoral student, Catherine trained and worked at the University of Tennessee Counseling Center, the Knoxville Family Justice Center and volunteered at Cornerstone of Recovery Substance Abuse treatment facility as well as the University of Tennessee Cole Neuroscience Center. Catherine will complete her Ph.D. following an internship at Eisenhower Army Medical Center in Augusta, GA, and she plans to graduate in fall of 2012.