

THE EFFECTS OF PERCEIVED CULTURAL FIT ON ACTIVE DUTY MILITARY WIVES

by

KIMBERLY GRANDA ANDERSON

JOSEPHINE PRYCE, COMMITTEE CHAIR

WILLIAM DRESSLER

JAMES LEEPER

HYUNJIN NOH

CASSANDRA SIMON

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ABSTRACT

Based on cultural consonance theory, the overall aim of this study was to explore the effect of cultural consonance, or cultural fit, within military culture on the psychological well-being of military wives. This study is a secondary data analysis of 8,748 respondents from the Department of Defense 2008 Survey of Active Duty Spouses (ADSS). The sample included all eligible civilian female spouses of active duty male service members.

Linear regression showed a significant relationship between the main effect predictor of cultural consonance, operationalized by the *Affective Commitment Scale* (ACS), and two outcome variables of psychological well-being, the *Perceived Stress Scale* (PSS-4) and the *Kessler 6* (K6) scale of psychological distress. ANCOVAs showed that demographic control variables combined with the ACS boosted the amount of variance explained. The ACS retained its significance when adjusted for the effect of demographics, demonstrating that none accounted for an alternative explanation of the outcomes. Binary logistic regressions showed the most striking results. When individual control variables were combined with low cultural consonance scores, a minority of wives had up to thirteen times the odds of having negative psychological well-being outcomes. Frequency of major life events, lowest rank, lowest income, and lowest educational levels were among the factors producing the largest effects when combined with low cultural consonance. Race/ethnicity and family status (children) had no significance. Findings from this study may be used to add cultural consonance as a factor to be considered regarding military cultural competence education, organizational commitment and support of well-being in military wives.

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CHAPTER 1

INTRODUCTION

Background of the Population

Demographics of Military Spouses

As of 2017 the Department of Defense (DoD) personnel information, which excludes the Coast Guard, shows that total force military family members (n=2,667,909) outnumber military personnel (n=2,103,415). Those totals include selected reserve components, i.e., members, but exclude all non-traditional families and dependents. Of the over 2.5 million officially defined family members, about two-thirds are children, making the current population of military spouses nearly one million (n=977,954). Excluding National Guard and Reserve spouses, there are currently about 612,000 active duty (AD) military spouses. Of those, 92% are female, 50% are age 30 or younger, and 25% are age 25 or younger. Only 14% are age 41 or older. Of all AD spouses, 74% have children at home, and 39% are not in the labor force. Of spouses who want to work in the civilian labor force, 76% are employed while 24% are unemployed, seeking work. Only 5% of military personnel are in dual military marriages (U.S. Department of Defense, 2018; Office of the Deputy Assistant Secretary of Defense; 2017).

The current study is an exploratory, secondary data analysis of the *2008 Survey of Active Duty Spouses* (2008 ADSS). The sample for the current study excludes male spouses of female service members and female spouses who are employed in the armed services. It includes only civilian females married to male military service members. The researcher chose to exclude male spouses and dual military couples because they may have a different cultural experience

within military life. Mirroring the study sample, the literature review will focus on military *wives*.

Military wives as a group, like service personnel, are younger and more racially diverse than the general population of the United States. In the 2008 ADSS study sample, which is consistent with the overall military of 2008 through present, 66% of respondents are under the age of 36. Twenty-four percent are under age 26. Seventy percent have children. Twenty-eight percent belong to racial minorities. Forty-three percent are employed. The group is better educated than their civilian counterparts. Only 12% have no college education. Eighty-two percent have some college up to a graduate or professional degree. Thirty-one percent of respondents were married to officers while 69% were married to enlisted members or warrant officers (DMDC, 2008).

Current Challenges

Life as a military spouse is subject to even greater stress than it was in the late twentieth century or during peacetime. The duration and intensity of America's military presence in Afghanistan and Iraq, along with its enlarging global presence, have increased the intensity of demands on military spouses (Skomorovsky, 2014). This intensity has been caused by an increase in a condition known as high operations tempo (OPTEMPO). Operations tempo is the combination of frequency and length of deployments of service personnel to combat operations. Many deployments, such as those made by members of Special Forces are not made public and are unknown to civilians. These stealth missions are also more common in the current conflict environment and represent a heightened amount of stress to families due to danger for the service member and periods of information blackout.

Along with becoming longer and more frequent, deployments are more dangerous and less predictable than ever before in U.S. military history (Hall, 2008; Park, 2011). The armed conflicts of the twentieth century all had different signature effects on both personnel and families. The heightened level of sustained stress and uncertainty brought about by 9/11 has not diminished, but rather has become the *new normal* for military families (Munson & Daley, 2013).

Military Wives Live Inside Military Culture

This study presumes that military culture affects military wives. It will be further asserted that there exists a cultural role, an underlying, shared set of expectations and demands for conformity, that applies to military wives. “*Military culture*” is widely accepted as having some informal, yet broadly recognized definition, distinct from the civilian world (Hall, 2011). In *Social Work Practice in the Military* (1999) James Daley makes the claim that, for those immersed in it long enough, the military becomes an “ethnic identity” (p. 298). At that time, he pointed out the irony of how much work was being done to provide cultural competence training for non-military applications and to create scales to measure racial and ethnic identity, while no research at all was being done on military identity assessment. The need for development of cultural competence with military populations is becoming recognized (Canfield & Weiss, 2015; Cole, 2014; Degraff, O’Neil, & Mancini, 2016; Harris, 2011; Meyer, Writer, & Brim, 2016). Recently, efforts to assess and teach cultural competence with military populations have been developing (Martin, Albright, & Borah, 2017; Meyer, Hall-Clark, Hamaoka, & Peterson, 2015). Something that seems valuable, but harder to measure, is the military identity itself (Johansen, Laberg, & Martinussen, 2014).

The current study undertakes a novel approach to understand and address the needs of military wives by exploring the effect of the individual's relationship to military culture. There is a need for study and recognition of the culture of military wives and how cultural role expectations affect individual wives. There is research to support the idea that culture plays a role in health outcomes and therefore, is increasingly being acknowledged as a general social determinant of health (Napier, et al., 2014; Singer, Dressler, and George, 2016). However, there is a paucity of research on how wives experience military culture, and virtually no research on cultural consonance or goodness of cultural fit for military wives. Most of the evidence for military wives having a culture that is within, but distinct from military culture, is anecdotal based on popular publications and media.

One Use of Cultural Consonance Methods for Study of Military Populations

In his doctoral dissertation, *Cultural Sharing in United States Navy Families*, Springle (2003) found a consistent shared model of family life that is different for Navy families than for civilians. Springle asserts, in accordance with cultural anthropology theory, that the study of successful members of a group provides insight into what it takes to thrive in that group and allows for better risk assessment and intervention planning (Springle, 2003). Research on what it takes to thrive as a military wife could have implications for DoD policy makers, civilian and military social workers, and other service providers.

Relevance to Social Work

The study of factors in well-being of military wives is relevant to social work because of the need to increase cultural competence in interactions with military connected populations. Preparing military and civilian human service and medical providers to work with the unique challenges faced by military-connected populations is a priority for the Council on Social Work

Education (CSWE), (Canfield & Weiss, 2015). Understanding and supporting military wives benefits multiple stakeholders such as the DoD, military social workers, civilian social workers, medical providers, service members, military children, military wives themselves, and their communities (Green, Nurius & Lester, 2013; Padden & Posey, 2013).

Social workers and DoD policy-makers share a wish to avoid wasted potential. Military wives are in a position to have a positive ripple effect that extends broadly, or their distress can be harmful to those around them and ultimately may drain rather than enhance defense resources. Social workers are well positioned to contribute to advancing knowledge about the circumstances, strengths, and challenges for military families and wives in particular. Military wives affect their children, and their husbands while serving, separating from the military and reintegrating into civilian society. Many military wives become caretakers of disabled veterans. For those reasons, plus their status as an understudied group with unique stressors, recognition and support of military wife well-being, has become a research priority in social science and medical fields (MacDermid & Southwell, 2011).

Military families and spouses are among the special populations for which the National Association of Social Workers (NASW) and the Council on Social Work Education (CSWE) have formed special standards for practice and education. They have also recommended social workers learn cultural competence and now require special training for advanced social work practice in military social work (CSWE, 2010; Frey, Collins, Pastoor, & Linde, 2014; Savitsky, Illingworth, & DuLaney, 2009). Since the military has long been understood as a distinct culture, the preparation of social workers should include cultural competence with military connected populations to relate to service members, military spouses and children, (Hall, 2011; Martin et al., 2017; Martin, Rosen, & Sparacino, 2000; Meyer et al., 2016; Munson, 2013). The

notion of cultural competence assumes that military connected people inhabit a culture that is distinct from general civilian culture. While military-connected people are not defined solely by their military status, it is necessary to consider that they take part in a culture that is significantly different from civilian life. For these reasons the proposed study could contribute to research yielding improved policy.

Summary

Military life is stressful for military wives. The well-being of military wives, or the absence of it, has a ripple effect from the family to the community to the mission of national security. Continued research is needed to expand the understanding of determinants of well-being in military wives in order to provide better policy and supportive programming. A wife's perception that she identifies positively with military culture or has a good cultural fit may influence her perceived stress and psychological well-being. However, the literature review will show that, while stress has been studied in military spouses, there is a paucity of research on wives' experience of military culture and almost no effort to establish a cultural model or to study the effects of goodness-of-fit within military culture. The theory of *cultural consonance* from cognitive anthropology will be used in a novel way to understand the effect of perceived cultural fit on the well-being of military wives. These ideas support the purpose of the study and research questions.

Statement of the Problem

Considering the evidence that culture plays a role in health, there is a need to explore the effects of cultural fit on the well-being of military spouses. The calls for efforts to improve awareness and cultural competence with military populations have not addressed military wives or *military wife culture*. A greater understanding of the vulnerabilities and determinants of well-

being in military wives is needed to improve policies, programs and knowledge for the DoD and service providers. The impact of life within military culture per se' has not been addressed in the literature on military wives. The possibility that cultural consonance influences spousal well-being deserves exploration.

CHAPTER 2

CONCEPTUAL FRAMEWORK AND LITERATURE

Overview of Conceptual Framework

Theoretical Framework

The current study incorporates a novel approach to understand and address the needs of military wives by exploring the effects of their relationship to military culture. The researcher posits that three areas of existing research may be combined to explore military wife well-being in a new way. Cultural consonance theory and organizational culture theory are well established theories with empirical research to support their construct validity. Military culture is the general milieu to which military wives must adapt. *Military Culture* is a blend of two types of culture. The social role of armed service personnel has roots in the traditional, even archetypal role of the warrior (Bateman, 2004; Smith & True, 2014; Wertsch, 1991; Wilson, 2008). The military is also a large hierarchical bureaucracy. Wilson, (2008) asserts in his history-based framework for defining military culture that it can be thought of as a specific type of institutional culture (Wilson, 2008). Cultural consonance and organizational culture theory both utilize the person-in-environment perspective that originated with the *field theory* work of psychologist Kurt Lewin, (1939). His work is considered seminal for the person-in-environment perspective. He insisted that individuals cannot be understood in isolation from context. The individual is situated in a field of factors that influence physiological and behavioral outcomes. The person-in-environment perspective has been adopted by other social sciences including social psychology, sociology and social work (Bargal, Gold, & Lewin, 1992). While cultural

consonance theory has anthropological antecedents, it shares the study of adaptation of a person to his or her cultural environment with organizational culture theory.

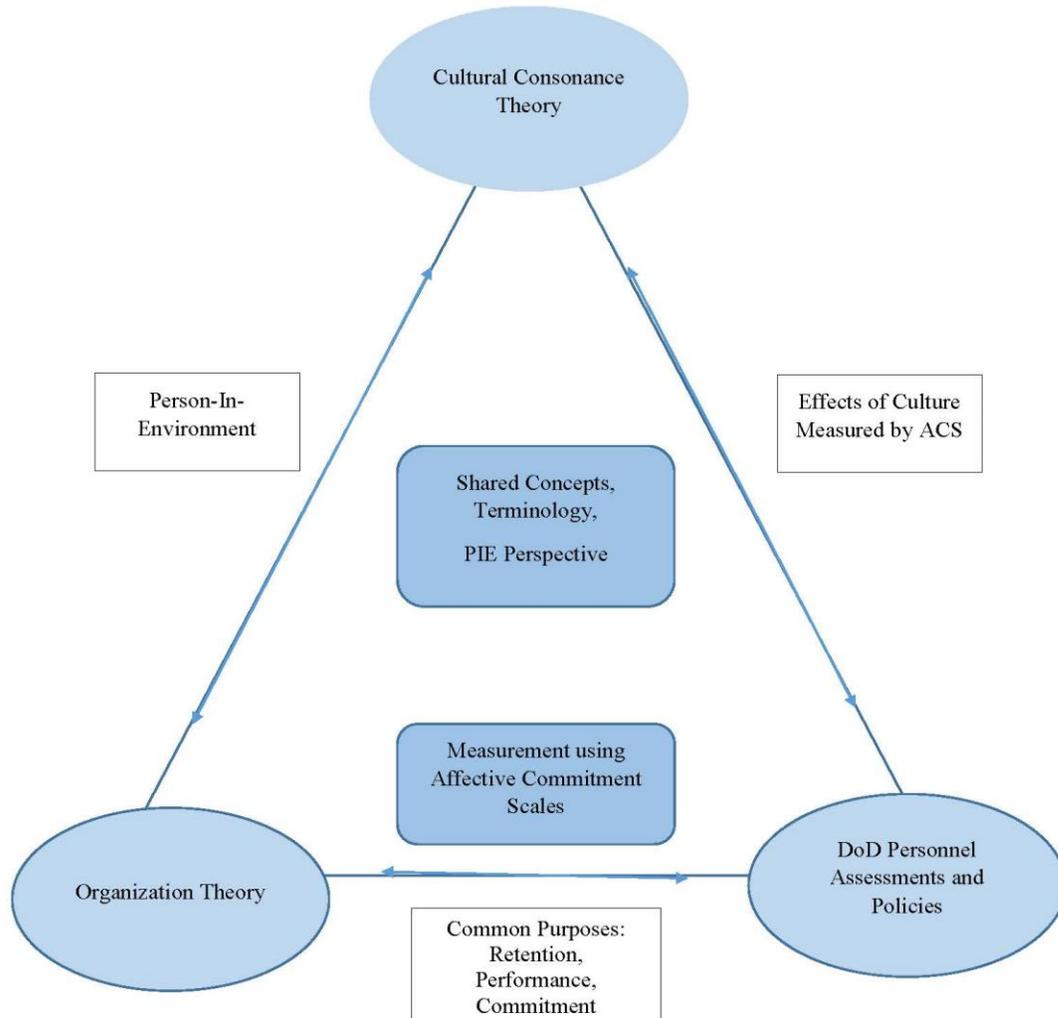
Military wives are people in an environment. The researcher will make a case that in its family policies the DoD treats military wives as an extension of its paid personnel. In fact, wives' performance of their role is vital to the mission of national defense. Through the way the DMDC structures the 2008 ADSS and the questions comprising the Affective Commitment Scale (ACS), it captures more than just commitment to the military as an employer. In its effort to assess wives' feelings and satisfaction with military life, the DMDC has made the ACS act as a brief approximate measure of cultural consonance or cultural identity (Montgomery, 2011).

The DoD is an organization, comprised of millions of individuals, with history, structure, values, standards and codes of conduct so unique that it forms its own social culture. *Military culture* is widely recognized to exist and receives scholarly scrutiny (Allsep, 2013; Johansen, Laberg, & Martinussen, 2013; Martin, Albright, & Borah, 2017; Meyer, 2015; Meyer et al., 2015; Wilson, 2008), without having a standardized definition and with very little scholarship coming from the field of anthropology. The military is not attached to any single theoretical perspective. Its focus is on the mission of national defense and is entirely pragmatic. However, the military commissions and conducts extensive research on its personnel and its own functioning as an organization. Organizational culture theory is the most widely used perspective in studies of military culture.

Figure 1 represents a conceptual framework adopted by the researcher for the purpose of using the 2008 ADSS to explore military wife well-being. This chapter will present information about military spouses and how they are situated in military culture. Further detail will be presented using literature to support the posited relationship between the DoD, organizational

culture theory and cultural consonance theory. The DoD and organization theory are both interested in measurement of things that can predict and influence the outcomes of retention, performance and organizational commitment in employees. The *Affective Commitment Scale* (ACS) has been repeatedly used by the DoD for that purpose and by organizational scholars when they study the military as an organization. The DoD and cultural consonance theory share an interest in how culture affects people. Between the three, the researcher found a pattern of concepts and terminology in the literature which match language in the questions on the ACS. The researcher will demonstrate that the ACS can be used to measure something it was not explicitly designed for. The ACS may approach the essence of cultural consonance in a brief scale. Figure 1 provides a visual map of the conceptual framework that will be used to link theory to measurement and justify the use of the ACS as a proxy measure for cultural consonance.

Figure 1 *Conceptual Framework for the ACS as a Proxy Measure for Cultural Consonance*



Cultural Consonance Theory and Why the Military Needs Anthropology

Definition and Application of Cultural Consonance

Cultural consonance is an individual's ability to understand and meet the expectations of his or her major cultural roles. More formally, "Cultural consonance is the degree to which individuals approximate, in their own beliefs and behaviors, the prototypes for belief and behavior that are encoded in shared cultural models" (Dressler 2007; Dressler, 2017). Cultural consonance is a theory of how perceived fit in one's main cultural roles affects health and mental health outcomes, including psychological distress and perceived stress (Dressler, Balieiro, Ribeiro, & dos Santos 2007a, Dressler et al., 2007b). It is also a set of methods for measuring cultural consonance and researching the role culture plays in health outcomes (Dressler, 2017). Poor cultural consonance increases stress and influences other factors which result in poorer physical and mental health outcomes. Basically, regardless of position in life, harmony and good fit plus the ability to perform cultural role expectations increases the chance of positive health and mental health (Dressler, 2011; Dressler, 2012; Dressler et al., 2007a; Dressler, 2007b; Dressler, Balieiro & dos Santos, 2017; Dressler, Balieiro, & dos Santos, 2018).

The term "*cultural model*" refers to a socially constructed ideal of the ways people should live and act in particular situations or *cultural domains*, such as *being a college professor*. "*Cultural consensus*" refers to a measurable agreement among group members about the salient features that make up the model. These terms have specific definitions within the field of cultural anthropology (Romney, Weller, & Batchelder, 1986) and form part of the basis for measurement in cultural consonance theory. These concepts could be applied to formation of cultural models for both service members and military spouses. Though members of military culture operate with

broad agreement on how people in various roles should look, act and live, no cultural model for military members or spouses has been established by anthropological methods.

Cultural consonance theory predicts that when a military wife identifies with her role, feels comfortable with her understanding, and is able to perform her cultural role, she is likely to experience greater well-being within the military community than if she dislikes the role or fails in attempts to conform. Being comfortable and confident in the role of military wife may be referred to as a *good cultural fit*. In the absence of a rigorously defined *cultural model*, strong cultural fit stands in for a high degree of cultural consonance. A wife who experiences conflict or failure in the role, or who rejects the identity of *military wife* has *poor cultural fit*, i.e., low cultural consonance. For this study, the researcher will use the term *consonance* with the understanding that it refers to the theoretical construct, but has not been measured with true cultural consonance methods.

Cultural Consonance as a Social Determinant of Health

The fields of medicine, neuroscience, social work, sociology, social psychology, organizational theory and anthropology are part of the ongoing search for factors that predict health or illness in body and mind. Many fields have explored inter-connections between the states, traits, experiences, perceptions, and behaviors of individuals with their environments and health outcomes. There is evidence that nonmedical factors may have greater influence on an individual's health than medical factors (Marmot, Friel, Bell, Houweling, Taylor, & Commission on Social Determinants of Health, 2008). In medicine and other disciplines there is a growing accumulation of evidence that culture is among the non-medical factors that affect medical and psychiatric outcomes (Napier, et al., 2014; Singer et al., 2016). The main line of exploration of the effect of cultural consonance is its relationship with health and well-being. Research has

consistently shown that individuals with high cultural consonance have better physical and mental health, measured by such things as arterial blood pressure, cortisol saliva levels and perceived stress, depression, and psychological distress, while people with lower cultural consonance have less positive outcomes (Dressler, 2012; Dressler, Balieiro, Ribeiro & dos Santos, 2015; Dressler et al., 2018).

Stress as a Mediator from Nonmedical to Medical Health Factor

Cultural consonance has included the study of *stress* as both an outcome and a mediating factor between low cultural consonance and negative health outcomes (Balieiro, dos Santos, dos Santos, & Dressler, 2011; Dressler, 2011b). A body of research by Dressler and colleagues bears out the assertion that strong cultural consonance is associated with lower stress and better health outcomes. Cultural consonance has gained recognition in medicine and is likely to have expanded use in other disciplines for the study of physical and behavioral health through the lens of this previously unrecognized element of social environment.

The general concept that culture must be included as a significant factor in multiple areas of health research and service provision is gaining wide recognition, though the definition of culture and consistency in measurement remain problematic (Singer, Dressler, & George, 2016). Of particular value for the current study is the role of *perception* of both cultural fit and *stress*. The individual's perception is key. A perceived positive fit between the demands of a cultural role and an individual's ability to meet them appears to serve as a buffer between difficult external circumstances and the effects of those circumstances on body and mind. A perceived clash of identification with or inability to live up to the expectations imposed by one's cultural role creates or exacerbates a stress response, which then results in depressive symptoms, and/or psychological distress (Dressler, Balieiro, & dos Santos 2017; Dressler et al., 2018). Other

researchers are confirming the relationship between emotional fit with culture and psychological well-being (DeLeersnyder, Kim, & Mesquita, 2015).

The work of Dressler and colleagues employs mixed methods and has included physical measures of stress, such as cortisol in saliva and arterial blood pressure measurements. Because physical measures of stress are not available in a survey, this study examines only mental health outcomes, and only by multiple choice questions. Research on cultural consonance has used survey measures for perceived stress and psychological distress (Balieiro, dos Santos, dos Santos, & Dressler, 2011; Dressler et al., 2007b; Dressler, 2011b). Those measures are included in the present study.

Cultural Consonance as a theory has application to forming a better understanding of how a military wife's perception of her fit in military culture might affect her well-being. Related methods could later be used to construct cultural models which could lead to culture-related predictors of well-being for the overall military-connected population. This exploration of cultural consonance for military wives will contribute new information about a factor that may influence who thrives in the military environment and how to identify and support those at risk for stress-related symptoms. Along with the list of both every day and extraordinary stressors associated with military life, adjustment to the culture itself may be a factor that exacerbates stress or protects against it. This study will use validated scales on perceived stress and psychological distress contained in the 2008 ADSS. The Perceived Stress Scale and other measures of non-specific psychological distress have been used in several works cited above. This study will use the ACS as a proxy measure to explore the association between cultural consonance and the outcome measures of mental well-being.

Justification for Use of the ACS as a Proxy Measure for Cultural Consonance

Merriam Webster defines the word *consonance* as *harmony or agreement among components*. It gives the synonyms: *balance, coherence, harmony, proportion, symmetry, symphony and unity*. Antonyms include: *asymmetry, discordance, disproportion, disunity, imbalance, incoherence and violence* (Consonance, 2019). The military is an organization as well as a culture. Organization theory is the origin of the Affective Commitment Scale and is the main theoretical framework used to examine military culture as workplace culture. A link can be made from examples of terms in this literature to terms in cultural consonance literature. A further link can be made to language in the five questions of the ACS. Experts on cultural consonance, organizational theory, and the writers of the ACS are using substantially analogous language because they are all examining variations of the concept of *person-in-environment fit* from different disciplines.

The Affective Commitment Scale Comes from Organizational Culture Theory

Organizational culture theory shares the use of person-in-environment perspective with cultural anthropology. *Affective Commitment* is a component of *Organizational Commitment*, a measure of an employee's commitment to stay with the organization (Meyer & Allen, 1991). Affective commitment in the 2008 ADSS can be defined as "a military spouse's emotional attachment to, identification with, and involvement in the military," (Meyer & Allen, 1984; DMDC, 2008). The scale is there because of the DoD's interest in retention and motivation of its personnel.

Wilson, (2008) asserts that military culture is a specific form of institutional culture. i.e., organizational culture. Organizational culture theory, like anthropology, studies people in the context of culture. It is the main theoretical foundation for studies of military personnel. There

is conceptual alignment between cultural consonance and organizational culture theory as expressed in terminology. The following are important terms used repeatedly in the literature of cultural consonance:

goals in life, status confirmation, coherence, validation, fit, competence, and role expectations (Dressler, 2017; Dressler et al., 2018; Dressler et al., 2015; Dressler et al., 2017; Harrell, 2003) ***congruence, incongruity***, (Gudanowski, 1995; Reyes-Gracia, et al., 2010), and ***emotional fit*** (DeLeersnyder, Kim, & Mesquita, 2015). Compare those concepts with terms for analogous concepts in organizational culture theory: ***sense of community, community contexts***, (Bowen, Mancini, Martin, Ware & Nelson, 2003; O’Neal, Richardson, & Mancini, 2018; Totenhagen, 2018; Wang, Nyutu, Tran, & Spears, 2015), ***role fit, role satisfaction***, (Bowen & Neenan, 1990; Rosen, Ickovics, & Moghadam, 1990), ***sense of fit***, (McFadyen, Kerpelman, & Adler-Bader, 2005), ***environmental mastery*** (Wang et al., 2015), ***sense of community and support versus alienation*** (Redmond et al., 2015), ***perceived fit*** (Pittman, 1994).

It is possible that the items in the ACS are more than a yardstick of commitment to the military as an organization.

Being a military spouse fulfills most of the important needs I look for in my life

Being a military spouse is ideal for me.

Being a military spouse is consistent with my personal goals.

I enjoy being a military spouse.

Generally, on a day-to-day basis, I am happy with my life as a military spouse.

The ACS items ask the participant to rate her sense of emotional fit, congruence of ideals, fulfillment of needs, and whether the military lifestyle is consistent with her life goals. The researcher posits that the same things that measure commitment to an organization are measures

of a wife's sense of harmony, belonging, role fit and alignment of personal goals with the military community. Whether it is family life in Brazil or the role of military wife, a sense that you like your cultural environment and it likes you back provides a boost to well-being.

Cultural consonance was used to study organizational culture because of its ability to link culture at both the individual and aggregate levels, (Jaskyte & Dressler, 2004). There is precedent for use of the items in the ACS to measure constructs of interest that are analogous, but not identical, to its original intent. Through the *Construct Equivalence Approach*, Tremble, Payne, Finch, & Bullis (2003) found that they could tap data from the organizational archives of the DoD by adapting items from earlier versions of the ACS to study other theoretical constructs of interest. Meyer and Allen's original list of items have been adapted and combined to measure related constructs. That is what the authors of the ADSS did in 2006 as well as 2008 (DMDC, 2007; DMDC, 2008). The researcher posits that the items in the ACS do capture a wife's perceived sense of cultural fit within the military community. Furthermore, the items could be adapted and combined with other items already in use by the DMDC for a future attempt to create a cultural consonance scale for military wives.

Overview of Military Culture for Service Members

For an idea that is widely accepted and written about, military culture does not have a universal, formal definition, especially not based on research evidence. Research studies on culture have been extensively published in the field of cultural anthropology. One published definition of *culture* is, "the knowledge an individual must possess to function adequately as a member of a social group" (Goodenough, 1956). If that is true, military culture has been shaped by what it takes for a group of warriors to win a war. Since combat has traditionally been an almost exclusively male endeavor, the culture of all military forces has been defined by highly

masculine norms, values, and beliefs, sometimes referred to as the warrior identity (Bateman, 2004; Johansen, Laberg, & Martinussen, 2013; Wertsch, 1991). Military culture has been traditionally shaped by the demands of top performance of duty and readiness for potentially deadly combat.

The Center for Deployment Psychology defines military culture as: “the sum total of all knowledge, beliefs, customs, habits, and capabilities acquired by service members and their families through membership in military organizations” (Martin, Albright, and Borah, 2017). In, *Serving Military Families in the 21st Century*, the authors say military culture is exhibited through language, a chain of command, locations, respect for service, personal sacrifice, discipline and military laws. Military family life is described as relying on a sense of community, where duty comes first (Blaisure, MacDermid, Saathoff-Wells, Pereira & Dombro, 2012). In *Military Brats: Legacies of Childhood Inside the Fortress*, Wertsch, (1991) describes the warrior society as an authoritarian structure that may include the family, isolation, importance of mission and the *masks of the fortress*. The masks necessary for the warrior mission, according to Wertsch (1991), are secrecy, stoicism and denial. The author of *Counseling Military Families* describes a trend observed by professionals working with military families for them to be parent-centered; that is the needs of parents come first because the parent(s) are in turn dominated by the demands of the military mission (Hall, 2008).

Civilians should be aware that military personnel, once sworn into service, paradoxically forfeit the constitutional and some of the civil rights afforded to other citizens of the country they swear to protect. Service members come under the UCMJ, or Uniform Code of Military Justice (Jividen, 1994). This is a set of laws that apply only to military personnel, and which sometimes override civilian law. Some actions or omissions merely frowned upon in the civilian world are

crimes in the military. For example, rudeness, disobedience to a supervisor, or walking off a job can get civilians fired. In the military, they are the crimes of insubordination and desertion, which are punishable by prison time. Treason is potentially punishable by death. The military can make other unusual demands. There is no limit to hours worked, requirements for working conditions, or demands for service. There is no presumption that bodily safety will be ensured for a service member. All members can be required to report for long-term deployment anywhere in the world on 24 hours' notice. This fact has great bearing on the lives of military dependents. There is no negotiation. The military comes first. Its demands supersede other family obligations. The military commands the service member to an extraordinary degree. What is not often recognized by civilians is that it creates enormous demands on the family and spouse, because they too are controlled by the exigencies of military orders (Pittman, 1994; Redmond et al., 2015; Segal, 1986; Strong, & Weiss, 2017; Wertsch, 1991).

Families Are Embedded in Masculine Warrior Culture and Organizational Culture

The military is a unique institution because it is a workplace culture and a social culture at the same time. All study of workplace cultures includes social elements such as identity, cohesion, values, codes of dress, behavior, norms and standards. The military is unique for active duty members and families because *they never leave*. Life at a duty station, with housing on a military installation, means that spouses and families are embedded in military workplace culture along with the service member, and they have no aspect of life unaffected by that. Unlike manufacturing, sales, service or information sector private employees, military people never go home. The military *is* the home and is often described as *the military family* (Galvin, 2008). For those who become strongly attached, the military becomes a primary identity. For

those who do not attach enough, living and working in the military community may never be comfortable.

There are retirement communities designed for retired military people because they want to remain close to the military community (Frese, 2003; Frese, 2008; Maurer & Watson, 2010). There are some veterans who never stop wearing military clothing or civilian clothing with military symbols and emblems. Think of Viet Nam veterans who retain their jungle fatigues. The military identity and culture are so strong that they can present a problem for those who fail to identify and for those who identify too much.

Shopping, schooling of children, entertainment, social and recreational facilities are typically collected on the military installation. Most of them have swimming pools, theaters and bowling alleys. Morale, Welfare and Recreation (MWR) facilities are an employee benefit for vacationing all over the world. Posts and bases include clubs where officers and enlisted may drink, but usually not together. Some authors refer to the military as having the features of an ethnicity (Daley, 1999; Zirker, Danopoulos, & Simpson, 2008).

Military identity is being studied and attempts to measure it are developing (Johansen et al., 2013; Johansen, Laberg, & Martinussen, 2014; Lancaster & Hart, 2015). A common theme in these articles is that identity affects mental well-being. Strong identification makes it easier to *fit* in the military, but harder to get out. There can be conflicts between civilian identity versus demands of the military environment (Montgomery, 2011; Smith & True, 2014). None of this is being studied in military wives.

Modern American military culture is highly structured, hierarchical, and formally defined. Job descriptions, chain of command, dress codes, protocols for performance of duty, and personal as well as professional behavior are all codified in written rules. Military culture is

defined by the overarching mission of national defense. Some commonly recognized essential values include honor, courage, loyalty, sacrifice, stoicism, competence, unity, and strong conformity (Allsep, 2013; Blaisure et al., 2012; Meyer, 2015). Standards for physical appearance are sharply defined. The demand for conformity is such that even the bodies of service members are trained to have a particular posture, patterns of breathing for different purposes and specific ways of walking, standing, marching and running. Training for performance, unit cohesion and presentation of a *military bearing* change a person more deeply than training and demands in other fields of employment. The person takes on a warrior identity and becomes what Lande describes as “culture incarnate” (Lande, 2007). Because military life is a blending of employment and deeply personal effects on identity and personal life, organizational theory alone is not sufficient to understand the phenomenon of military life. For that, researchers should embrace social anthropology.

Overview of DoD Policy on Military Spouses

As part of their traditional role as providers and protectors, the history of men is entwined with threads of governance, war and armies. The history of women is wrapped around husbands, households, children, and often entwined with direct and indirect roles in armed conflict. American military policy has moved from neglect of wives and children to current policies which strive to provide support and make the military lifestyle a good place to live and raise children (Park, 2011). From Valley Forge to the Civil War to present day, families have been part of military life (Albano, 1994; Alt, Alt, & Stone 1991; Campbell, 2003; Alt & Alt, 2006). From the American Revolutionary war until WW I, there were always *campfollowers* found near the location of troops. The campfollowers consisted of wives, children and mistresses. Wives and children supported themselves and the troops with helpful menial work, such as doing

laundry, foraging for food, and picking up firewood. While officers could have spouses, it was not until 1925 that enlisted men could marry, and only then with the permission of their superior officer (Alt & Alt, 2006; Alt et al., 1991).

Until WWII the US military remained small in terms of troop size. With entrance into WWII, draft and voluntary enlistment took a large percentage of the nation's men went to war. There was a surge of hasty decisions to marry before shipping out, creating a group of young women known as *war brides*. Married men with dependents also went to serve, creating the need for congress to pass the *Servicemen's Dependents Allowance Act* of 1942, (Alt, Alt, & Stone, 1991). In previous wars, fought in North America, the presence of women near their fighting men was regarded with some ambivalence as to whether they were helpful contributors to the war effort or merely in the way, (Alt, Alt, & Stone, 1991). In WWII, women contributed by taking the work roles men left behind. Otherwise, the military generally ignored military wives and considered them a distraction and a drag on resources. The saying went, *If the army wanted you to have a wife, they would have issued one.*

The Shift to the All-Volunteer Force and Total Force Concept

In 1973, President Richard Nixon ended the draft and the Department of Defense, (DoD) established an all-volunteer, professional military. The advantage of this change was to create a career military field. The heavy investment of capitol in training personnel now makes the DoD motivated to retain trained personnel. Defense officials wish to cultivate a military of dedicated career service professionals who are there by choice. It is most efficient to promote from within so that decades of accumulated training and experience benefit the total force. Total Force is the concept of including National Guard and reservists in the personnel available at any given time to respond to an armed conflict (Knox and Price, 1999). Thus, the United States created the most

highly trained, seasoned and motivated fighting force in the world. Because career warriors are older as a group and by definition, in a more permanent role in the military, they accumulate wives and children. This shift led to the need for explicit military family policy.

With the advent of the all-volunteer force, the U.S. military's policies regarding military families progressed from negligible recognition to active efforts to support the whole family (Bowen, & Neenan, 1990; Knox & Price, 1999). In a 1983 White Paper, the Chief of Staff of the Army identified the deficiencies in the military system at that time and the urgent need for the Army to take better care of its soldiers and families, (Department of the Army, 1983). Since then, efforts to understand the needs of military families and respond with proactive policies have intensified, including formal commitments from political and DoD authorities. (McLeroy, 2008; Office of the Press Secretary, 2011).

The Military Family Act of 1985

The Military Family Act of 1985 was a turning point in the military's commitment to address the needs of members' families. The bill finally passed in 1985 falls under Title 10 – Armed Forces; subtitle A – General Military Law, Part II – Personnel, Chapter 88 – Military Family Programs and Military Child Care (Military Family Act of 1985, 1985). Callahan & Zimring, (2011) describe 1985 as one of seven key years in the development of military family policy. At that time, the research also started calling for the military to provide programs, services and interventions to support families and veterans as well as service members (Martin, Rosen & Sparacino, 2000).

Department of Defense Interests in Military Wives

Since the passage of the Military Family Act of 1985, the Department of Defense has pledged considerable financial and administrative support for the overall well-being of military

families. The DoD has a vested interest in the well-being of military wives because they amount to un-paid employees who perform several vital services. Conversely, when wives are not happy or become dysfunctional, they potentially do harm. Spouses have strong influence in retention, financial stability, child well-being, family readiness for deployments, service-member focus while deployed, and the support of other military wives and families in the military community. Deployments, separations and PCS moves are recognized as particularly stressful times. Command structure has responded through formal DoD offices and through programs which encourage military families to help each other, such as Family Readiness Groups (Blaisure et al., 2012).

Retention

The military is highly motivated to retain competent mid-level personnel because of the high cost of training and the need to promote from within (Wardynski, 2000; MacDermid & Southwell, 2011). Research has shown that retention is significantly influenced by spouse satisfaction with the military (Gill & Haurin, 1998; Pittman, 1994; Pittman & Orthner, 1988; Orthner & Rose, 2009). These and other studies have consistently shown that a wife who is unhappy or dissatisfied with military life may urge a service member to separate from the military career.

Financial stability

Financial stability is another key to family readiness and the family's perception that the rewards of military life are worth the sacrifices (Schwartz, Wood & Griffith, 1991). Competitive pay, job security and valuable benefits support financial stability. However, many military families need the second income of a spouse. The DoD allots resources where it sees the highest cost to benefit ratio. Ever thrifty, the department has made investments in spouse earning

capacity both to keep wives happy and to support their earnings as a supplement to the personnel income (Wardynski, 2000). Sections 1784 and 1784a of the 1985 Military Families Act address “Employment opportunities for military spouses” and “Education and training opportunities for military spouses to expand employment and portable career opportunities”. The word ‘portable’ has relevance to military spouses because of frequent moves. Research leading up to the act identified the frequent moves as a major factor in unemployment and underemployment of military spouses (Payne, Warner & Little, 1992; Grossman, 1981). In the 2018 *Military Family Lifestyle Survey*, difficulties with spouse employment remains the number-two concern of military spouses after time the service member spends away (Bluestar Families, 2018).

Family functioning

Though individual service members comprise the fighting force, their performance is jeopardized by distractions associated with family problems. Military wives need to be stable and high functioning to handle things at home alone. (Burrell, Adams, Durand, & Castro, 2006; Pittman, 1994; Pittman, Kerpelman, & McFadyen, 2004). Accumulating evidence about military families demonstrates that there is one person, besides the service member, whose well-being and stable functioning affect all others. The military wife needs to be better understood and supported because she is the nerve center of the family. Whether she works outside the home or not, the spouse takes care of everyone. The mental and behavioral outcomes of children are influenced by the mother (Flake, Davis, Johnson, & Middleton, 2009; Hall, 2008; Lester, et.al., 2010). Service members perform better at work and reintegrate after separation from the military more smoothly with a stable, functioning partner (Burrell et al., 2006). Conversely, when the primary caregiver is troubled, everyone else is affected (Flake et al., 2009).

The DoD currently recognizes the benefit of investing in military spouses because they are integral to mission readiness and thus to overall national security. Spouses either help or hinder the mission of national defense. They are not irrelevant. Because of the significant responsibilities placed on spouses and the unique stressors in military life, improving the quality of support for troops and families has become a permanent part of DoD processes (Department of the Army, 1983; Military Family Act, 1985; Shinseki, 2003; Office of the Press Secretary, 2011).

Unique Stressors and Demands in Military Life

Stressors Drive the Literature

The DoD is aware that military life places some unique stressors on military families. It must be said that military life also provides some special supports, such as fair pay and job security for the service member, good health insurance coverage, special programs for the education and support of children, and a sense of pride, and community for many. To understand military wives, it is important to understand that the military is unlike any other employer. Those who marry into the military have always faced some built-in, unique stressors, which include: a) the phenomenon of *greedy institutions*, i.e., the inherent tension between demands of the military and the needs of the family, b) Deployments / separations, c) Frequent *Permanent Change of Station* (PCS) moves, d) persistent barriers to career development, and e) the sense of chronic uncertainty and lack of control those conditions impose. These stressors will be discussed in more detail. The relevance to the current study is that military spouses frequently deal with specific types of stressful circumstances not familiar to civilians. (Blaisure et al., 2012, Burrell et al. 2006; Department of the Army, 1983; Hall, 2008).

Factors in Stress and Well-Being

The Life Stress paradigm holds that stressful life events can create distress in an individual, resulting in physical and mental symptoms (Pearlin, Lieberman, Menaghan, & Mullan, 1981; Ensel & Lin, 1991). It further holds that successful coping and support can moderate the effects of that stress. This paradigm offers a general lens through which to understand the impact of the unique stressors that accompany life in the military as well as the importance of successful coping and support.

Research related to military families apparently did not exist until 1949, when sociologist, Reuben Hill wrote *Families under stress: Adjustment to the crises of war separation and reunion* (Hill, 1949). Hill found that personality factors, social support, resources available to the family and the way they defined the event affected the family's ability to adjust. The notion of weighing risk factors against protective factors has been an important thread in literature ever since (Martin et al., 2000). Generally, the life of a military wife is fraught with factors that create chronic uncertainty, high responsibility and low control, such as adjusting to the military, adapting in foreign countries, and decreased social support from the family of origin, (Burrell et al., 2006).

The Military and Family as “Greedy Institutions”

Lewis Coser (1974) within the field of conflict theory and organizational theory, coined the term, *greedy institution*. His contention was that organizations work to extract primary loyalty and maximum service from their members in the face of competing demands from other sources. An individual can give primary and unconditional loyalty to only one organization or institution at a time. In her seminal article, Segal, (1986), asserted that families and the military are both *greedy institutions*. The DoD demands unconditional, primary loyalty from the service

member. Many civilian spouses feel bound by primary loyalty to the stability and nurturance of the children and the family. This situation creates an inherent, chronic conflict and source of stress for military wives, which requires strenuous efforts at repeated adaptation. It can also bring up the need to decide whether continued military service is tolerable for the family. According to Wardynski (2000) and Savych (2008), a military spouse constantly engages in cost versus benefit analysis regarding military life. If she determines that the costs of military life outweigh the benefits to the family, a military wife may withdraw her support of continued service. That withdrawal of support sometimes results in either divorce or separation of the service member from the military.

Deployments

As the response to 9/11 required extended and repeated deployments by service personnel, the first area to receive research attention on families was the effects of deployments. The earliest studies focused on children or families as a unit (Lester, Peterson, Reeves, Knauss, Glover, et al. 2010). Over time, the studies became more numerous and some focused on the effects on spouses, specifically (Larsen, Clauss-Ehlers, & Cosden, 2015; Wheeler & Torres-Stone, 2010).

Deployment means, "Leaving the normally assigned duty area, usually as a unit, to serve temporarily in another area" (Schading & Schading, 2006, p. 226). During wartime, this is often a combat zone or hazardous duty zone, which both represent heightened risk for service members. A feature of the current wars is that they have no *fronts*. Even support personnel are at risk from mortar fire or roadside explosives just while travelling in truck convoys to deliver supplies or get to new stations. This factor adds fear for the safety of her service member to the list of stressors for the military spouse (Warner, Appenzeller, Warner, and Grieger, 2009).

Deployment of the service member has been shown to bring increased stress levels to most military wives (Dimiceli, Steinhardt & Smith, 2010; Lara-Cinisomo et al., 2012). Perceived social support has been found to be an important protective factor in the psychological well-being of the spouses (Skomorovsky, 2014). Burrell et al., (2006) found that the impact of separations predicted a negative effect on all measures of spouse well-being. The number of separations was not a significant factor, which the authors interpreted as suggesting that it was the spouse's *perception* of the separation that mattered most. Authors using the Perceived Stress Scale found that wives experienced deployment as a stressful event (Cohen, Kamarck, & Mermelstein, 1983; Padden, Connors & Agazio, 2011). These studies had a finding common to many studies on military spouse stress, which is that *perception* is key. The Padden study found that the greater the spouse's perception of the deployment as a stressful event the more negative the impact on physical and emotional well-being.

Frequency of Permanent Change of Station (PCS) Moves

A move to a new duty station is a Permanent Change of Station (PCS). When the service member is re-stationed, either within the continental U.S. or to a different country or a territory outside the U.S., the family must also relocate or continue life without the service member living at home. There is no negotiation. Active Duty military families move an average of every 2-3 years. When a woman marries a man in the military or her husband joins the military, she enters the military world. As discussed, this alone requires extensive and ongoing adaptation (Blakely, Hennessy, Chung, & Skirton, 2014a). She must go where the military stations the service member, which means that she will immediately leave her family of origin and familiar surroundings. The only alternative is staying behind. When the service member is deployed unaccompanied, wives and children, if any, may stay where they are geographically and carry on

in a state of separation from the husband/father. In some cases, families choose to stay in a locality, for the continuity of children's schooling and friendships for example, while the service member moves to the next duty location, knowing that separation will last two to three years. Whether the whole family moves together or is separated, the situation is stressful (Knox & Price, 1999; Strong & Weiss, 2017).

In addition to the hassle factor of packing, unpacking and finding one's way around a new place, PCS moves impose a psychological burden. Some spouses cope better than others. Websites such as *Spousebuzz* are awash with postings about tips for efficiency of packing and how to make moving less disruptive for all concerned. Personality factors, personal circumstances, and (again) the wife's perception of the experience can determine how distressing the move is. For most, the loss of control itself is distressing to various degrees (Blakely, Hennessy, Chung, & Skirton, 2014; Russo & Fallon, 2015).

Persistent Obstacles to Education and Career Goals

Frequent moves and the reality of being a de facto single parent at unexpected intervals pose a challenge to a military wife's ability to have continuity and growth in career and education (Burrell et al., 2006). Military spouses report obstacles to employment and career advancement as one of the top five problems with military life. In the 2013 Military Family Lifestyle Survey Comprehensive Report, 68% of military spouses who took the survey reported that the military lifestyle negatively impacted their ability to obtain and keep meaningful employment (Greentree, et al., 2013). Many military wives need to work to contribute financially. Many also want to work for a sense of purpose and identity separate from homemaking, childcare, and the supporting role in the military family. A 1981 labor review report stated that low military wages and consumer price inflation created a need for military

wives to work for wages outside the home at the same time that social changes were making that a more viable possibility (Grossman, 1981). This article mentions some of the same obstacles to employment as the current literature: Frequent moves, living in remote areas with poor job market alignment, discrimination by employers, extended absences by the service member husband and caretaking responsibility for young children (Grossman, 1981). A 2004 RAND publication found that when military spouses do work, they earn less than their civilian colleagues (Harrell, Lim, Castaneda, & Golinelli, 2004). A 2008 follow up study found that nearly two-thirds of military spouses did feel their connection to the military made it hard to work, and many were not looking for work even though they wished they could. The authors reported the findings suggested that *intangible factors*, such as unpredictability of circumstances and the obligation to be an anchor at home were particularly relevant to the military spouse population (Castaneda & Harrell, 2008).

Taken together, these studies show a consistent picture about spouse employment concerns. Military spouses choose not to work less than their civilian counterparts. Of spouses who want to work in the civilian labor force, 24% are unemployed, seeking work. Of those who are not employed, many want to be employed but cite consistent obstacles to employment that are intrinsic to military life. When military spouses do work, they earn less money and are underemployed based on their levels of education compared to civilian women. Overall, needing or wanting to be employed was an issue for military spouses in 1981 and it remains a source of frustration for military spouses today (Blue Star Families, 2018; Bogen, 2019; U.S. Department of Defense, 2018). This group of unique stressors create a context of chronic stress, uncertainty and lack of control for military spouses.

The Changing Role of Military Wives in Military Culture

Military Wife Culture in the Twentieth-Century

The Army Wife (Shea, 1941) and *The Army Women's Handbook* (Collins, 1942) were the first of a genre of guides for military wives which persists today. Collins' guide is instructive about using resources, such as how to fill out various forms, how to make a claim for a death benefit and a description of the property rights of women while separated or widowed. It also turns quickly to instructions and standards for etiquette and conduct with a list of the general principles advised to an Army wife.

1. Make your husband as happy and comfortable as possible.
2. Watch the health and well-being of your family carefully.
3. Keep interested and informed on the affairs of your country.
4. Do not talk about movements of troops or other Army events.
5. Be thoroughly prepared for sudden orders for your husband.
6. Carry out the advice given in this book. (Collins, 1942, p.4).

Part II of the book deals with the rigidly gendered social role and expected behavior of the Army wife of the time. It deals extensively with "military courtesy," including use of tea cards, informal entertaining and "training the maid to serve." A wife is advised to stay, "young and interesting." In just a few pages, it conveys a powerful picture of the cultural expectations of a military officer's wife. The main cultural expectations conveyed to a military wife were: to support to her husband and children, to learn the written and unwritten rules of conduct in accordance with her husband's rank and to become an artful hostess, volunteer worker and leader of other women. An overarching imperative was to never criticize anything publicly, put on a

happy face, and to be “both buffer and bulwark of strength for her busy husband.” (Collins, 1942, p. 178).

The Army Wife explicitly spelled out how a wife’s role was to support the advancement of her husband’s career by her deeds and attitudes; both private and public. It was as if she was a kind of public relations manager who should create an image by her charming deportment, attractive appearance, the elegance of her home, her ability to entertain, and the behavior of her children that would lead directly to promotion through the ranks. In fact, a wife’s ability to perform the cultural role as expected could make or break an officer’s career. Being married to an officer was to be his partner in the career (Shea, 1941). A thesis was written on the evolution and the solipsistic power of these publications to both reflect and determine the gendered role of the military wife in the mid Twentieth Century (McMurray, 2009).

Military Wife Culture in the Twenty-First Century

A study by Durand (2000) contains a scale titled, “Officers’ Wives Perceptions and Ratings for Military Family Life Activities.” Subjects were asked to respond to a list of activities from three perspectives; *Does the Army expect this of you? Does your husband expect this of you?* and “*Do you rate this activity as “very important”?* The subject matter included wives’ perceptions of an “army wife” role, clarity/ambiguity of the army wife role, the army’s and husbands’ expectations for wives’ behavior, commitment to the army community, alignment with the “two-for-one” career pattern, and wives’ satisfaction with their current lives. Durand concluded that the women perceived that the Army expected a great deal of them, but they were less willing to comply with those expectations than previous generations. They also perceived the husbands as having less expectation that the wife will participate in Army activities and clubs, but still having high expectations for the wife’s role at home. The author concludes that

the *two-for-one* career, in which both members of a couple were obligated to the institution while only one was formally employed, is less required than it once was for officer's wives. An exception to that is for wives of service members who are ambitiously committed to a lifelong career and climbing to the highest possible rank. That is a striking difference from the past, as defined by Durand's personal experience (Durand, 2000; Harrell, 2001a).

There is now a well-developed genre of overview/educational books for military wives to educate themselves with titles such as, *A Civilian's Guide to the U.S. Military* (Schading, & Schading, 2006), *A Family's Guide to the Military for Dummies* (Garrett and Hoppin, 2009), and *the Complete Idiot's Guide to Life as a Military Spouse*, (McGrath, 2008). They contain common practical elements, such as a glossary of acronyms, understanding rank and hierarchy, and utilizing military resources. However, most of the content is advice for coping with the stressful elements of military wife-life and some direction regarding unspoken norms, as well as how to seek social connection. Most recently, social media has provided many forums for connections among military spouses, and spouses have formed groups for their own mutual support and advocacy (Blakely, Hennessy, Chung, & Skirton, 2014b). There are blogs on platforms such as *Spousebuzz*, which cater to general military spouse concerns. There are also specialty groups, such as the Military Spouse JD network who advocate for the portability of law licenses. Wives can share online deeply personal experiences and start conversations on even controversial subjects (Noll, 2017).

There are also many textbooks for training of human service providers. Some examples are: *Social Work Practice in the Military* (Daley, 1999), *Serving Military Families in the 21st Century* (Blaisure, et al, 2012), *The Costs of Courage: Combat Stress, Warriors, and Family*

Survival (Pryce, Pryce, & Shackelford, 2012) and *Counseling Military Families: What Mental Health Professionals Need to Know* (Hall, 2016).

The existence of so many guides for navigating military life is evidence that military life requires a guide. That these handbooks started in 1942 with an overt prescription for the role of military wife, and that chapters on military culture remain included is evidence that there is a shared understanding of what is expected of military wives. Women who live within military culture know it when they see it, yet it is hard to define. They also know that those who enter it for the first time must adapt or struggle with it. That is why the books are helpful. They consolidate advice from experienced military wives to beginners.

The body of qualitative studies on military spouses' experiences has grown in recent years. Some of the thematic findings touch on identity and how women assign meaning to their role as a military spouse. A 2006 study of interviews with seven Canadian military wives reported they felt that no one except other military wives understands the lifestyle, that informal supports are very important, that communities can be based on service and mutuality of concern and circumstance rather than locality, and that they wish the Canadian military and their husbands would not be so controlling about access to needed information (Mullin-Splude, 2006). Another solicited stories and the meaning placed on those stories about military related experiences collected from 17 military spouses. Fourteen of the 17 spouses chose challenges faced during deployments of their service member husbands as the subjects of their stories. The themes noted were collected around independence, interdependence, resilience and resourcefulness (Thomson, 2011).

Several themes repeated in qualitative studies of military wives include: lack of privacy in military housing, blurring of identity with the serving partner, dependent status, a lag in

cultural change in a paternalistic military, feeling forgotten, loneliness, role strain, i.e., being solely responsible for a large array of tasks, including emotional caretaking, and needing to learn new skill sets for home and auto maintenance, feeling silenced, by the need to protect others from difficult emotions and the need to maintain a brave face, split loyalties between marriage/family and loyalty to the military, having to manage a three-way marriage with husband and the military, having an ambiguous insider/outsider status, i.e., being closer than anyone else to the combat warrior returned home, but always being an outsider to actual military experiences. Those are the negative themes (Adducci, Baptist, George, Barros, & Goff, 2011; Borah, & Fina, 2017; Harrell, 2001a; Higate, & Cameron, 2004).

In contrast, there is a prevalent set of expressions from military wives of positive experiences, such as pride in affiliation with the armed services, enjoying travel and locating outside the U.S., gaining new-found self-confidence, finding inherent strength and resourcefulness, pride in taking on a capable, androgynous role that includes the husband's responsibilities, and being reluctant to *turn over the pants* when he returns, forging deep friendships and alliances with other women, and a general theme of pride and self-discovery coming from hardships (Aducci et al., 2011; Borah & Fina, 2017; Frese & Harrell, 2003; Harrell, 2001b; Higate & Cameron, 2004).

As of 2019, military wives seem to have embraced the determination to work with the formal structure of the DoD and affiliated agencies; and also to take charge of their own situation. The DoD has been working at support of spouses with recognition of their vital contribution to mission readiness for almost 35 years. Social changes supporting increased independence for most American women have occurred in the same span of time. More recently, the advent of social media has created an opportunity for military wives to network and

band together as never before. The internet allows some wives to find career portability by having their own web-based businesses and to find fellowship across the globe. The overall tone of military wife culture is that they embrace the formal supports offered by the military and also will count on themselves and each other more than was possible for previous generations.

Purpose of the Study

Along with calls for social work and other fields to continue development of cultural competence with all military-connected populations, there is a need for steps to define the cultural role of military wives and explore how cultural role expectations affect individual wives. Research shows that culture plays a role in health outcomes (Napier, Ancarno, Butler, Calabrese, Chater, et al., 2014; Singer, et al., 2016). However, there is a paucity of research on how wives experience military culture, and virtually no research on cultural consonance or goodness of cultural fit for military wives. Utilizing cultural consonance theory, the purpose of this study is to increase knowledge about factors affecting the well-being of Active Duty military wives by exploring the association between cultural consonance and outcome measures of mental well-being.

Research Questions

Primary aim.

The primary aim of this study will be to explore whether perceived cultural consonance is significantly associated with military wife mental well-being. This will be addressed through secondary analysis of data collected by the DMDC 2008 Survey of Active Duty Spouses (ADSS).

Research Question 1: Do military wives with strong cultural consonance within the military community experience better mental health?

Hypothesis 1: Military wives who respond positively to questions indicating good cultural consonance will have more positive scores on a scale measuring non-specific psychological distress.

Hypotheses 2: Military wives who respond positively to questions indicating good cultural consonance will have more positive scores on a scale measuring perceived stress.

The null hypothesis is that no relationship will be found.

CHAPTER 3

METHODS

Study Purpose

The purpose of this study is to explore whether positive identification or positive cultural fit within the military community is associated with mental well-being for military wives when other possible influences are controlled. This chapter will present descriptive characteristics of the military wives, the steps for sample selection, and explanation of recoding of certain variables, and the basic data analysis plan.

Research Design

This study is an exploratory, quantitative, secondary analysis of cross sectional survey data obtained from the Defense Manpower Data Center (DMDC), which is an agency within the Department of Defense (DoD). It employs descriptive and inferential statistics to explore association and interaction between and within groups.

Data Source

The data source is the *2008 Survey of Active Duty Spouses* (2008 ADSS), obtained through a freedom of information act request. The survey was developed by agencies within the Department of Defense (DoD) under the purview of the Under Secretary of Defense for Personnel and Readiness (USD [P&R]). The survey is part of a series begun in 1985 to assess the experiences and needs of active duty (AD) military spouses. It is described to participants in the introductory letter as a way for them to share their experiences and to have them “included in creating policies and programs for the entire military community.” (DMDC, 2008, appendix

C, Communications). The surveys are part of DoD acknowledgement that families of service members are important to mission readiness and should receive DoD support as needed in forms above and beyond financial compensation. The survey data set is unrestricted for public use and contains no identifying information.

The 2008 ADSS has 95 questions divided into nine sections. The length was addressed to participants with the suggestion that they need not complete it all in one sitting (DMDC 2008). The section headings are: *Background Information*, *Permanent Change of Station (PCS) Moves*, *Your Spouse's Deployments*, *Military One-source*, *Education and Employment*, *Financial Well-Being*, *Health and Well-Being*, *Feelings About Military Life*, and *Comments* (DMDC, 2008).

Data Collection

The 2008 ADSS was distributed between March 24 and June 10 of 2008 through both the internet and paper mail, along with a participant letter explaining the purpose and procedures of the study, and assuring anonymity. The individuals sampled were identified from four data bases of military personnel, using federally prescribed sampling calculations. Sampling was adjusted to try to produce proportional groups, and employed oversampling of smaller groups. A stratified random sample of 49,368 legally married spouses of active duty service members were solicited from the Army, Navy, Air Force, Marine Corp and Coast Guard located around the world. The Coast Guard is part of the Department of Homeland Security rather than DoD. Spouses of Coast Guard members were sent the same survey, but the sample selection criteria were made through a separate calculation. Responses from Coast Guard members were tabulated separately.

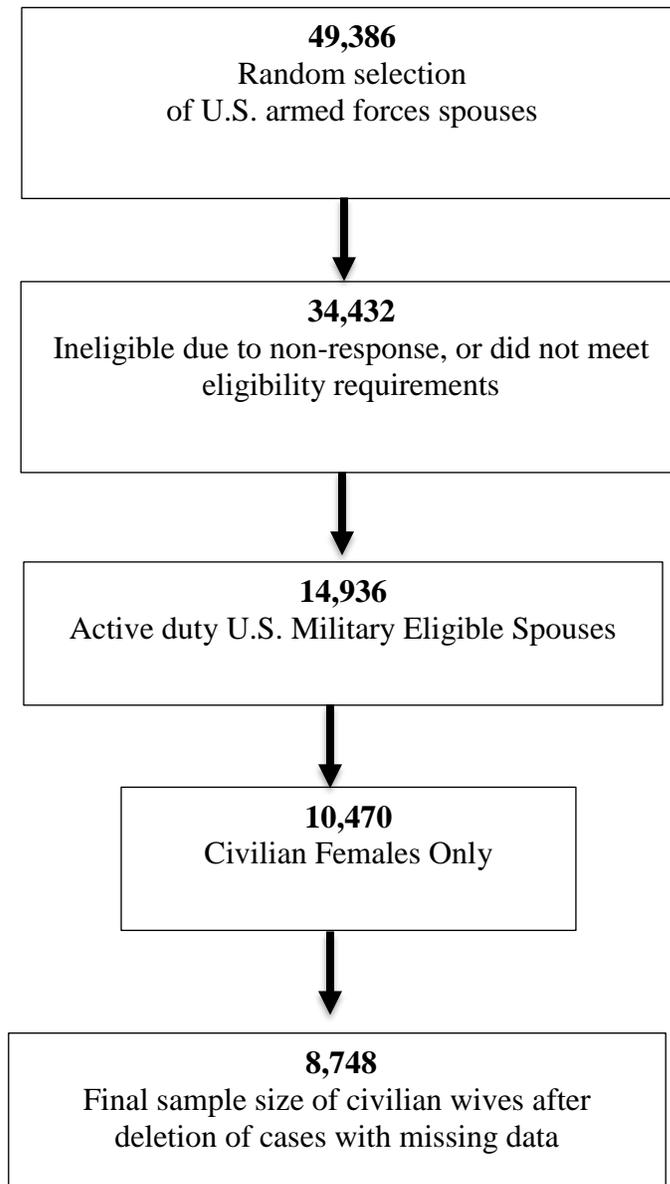
Survey Eligibility and Response Rates

The DoD sampled 49,386 military spouses. They received 14,936 eligible responses. To be eligible, the spouse had to complete 50% or more of all questions plus two critical questions, determining that the couple was still married at the time of the survey and the service member was on active duty. Spouses who were divorced, widowed or whose service member spouse was no longer on active duty were excluded from the survey. Eligibility depended on the status of being married to a service member. Dual military career couples were included. Both spouses received a survey. The overall response rate of completed eligible surveys was approximately one third (28%). The Coast Guard response rate was slightly higher, (32%). The total number of completed eligible surveys returned was 13,423. Participation was voluntary. Completion of the survey was considered implied consent with details provided in an introductory letter.

Study Sample Selection

The study sample selection was limited to civilian females married to male service members, referred to as *wives* within the study. The study sample ($n = 8748$) was selected by the *case selection* function in SPSS 25. Figure 1 charts the process of reducing the total sample to the sample in the present study. From the original data set, variables of interest were selected and made into a subset. Cases with missing data were deleted. Then syntax was applied to select only females whose employment status was *employed*, *unemployed*, or *not in labor force*, but to exclude those with employment status of *armed service*.

Figure 2. *Sample Selection Flow*



Limitations of the Sample

The eligible response rate of only 28% shows that the sample reached many people who did not care to complete it and that some did not complete at least 50% of the questions. This may indicate a reluctance to provide personal information, even with an assurance on anonymity.

The length of the survey may have deterred some individuals because of the commitment of time required. These factors may have created a sample bias by which the completed surveys reflected the group of people most motivated to provide input and feedback to the military. The sample may be biased toward those respondents who identified more with the military or had a stronger motivation to express positive or negative opinions of the military. That being said, 28% is a strong response rate to an anonymous electronic or mailed survey.

Study Measures and Recoding

Dependent/Outcome Measures

The dependent/outcome variables are scores from the Kessler Psychological Distress Scale (K6), and the Perceived Stress Scale (PSS-4), which are both validated scales embedded in the survey. These scales were also divided into negative and positive categories for binary logistic regression.

Psychological Distress. The 2008 ADSS used the *Kessler Scale* (K6) to “identify potential mental health concerns by measuring spouses’ experiences/reactions in the 4 weeks prior to taking the survey.” The Kessler scales are available as a ten-item or six-item version. The scale has a history of development through item response methods and validation with fully structured diagnostic interviews. The purpose of the K6 is to screen for the presence of mental illness as the probability that an individual does or does not have a DSM IV diagnosis. Earlier work had determined that people with different kinds of mental disorders commonly have a high rate of response to questions that capture a core dimension of mental illness termed *non-specific psychological distress* (Kessler et al., 2002). Those questions have turned out to be remarkably effective at screening for the likely presence or absence of a mental illness. The scale was developed in the United States, but has been validated for use all over the world. Validity has been established by independent clinical validation studies, comparing the scale score results on

individuals who were also assessed for a DSM IV diagnosis by mental health professionals, using a structured assessment interview. The K6 has been used in epidemiologic studies of large populations, including the World Mental Health (WMH) survey initiative (Kessler et al., 2010). It can be used to measure both the dimension of *psychological distress*, and as a way to screen individuals who are at various levels of risk for a psychiatric diagnosis. It has been established that the scale can be used with continuous scoring or can be divided into two-level or three-level categories (Kessler et al., 2002; DMDC, 2008; Kessler et al., 2010; Krynén, Osborne, Duck, Houkamau, & Sibley, 2013). The 2008 ADSS included variables for using each question separately or as a scaled variable. The K6 has a strong Cronbach's alpha of (.89) (Kessler et al., 2003). This study sample closely matched that with a Cronbach's Alpha of (.88).

In the current study the K6 is used in both a continuous and dichotomized form. In the 2008 ADSS, the six Kessler questions, which compose the continuous scale, are scored from 1-5, with low numbers indicating low levels of distress. Put another way, low number scores represent *positive*, i.e., good mood or good mental health in the original ADSS survey. The items and possible answers are stated as follows: "During the past 4 weeks, how often did you feel... Mark one answer for each item. *None of the time, Little of the time, Some of the time, Most of the time, or All of the time.*" The six items are:

a. *So sad that nothing could cheer you up?*

b. *Nervous?*

c. *Restless or fidgety?*

d. *Hopeless?*

e. *That everything was an effort?*

f. *Worthless?*

The researcher wished to make all of the scales consistent in the direction of their scoring such that higher numbers would indicate *positive* scores. For that purpose, all six of the Kessler questions were reverse coded so that *low* scores equal *negative* outcomes, and *high* scores equal *positive* outcomes. The scale score scores in the present study range from 6 (worst) to 30 (best).

For binary logistic regression, the sample was divided into two categories, labeled *negative K6* and *positive K6*. These categories were not based on previous literature that categorized samples with varying levels of risk for mental symptoms. These categories were determined by the frequency of responses with the goal of dividing the sample into approximately the most negative or lowest 10% of responses and everyone else. The lowest 12% of the sample, (1046 cases) for the K6 had scores of 6-18, i.e., *negative*. The highest 88% (7702 cases) had scores from 19-30, i.e., *positive*. The binary logistic process and the graphic presentation required the researcher to code the lowest 12% as a one, and everyone else as a zero. The coding makes 1 = negative, and 0 = positive.

Perceived Stress Scale (PSS-4). This is a four-item scale which the 2008 ADSS codebook describes as a spouse's stress level, measured by their emotional experiences/reactions in the month prior to taking the survey (DMDC, 2008). The popular instrument was developed as a 14-item, 10-item or 4-item measure of "the degree to which individuals appraise situations in their lives as stressful" (Cohen, Kamarck, & Mermelstein, 1983, p. 385). The focus of this measure of stress is on the degree to which individuals perceived life as unpredictable, out-of-control, or overwhelming in the previous month. The items and possible answers are stated: "In the past month, how often have you... Mark one answer for each item. *Never, Almost never, Sometimes, Fairly often, and Very often.*" The four items are:

a. Felt that you were unable to control the important things in your life?

b. *Felt confident about your ability to handle your personal problems?*

c. *Felt that things were going your way?*

d. *Felt difficulties were piling up so high that you could not overcome them?*

The scales were available in the data as separate questions or as scale scores. In order to make all four items have their scores run in the same direction of low numbers for *negative* scores and high numbers for *positive* scores, the researcher reverse coded the middle two questions. Each item is coded from 1-5. The PSS-4 continuous scale scores range from 5-20, with a five being the most stressed, and 20, the least stressed.

For binary logistic regression, the sample was divided into two categories, labeled *negative PSS-4* and *positive PSS-4*. As with the K6, the categories were divided using the frequency of responses, not a standardized cut-off point. The lowest 11% of the sample, (942 cases) had scores of 4-10, i.e., *negative*. The highest 89% (7806 cases) had scores from 11-20, i.e., *positive*. As with the K6, the researcher coded the lowest 11% as a one, and everyone else as a zero. The coding makes 1 = negative, and 0 = positive.

The Cronbach's Alpha score for the study sample was .78, which is very close to the reliability it demonstrated in other studies. Park et al. (2018) found observed alphas of .71 and .76 in a pre-test/post-test study of perceived stress, adverse life events, and self-control in adolescents using the PSS-4. Lee (2012) in a *Review of the psychometric evidence of the Perceived Stress Scale* compared the reliability of the three versions of the PSS (14-item, 10-item, and 4-item). The longer versions consistently had Cronbach's alpha scores $>.70$ across twenty-four studies. Of the six studies that used the PSS-4, half had alpha scores $<.7$, which Lee found only marginally acceptable. Cohen et al. (1983) found alpha reliability of .84, .85, and .86 in each of three samples. Analysts of the 2008 ADSS and previous versions of the survey

consider the 4-item version to have acceptable reliability and be preferable because of its brevity (Cohen & Williamson, 1988 as cited in DMDC, 2008). The PSS has been validated by correlation with other measures of related constructs, such as adverse life-events, depression and anxiety scales. While it correlated well with the related constructs, it was determined to be measuring a distinct, independent construct.

Primary Predictor Measure

Affective Commitment Scale. The 2008 ADSS contains a section titled *Feelings About Military Life*. According to the survey codebook, one intention in this section was to measure *Military Spouse Commitment*. The codebook states, “*Affective Commitment* can be defined as the military spouse’s emotional attachment to, identification with, and involvement in the military” (DMDC, 2008 p. 13).

The construct of *cultural consonance* is operationalized for the current study by the proxy use of an embedded scale called the *Affective Commitment Scale* (ACS). This scale was created to assess commitment characterized by “positive feelings of identification with, attachment to, and involvement in the work organization” (Meyer and Allen, 1984, p. 375). The scale has been widely used and adapted. There is debate in the literature about what is actually being measured. Meyer and Allen responded to the lack of consensus in construct definition by publishing, *A Three-Component Conceptualization of Organizational Commitment*, (Meyer, & Allen, 1991) which argued that commitment as a psychological state includes at least three parts, “reflecting (a) a desire (affective commitment), (b) a need (continuance commitment), and (c) an obligation (normative commitment) to maintain employment in an organization” (p. 61). The 2008 ADSS adapted their questions from Meyer and Allen’s original scale. They reported an alpha coefficient of .87.

The researcher's rationale for using the ACS as a proxy measure for the theoretical construct of *cultural consonance* is presented in chapter two in detail. The face validity for measurement of cultural consonance from the DMDC survey questions comes from substantive alignment of the language and concepts in the questions with language, research concepts, and measures from organizational culture theory and cultural consonance theory, which both incorporate the person-in-environment perspective. In RESULTS the construct being measured by the ACS will be referred to as *consonance*.

The survey items of the ACS are coded (1-5) on a five-point Likert scale with the highest values indicating the strongest emotional attachment/identification/involvement. The ACS scale scores range from 5 – 25. The ACS has always been used as continuous data and is used as such in the current study. There is no standardized cut-off for high or low affective commitment. The study sample produced a strong reliability value (Cronbach's alpha) of .908 on the five items. The five items and possible answers are stated: "How much do you agree or disagree with each of the following statements? Mark one answer for each item: *Strongly agree, Agree, Neither agree nor disagree, Disagree, and Strongly disagree.*"

Being a military spouse fulfills most of the important needs I look for in my life.

Being a military spouse is ideal for me.

Being a military spouse is consistent with my personal goals.

I enjoy being a military spouse.

Generally, on a day-to-day basis, I am happy with my life as a military spouse.

Categorical/Control Variables

Gender. Gender was a binary category, selected by the respondent. Gender is not included as a variable in the data analysis because the study sample excluded males.

Race/Ethnicity. Race/Ethnicity is coded as 1 = *Non-Hispanic White* and 2 = *Total Minority*. Respondents could choose *Black, Hispanic, American Indian, Asian, or Native Hawaiian*. However, the DMDC data set compressed all minorities together, as *Total Minority*.

Age. Age was included in the data set as both a continuous and categorical variable. The categorical variable used in this study was coded as 1 = *less than 26 years*, 2 = *26-30 years*, 3 = *31-35 years*, 4 = *36-40 years*, and 5 = *more than 40 years old*.

Paygroup/Rank. The variable for paygroup/rank of service member was known by the DoD from the data bases they used. It was coded categorically in five levels where E stands for enlisted, O stands for Officer, and W stands for warrant officer. The categories are coded as 1 = *E1 - E4*, 2 = *E5 - E9*, 3 = *W1 - W5*, 4 = *O1 - O3*, and 5 = *O4 - O6*.

Highest Level of Education. Highest Level of Education was categorical and coded as 1 = *12 years or less (no diploma)*, 2 = *High school graduate*, 3 = *Some college/Associate's degree*, 4 = *Bachelor's degree*, and 5 = *Master's/doctoral/professional school degree*.

Family Status. Although the DoD survey collected more specific information about number of dependents in various age categories including *over 65*, only the binary of *with or without children* was available in the data provided. It was coded as 1 = *without children* and 2 = *with children*.

Monthly Household Income. Monthly household income was provided as a continuous variable. For study purposes, it was recoded into categories selected to include relatively

proportional frequencies. They were coded as 1 = 599-999, 2 = 1000-1999, 3 = 2000-3999 4 = 4000-5999, 5 = 6000-7999, and 6 = 8000-81000.

Spouse Employment Status. Spouse employment status was coded as 1 = *Employed*, 2 = *Unemployed*, 3 = *Not in Labor Force*. The variable had included a fourth category, 4 = *Armed Forces*. As stated, cases were selected to exclude that category, which would have been wives also employed in the military. The researcher excluded this category based on the possibility that military women would have a different experience of military culture than civilian women married to a service member.

Years of Marriage. Years of marriage was collected as a continuous variable, but was only available in the data set provided as categories, where 1 = *less than 1 year of marriage*, 2 = *1 to 5 years of marriage*, and 3 = *more than 5 years of marriage*.

Life Event(s). In addition to demographic variables, a question about frequency of major life events was included because a major life event can be associated with stress and psychological distress (Park et al., 2018; Rabkin, & Struening, 1976). The intent was to check for an alternative explanation for the stress effect. It should be noted that the military made adjustments in the years since the Persian Gulf War, including a *Family Emergency Leave* policy because some deployed service members became distracted from mission engagement if there was an emergent situation at home. Some spouses found it difficult to cope in the absence of the service member, especially if they were unprepared or events could not be anticipated (Blaisure et al., 2012).

Respondents answered on a Likert Scale. The question was: “In the past 12 months, how often have each of the following occurred? Mark one answer for each item. I experienced a major life event without the presence of my spouse (e.g., move, birth of a child, major illness,

death in the family).” *Life events* is a categorical variable, coded as 1 = *Very seldom or never*, 2 = *Seldom*, 3 = *Sometimes*, 4 = *Often*, and 5 = *Very often or always*.

Procedures for Data Analysis

Descriptive Analysis

Descriptive statistics are provided to describe the profile of the overall sample, report on the frequencies and distributions of all the study variables, and compare the study sample to the general military community. Statistical tests were conducted using Statistical Package for Social Sciences (SPSS 25).

Inferential Analyses

Linear Regressions. This procedure tests the association between the primary predictor, (ACS) and each of the outcome variables, (K-6 and PSS-4). This tests the hypotheses that positive cultural consonance predicts positive mental health as measured by positive scores on perceived stress and psychological distress.

Univariate GLM ANCOVAs. The outcome variables are analyzed with Univariate GLM ANCOVAs against each of the categorical demographic variables combined with the ACS as a covariate. Having established that ACS has a significant relationship to the outcome variables, this step tests whether ACS remains significant after adjusting for demographics and life events as potential confounding variables, i.e., alternative explanations for variance in the outcome variables.

Binary Logistic Regressions. This step examines the explanatory power of the ACS in combination with control variables to explain within-group differences in the stress and psychological distress outcomes. Probability graphs based on odds ratios visually display the effects.

IRB Information

The data set used in this study is approved for public use and contains no personal identifiers. The current study has been approved by The University of Alabama Institutional Review Board under exempt status, approval expiring 9/12/2019.

CHAPTER 4

RESULTS

The purpose of this study is to explore whether positive cultural consonance within the military community is associated with mental well-being for military wives when other possible influences are controlled. As described in METHODS, the theoretical construct of cultural consonance i.e., *cultural fit*, is measured by the Affective Commitment Scale (ACS). The two outcome measures of mental well-being are the Kessler 6 (K6) Scale for measuring *non-specific psychological distress* (Kessler, et.al. 2002) and the *Perceived Stress Scale*, four-item version (PSS-4) (Cohen et al., 1983). This chapter provides a description of the sample, presents findings of the data analysis, and addresses results of hypothesis testing. It is organized by steps of the analysis process. The steps are presented and explained in this order: description of the study sample, descriptive summary of the main effects variables, regression analysis of the main effects, univariate GLM ANCOVA analysis, crosstabs, T-test, and finally, binary logistic regression analysis.

Description of the Sample

Table 1 presents a description of the study sample with frequencies and percentages for all demographic control variables. Percentages are also shown for the total survey sample. The study sample is consistent with the total survey sample, except that males and armed service employed wives were removed.

Table 1 – Part 1

Comparison of Study Sample Characteristics to All 2008 ADSS Respondents

Variable	Frequency in Study Sample, n=8748	n(%) in Study Sample	n(%) Total Survey n=13423
Gender of Spouse			
Female	8748	100	10.7
Male	0		89.2
Ethnicity			
Non-Hispanic White	6634	75.8	72.3
Total Minority	2114	24.2	27.7
Age			
Less than 26 Years Old	2071	23.7	23.5
26-30 Years Old	2025	23.1	22.8
31-35 Years Old	1723	19.7	19.4
36-40 Years Old	1501	17.2	17.2
More than 40 Years	1428	16.3	17.1
Children			
Without Children	2477	28.3	29.6
With Children	6271	71.7	70.4
Paygroup /Rank			
E1 –E4	2264	25.9	26.2
E5 – E9	3498	40.0	40.4
W1 – W5	226	2.6	2.5
O1 – O3	1388	15.9	15.6
O4 – O6	1372	15.7	15.3
Monthly income			
599-999	23	0.3	0.3
1000-1999	409	4.7	4.6
2000-3999	2095	23.9	22.2
4000-5999	2311	26.4	25.3
6000-7999	1670	19.1	18.7
8000-81000	2240	25.6	28.9
Years of marriage			
Less than 1 Year	572	6.5	7.4
1 to 5 Years	3625	41.4	42.0
More than 5 Years	4551	52.0	50.6

(continued)

Table 1 – Part 2

Variable	Frequency in Study Sample, n=8748	n(%) in Study Sample	n(%) Total Survey n=13423
Employment			
Employed	4590	52.5	43.0
Unemployed	816	9.3	7.7
Not in labor force	3342	38.2	31.0
Armed Force	0	0	11.8
Education			
12 Years or Less	118	1.3	1.5
High School Graduate	942	10.8	11.5
Some College/Associate's	3871	44.3	45.4
Bachelor's Degree	2680	30.6	28.6
Master's/Doctoral/Prof	1137	13.0	13.0
Frequency of Major Life Events			
Very Seldom or Never	4614	52.7	51.9
Seldom	1315	15.0	15.4
Sometimes	1123	12.8	13.2
Often	562	6.4	6.5
Very Often or Always	1134	13.0	13.1

The demographic/control variables were selected for analysis to see whether demographics or frequency of life events could be confounding factors, i.e., more significant predictors of stress and distress than cultural consonance. In the overall 2008 ADSS study sample, 66% of respondents are under the age of 36. Twenty-four percent are under age 26. Seventy percent have children. Twenty-eight percent belong to racial minorities. Forty-three percent are employed. The group is well educated. Only 12% have no college. Eighty-two percent have some college up to a graduate or professional degree. Thirty-one percent of respondents were married to officers, 69% were married to enlisted members or warrant officers (DMDC, 2008).

The current study sample is also consistent with characteristics of the general military, including ways the population is different from their civilian counterparts. The sample is 24% minority, which is higher than in the civilian population of the United States. Military members and their spouses are generally younger, healthier, and better educated than the civilian population. They tend to marry younger and have more children while they are young. Educationally, they are more likely to have at least a high school diploma. Only 1.3% of the wives in the study sample have less than a high school diploma, compared to 10.7% in the civilian labor force. Almost 44% of the wives in the study have a bachelor's degree or higher, compared to 29% of people in the civilian labor force (Clever & Segal, 2013). Despite generally competitive pay for service members, frequent moves and employer perceptions create a persistent unemployment / underemployment and earnings gap between military spouses and their civilian counterparts (Hosek & MacDermid, 2013).

It is important to note that the military tends to be a very homogenous group because of the selection and recruitment process and because of the common environment and supportive benefits and services the military provides. Spouses tend to reflect the same homogeneity as the service members. Benefits provided include health insurance, some daycare, housing, tax-free commissary shopping, and an array of supportive services, e.g. legal, financial, chaplain, dentistry, counseling, recreational facilities, support for special needs children, and DoD schools when stationed abroad. These benefits and standardized salaries mean that military families have some protection against the risk factors of poverty, unemployment and other circumstances which would impact general well-being in the civilian population. The military community is generally highly functional and more alike than different. Therefore, it is important that the analyses identify distinctions and reveal where the most striking differences occur.

Data Analysis

Main Effects Variables

Table 2 shows a summary of the variables which test the main effects of the study hypotheses. The Affective Commitment Scale (ACS), as a proxy for cultural consonance, is the primary predictor variable. The Kessler 6 Scale of Non-Specific Psychological Distress (K6) is an outcome/dependent variable which is a measure of mental well-being and a measure of the likelihood that an individual has a DSM diagnosis. The Perceived Stress Scale (PSS-4) is the other outcome/dependent variable, which is a subjective measure of stress.

Table 2

Descriptive Summary of the Main Effects Continuous Scale Variables

Scale Variable	Range of Scores	\bar{X}	SD	Skewness
Kessler 6 (K6)	6-30	24.68	4.75	-1.145
Perceived Stress Scale (PSS-4)	4-20	14.58	3.36	-.292
Affective Commitment Scale	5-25	15.93	4.63	-.306

The mean scale scores and the skewness statistics show that the study sample is skewed toward the higher (positive) range of all three scales, particularly on the K6. This means that the overall sample leans toward positive psychological well-being and a strong consonance with the military community.

Linear Regression on Main Effect Scales

Table 3 presents the regression analysis on the main effect scales. This test shows that there is a significant association between the variables. There is a difference between groups not attributable to chance. It shows that the ACS significantly predicts both the K6 and PSS-4

scores. The r^2 numbers show that the ACS score accounts for 6% of the variance in subjects' K6 scores and 7% of the variance in subjects' PSS-4 scores. That amount is statistically significant.

Table 3

Regression Statistics on Main Effect Scale Variables

Predictor x outcome variables	B (slope)	Sig.	r^2
ACS X Kessler 6	.243	.000	.056
ACS X PSS-4	.194	.000	.072

ACS = Affective Commitment Scale. PSS-4 = Perceived Stress Scale. Kessler-6 = Psychological Distress

Table 3 shows that the mental well-being outcome measures are significantly and positively related to ACS. This result affirms both study hypotheses. It shows that as the consonance measure goes up, stress and psychiatric symptoms both go down, i.e., the better the cultural consonance or sense of fit with the military community, the less stress and psychological distress a wife is likely to feel. The large sample size, (n=8748) can be prone to show statistical significance where there is no practical meaning. In this case, the ACS does predict outcomes of mental well-being, but only explains 6% to 7% of that effect. In large samples, low r-square values are not uncommon do not necessarily mean that no practical significance exists (Richardson, 2011).

Univariate Analysis of Covariance (ANCOVAs)

The next step of the analysis is to see whether the association remains significant after controlling for potential confounding factors. That question can be answered by using a general linear model (GLM) to do analyses of variance on potential confounding factors with the ACS included as a covariate (ANCOVAs). Eight categorical demographic variables and one survey question on frequency of major life events were tested.

Tables 4 and 5 present the results for the K6 and the PSS-4 respectively. Notice the r-square values, which highlight the amount of variance explained by the overall model for each variable. The information in parentheses at the bottom of each categorical predictor shows that in every case, the ACS remained significant after controlling for the effect of that variable. The effect size of the ACS at the bottom of each variable is the percentage of variance in the K6 explained after adjustment for that control variable.

Table 4 – Part 1

GLM ANCOVA Results Between the Kessler-6 and Controls with ACS as Covariate

Predictor/IV	Adj. Mean	S.D.	r-square	Sig. p < .001
Paygroup/Rank			.111	.000
E1 –E4	22.99	5.32		
E5 – E9	24.74	4.70		
W1 – W5	25.30	4.56		
O1 – O3	25.68	4.01		
O4 – O6	26.21	3.64		
(ACS, p < .001, effect size = .03)				
Frequency of Major Life Events			.109	.000
Very seldom or never	25.64	4.18		
Seldom	24.68	4.45		
Sometimes	24.20	4.64		
Often	23.32	5.02		
Very often or always	21.96	5.83		
(ACS, p < .001, effect size = .03)				

(continued)

Rank and the frequency of life events combined with ACS each explained 11% of the variance in K6 scores. Though that is a low r-square value, in a large sample of a very homogenous group like military wives, this result is meaningful. In Table 3, ACS was significant and the r-square of .06 showed that it accounted for 6% of the variance in K6 scores. Here, as a covariate with rank, they account for 11% of the variance in K6, but ACS accounts for only 3% of that. ACS remains significant, but its effect size is diminished after adjustment for the effects of rank and life events.

Table 4 – Part 2

Predictor/IV	Adj. Mean	S.D.	r-square	Sig. p < .001
Household Income – \$/MO			.098	.000
599-999	20.35	6.53		
1000-1999	22.88	5.46		
2000-3999	23.49	5.22		
4000-5999	24.57	4.69		
6000-7999	25.39	4.31		
8000-81000	25.76	4.08		
(ACS, p < .001, effect size = .01)				
Spouse Age			.090	.000
Less than 26	23.23	5.22		
26-30	24.46	4.68		
31-35	25.05	4.54		
36-40	25.45	4.35		
Over age 40	25.85	4.22		
(ACS, p < .001, effect size = .05)				
Highest Level of Education			.089	.000
12 years or less (no diploma)	23.31	5.74		
High school graduate	23.19	5.46		
Some college/Associate's degree	24.19	4.96		
Bachelor's degree	25.43	4.10		
Master's/doctoral/professional	25.47	4.32		
(ACS, p < .001, effect size = .01)				

(continued)

Table 4 – Part 3

Predictor/IV	Adj. Mean	S.D.	r square	Sig. p < .001
Years of Marriage			.077	.000
	23.45	5.17		
Less than 1 year	23.98	4.98		
1 to 5 years	25.40	4.38		
More than 5 years				

(ACS, p < .001, effect size = .03)

Monthly household income, spouse age, spouse education and years of marriage combined with ACS each account for 8% - 10% of the variance in K6 scores. The trend continues that when ACS is combined with a categorical predictor, they produce a bigger effect size than either one alone, but that the effect of ACS is diminished compared to the 6% of variance it explains in the K6 by itself. This result of the ANCOVA is most pronounced with income and education, where the effect size of ACS is down to 1%. With spouse age, the effect of ACS is 5%, which is closer to the 6% r-square it produces by itself.

Employment Status			.067	.000
	24.73	4.65		
Employed	23.03	5.45		
Unemployed	25.02	4.62		
Not in labor force				

(ACS, p < .001, effect size = .03)

Family Status (Children)			.062	.000
	24.95	4.7		
With Children	24.01	4.8		
Without Children				

(ACS, p < .001, effect size = .04)

Ethnicity			.057	.000
	24.74	4.68		
Non-Hispanic White	24.51	4.96		
Total Minority				

(ACS, p < .001, effect size = .03)

For the Kessler 6, all the control variables were statistically significant, although employment status, family status (children), and ethnicity combined with ACS barely explained any more of the variance than the ACS alone. When adjusted for the effect of the control variables the ACS remains significant, but its effect size is down to 3% - 4%. No control variable explains more of the variance in the K6 than ACS does. However, in all cases 90% or more of the between-groups variance remains unexplained. Table 5 repeats the test for the PSS-4 stress scale.

Table 5 – Part 1

GLM ANCOVA Results on the PSS-4 and Controls with ACS as Covariate

Predictor/IV	Adj. Mean	S.D.	R-squared	Sig. p < .001
Paygroup/Rank			.130	.000
E1 –E4	13.49	3.42		
E5 – E9	14.45	3.30		
W1 – W5	14.89	3.36		
O1 – O3	15.37	3.09		
O4 – O6	15.87	3.03		
(ACS, p < .001, effect size = .03)				
Household Income – \$/MO			.122	.000
589-999	11.78	3.94		
1000-1999	13.15	3.46		
2000-3999	13.70	3.45		
4000-5999	14.42	3.24		
6000-7999	15.09	3.19		
8000-81000	15.48	3.16		

(ACS, p < .001, effect size = .01)

(continued)

Table 5 – Part 2

Predictor/IV	Adj. Mean	S.D.	R squared	Sig. < .001
Highest Level of Education			.115	.000
12 years or less (no diploma)	13.73	3.63		
High school graduate	13.93	3.62		
Some college/Associate's degree	14.13	3.36		
Bachelor's degree	15.19	3.15		
Master's/doctoral/professional	15.28	3.22		
(ACS, p < .001, effect size = .02)				

Rank, income and level of education combined with ACS each explained 12% -13% of the variance in PSS-4 scores among categories of the variables. In Table 3, ACS was significant and the r-square of .07 showed that it accounted for 7% of the variance in PSS-4 scores. Here, as a covariate with rank, income and education, they account for 12% -13% of the variance in PSS-4, but ACS accounts for only 1% - 3% of that. ACS remains significant, but its effect size is diminished after adjustment for the effects of control variables. The highest combined effect size is found in these variables, which are markers of status in a hierarchy, and the effect of ACS is diminished the most, which means that these factors have a stronger effect on stress than the other demographics.

Table 5 – Part 3

Predictor/IV	Adj. Mean	S.D.	R squared	Sig. < .001
Frequency of Major Life Events			.114	.000
Very seldom or never				
Seldom	15.26	3.21		
Sometimes	14.48	3.15		
Often	14.10	3.23		
Very often or always	13.60	3.15		
	12.88	3.58		
(ACS, p < .001, effect size = .04)				

(continued)

Table 5 – Part 4

Predictor/IV	Adj. Mean	S.D.	R-squared	Sig. < .001
Spouse Age			.097	.000
Less than 26	13.72	3.41		
26-30	14.45	3.27		
31-35	14.64	3.33		
36-40	15.07	3.24		
Over age 40	15.42	3.28		
(ACS, p < .001, effect size = .07)				
Employment Status			.085	.000
Employed	14.62	3.30		
Unemployed	13.30	3.49		
Not in labor force	14.84	3.3		
(ACS, p < .001, effect size = .05)				
Years of Marriage			.083	.000
Less than 1 year	14.03	3.35		
1 to 5 years	14.17	3.37		
More than 5 years	14.98	3.30		
(ACS, p < .001, effect size = .04)				

Life events, spouse age, employment status, and years of marriage combined with ACS each account for about 8% -11% of the variance in PSS-4 scores. The trend continues that when ACS is combined with a categorical predictor, it remains significant. The combination produces a bigger effect size than either one alone, but the effect of ACS is diminished compared to the 7% of variance it explains in the PSS-4 by itself.

Ethnicity			.076	.000
Non-Hispanic White	14.68	3.38		
Total Minority	14.27	3.29		
(ACS, p < .001, effect size = .04)				
Family Status (Children)			.073	.001
With Children	14.65	3.38		
Without Children	14.39	3.30		
(ACS, p < .001, effect size = .06)				

Ethnicity and family status contribute almost no additional explanation of the variance in PSS-4 scores. The combined effect size is barely more than the 7% explained by ACS alone.

Summary of the Univariate GLM ANCOVA Analysis

The univariate analysis step confirmed that the control variables had significance, but that none of them presented a confound, i.e., a stronger alternative explanation for variance in the main effect scales. The demographic variables combined with ACS/cultural consonance as a covariate boosted the amount of variance explained in the outcomes by 1% - 6%. While the combined effect was higher, the effect size of the ACS was diminished. It diminished the least in variables that had very low significance, namely ethnicity and family status. The factors which produced the highest effect sizes in combination with ACS were rank, income, life events, education, and spouse age. The reader will see that the effect sizes for the ACS alone and in combination with control variables are consistent between the ANCOVAs and the last step of binary logistic regression.

Division of K6 and PSS-4 Scales for Logistic Analysis

As noted in METHODS, for the purpose of binary logistic regression, the outcome scale scores were recoded into *negative and positive* categories based on frequency distributions. For the K6, (far right column totals) the lowest 12% of the sample, (1046 cases) had scores of 6-18, i.e., *negative*, or distressed. The highest 88% (7702 cases) had scores from 19-30, i.e., *positive* or non-distressed. For the PSS-4, (bottom row totals) the lowest 11% of the sample, (942 cases) had scores of 4-10, i.e., *negative* or stressed. The highest 89% (7806 cases) had scores from 11-20, i.e., *positive*, representing non-stressed. Table 6 shows the crosstab results of outcome variable scores.

Crosstabs

Table 6

CROSSTABS 2X2 Chi Square on PSS-4 And K6 (Categorical)

		Pos. scores 11-20	Neg. scores 4-10	
K6 in Positive/Negative categories	Pos. scores 19-30	7312	390	7702
	Neg. scores 6-18	494	552	1046
Total		7806	942	8748

This test is a measure of association. The crosstab shows a significant relationship between categorized K-6 and PSS-4. There is a 90% agreement as calculated by Neg./Neg. + Pos./Pos. divided by the total. [7312 people had positive scores on both scales. 552 people had negative scores on both scales. $7312 + 552 = 7864$ people whose scores are in agreement. $7864 / 8748(\text{total}) = 90\%$]. Another way to say it is that 90% of the sample were either feeling positive or feeling negative on both measures. Only 10% had outcomes that did not match. This means that the chosen cutoff for scores to create the categories correctly classified people into positive and negative mental health categories. This provides justification for the use of binary logistic regression analysis in the next step.

Table 7

T-Test for K6 Categorical (Positive/Negative) and PSS-4 Categorical (Positive/Negative)

K6 and PSS-4 categories	N	X ACS score (range 5-25)	S.D.	<i>P sig.</i>
K6 positive	7702	16.22	4.46	.000
K6 negative	1046	13.82	5.30	
PSS-4 positive	7806	16.25	4.45	.000
PSS-4 negative	942	13.26	5.20	

The T-test analysis shows the mean ACS scores and standard deviations for the Kessler-6 and PSS-4 as categorical variables of positive and negative. The ACS scores range from 5-25 as coded in this study. The outcome categories were divided into the most negative (approximately) 10% and everyone else. The results show that was an effective way to divide the sample. There is a highly significant difference between the unhappiest 10% and everyone else. The people with the worst mental health measures have significantly poorer consonance.

Binary Logistic Regression Analysis Results

This is the final step in the sequential data analysis plan. The purpose of this study was to explore factors affecting the well-being of active duty military wives by exploring the relationship between consonance, perceived stress and psychological distress. This step in the analysis allows the most meaningful relationships to be identified within the survey responses in this very large and homogeneous sample. It allows the important differences between groups to be teased out from the large amount of data. Most importantly, logistic regression permits discerning the possibility of a cause and effect relationship without a true experimental design. Of course, it does *not* actually demonstrate causation. What it does do is allow for statements about the probability that an average participant answered questions in a predicted way given the answers they gave on a different set of questions.

Regression analyses are ways of estimating the relationships between variables in a way that allows for predictions about outcome variables when *predictor/independent* and/or *control* variables are held fixed. Different statistical tests allow for or require different characteristics in the type of data describing a variable in order to make the strongest possible statements about the relationships between research constructs of interest. In other words, the goal is to figure out what's going on between these factors in the real world. Since criteria were met in this survey

data, logistic regression allows the researcher to convert scale survey scores to a binary categorical variable of *negative / positive*. Logistic regression produces *odds ratios*, (O.R.) which can be expressed as a probability that a certain condition in one variable predicts a likely outcome in another. That prediction falls within a *confidence interval*, which is an amount of certainty that the true probability falls within a specified range of probabilities. A standard confidence interval of 95% was applied.

Results about this step of data analysis can be expressed in statements such as, *participants with less than twelve years of education are five times more likely than those with a post-graduate degree to be in the negative stressed category given the lowest consonance / ACS score*. The *probability line*, on a graph gives a visual way to perceive this, and allows for statements such as, *the better your consonance / ACS / cultural fit, the less likely you are to be in the category of having negative psychological distress*. This logistic regression includes an r-square value, which is a measure of how much variance in one factor is explained by another. This number applies to the overall model for each variable, rather than the sublevels of answers within the model. The analysis also includes a *p-value* to indicate whether the results have statistical significance ($p < .001$). For example, while the ACS score was statistically significant for predicting the Kessler 6 score, it only explained about 5% of the variance. It explained about 8% of the variance in PSS-4. However, when the ACS score was combined with a question about major life events in the past twelve months, that combination explained 10% of the variance in the K6, which means it is a consequential factor in screening for the likelihood of psychological distress and symptoms of mental illness.

Kessler 6 Logistic Regression Results

A binary logistic regression analysis was conducted to test the hypothesis that consonance (ACS), first alone and then in combination with other control variables, is predictive of a military wife's psychological distress (K6) category. Results of the analysis are summarized as follows with table 8, then a graph and interpretation for each variable

Table 8 – Part 1

Binary Logistic Regression Analysis – Kessler 6 (Outcome) Predicted by ACS Plus Controls

Predictor	Sig.	Exp (B) Odds Ratio	(Nagelkerke) R squared
ACS	.000	.897	.052
Paygroup/Rank			.110
ACS	.000	.897	
Reference Catg. = O4 – O6	.000		
E1 –E4	.000	5.134	
E5 – E9	.000	2.726	
W1 – W5	.000	2.428	
O1 – O3	.341	1.179	
Frequency of Major Life Events			.099
ACS			
Reference Catg. = “Very Seldom or Never”	.000	.916	
Seldom	.000		
Sometimes	.000	1.357	
Often	.000	1.952	
Very often or always	.000	2.510	
	.000	3.672	
Highest level of education			.097
ACS			
Ref. Catg. =	.000	.883	
Master’s/Doctorate/Professional	.000		
12 Years or Less (No Diploma)	.000	5.208	
High School Graduate	.000	4.129	
Some College/Associates Degree	.000	2.711	
Bachelor’s Degree	ns	1.177	

(continued)

Table 8 – Part 2

ACS (scale	.000	.897	.052
<hr/>			
Household income – \$/Month			.094
ACS	.000	.896	
Reference Category = 8000 - 81000	.000		
599-999	.000	13.330	
1,000-1,999	.000	3.942	
2,000-3,999	.000	3.011	
4,000-5,999	.000	1.832	
6,000-7,999	.045	1.278	
Spouse Age			.077
ACS	.000	.899	
Reference Category = over 40	.000		
Less Than 26	.000	2.483	
26-30	.053	1.266	
31-35	.173	1.189	
36-40	.535	1.087	
Years of marriage			.065
ACS	.000	.900	
Reference Category = > 5 Years Marriage	.000		
Less than 1 year	.000	1.967	
1 to 5 years	.000	1.600	
Employment Status			.060
ACS	.000	.898	
Reference Category = Not in Labor Force	.000		
Employed	.609	1.038	
Unemployed	.000	1.888	
Children (Family Status with or without)			.053
ACS	.000	.897	
Reference Category = Without Children	.000		
With Children	.048	.867	
Ethnicity			.053
ACS	.000	.896	
Reference Category = Non-Hispanic White			
Total Minority	.048	.860	

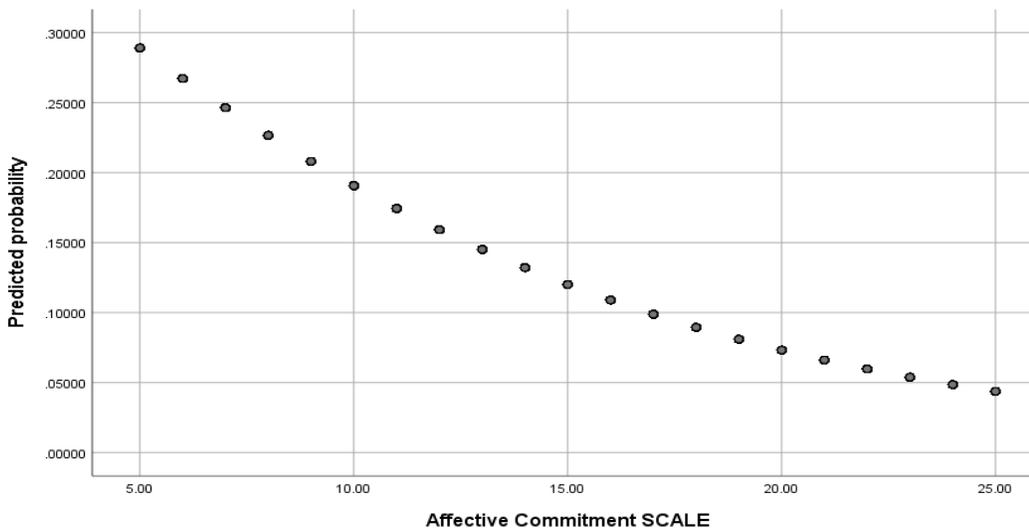
Summary of Binary Logistic Analysis of Kessler 6

Table 8 shows that the ACS scale (consonance) combined with the control factors explained much more of the variance in the K6 (psychological distress) outcomes than the control variables alone. The more striking result is the odds ratios, which show dramatic increases in the odds of having a negative Kessler 6 when low consonance is combined with particular categories within the control variables. The direction of the effect of higher ACS is consistent. Positive consonance is protective for everyone. Graphic displays of the results in figures 3-12 make this clearer.

Figure 3

Binary Logistic Regression Analysis – Kessler 6 (Outcome) X ACS Score

Predictor	Sig.	Exp (B) Odds Ratio	(Nagelkerke) R squared
ACS (scale score) Effect on K6 category	.000	.897	.052



Note: All graphs created and imported from SPSS 25.

The Kessler 6 (K6) was categorized with the 12% (n=1046) most distressed wives coded as (1), and all others as (0). Logistic regression looks at whether the ACS score would affect the probability

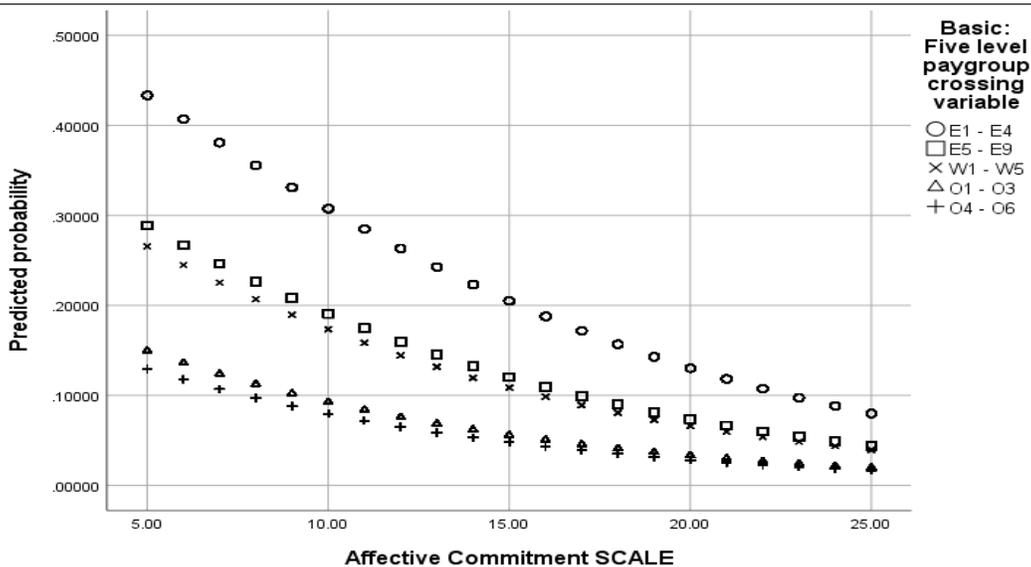
of a negative K6 outcome. Figure 3 is a *probability scale* based on odds ratios. The Y axis is the probability of having a distressed K6 score depending on the ACS score (range 5-25). The graph shows that as a wife's ACS score goes down, the odds of her having a distressed K6 go up. The better her consonance with the military, the less likely she is to have psychological distress. The r-square of .052 (Figure 3) means that the ACS score accounts for about 5% of the variance in the K6. When a group is homogenous, differences are harder to detect. The differences occur within a tight range of K6 scores. The graph shows that the wives with the lowest ACS scores have almost a 30% greater probability of having a distressed K6. Even though it accounts for only 5% of the total variance, that is a dramatic drop in distress as consonance goes up.

Figure 4 graphs the probability of a negative K6 on the Y axis. The X axis is the ACS score, ranging from 5 - 25. The different lines show the probabilities for the five categories of rank.

Figure 4

Paygroup/Rank + ACS Effect on K6

.110

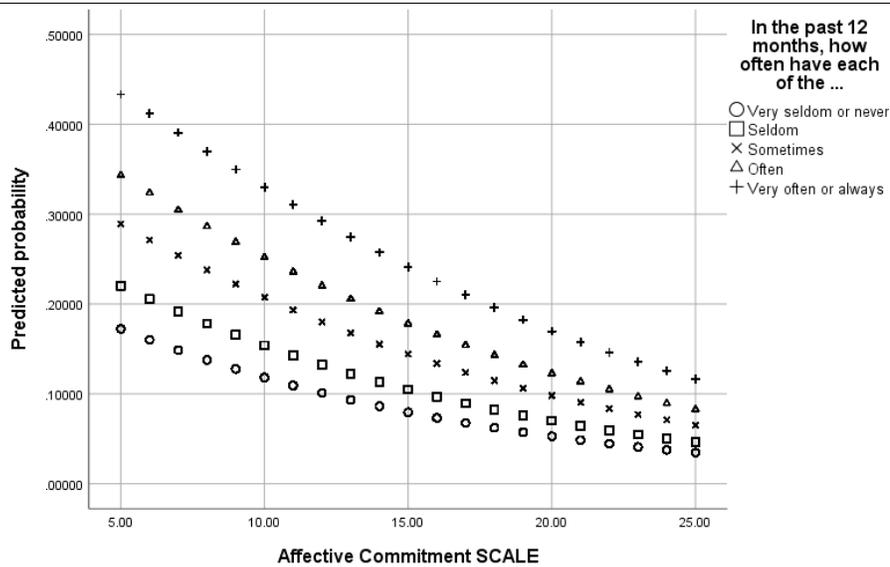


As other variables are added to the ACS, the combined effect can be seen. Rank was the variable in which ACS affected K6 the most, with 11% of the variance explained. The results show that the wives of men in the lowest ranks are affected the most. The odds ratio of 5.134 per Table 8 shows that the wife of a junior enlisted service member is five times more likely to have a distressed K6 than the wife of a senior officer. The top line of the graph represents the lowest enlisted ranks. It shows that, for that group, wives with the lowest ACS scores had about a 44% greater probability of being in the distressed K6 category if they had a low ACS. The middle ranks are less strongly affected. The difference between junior officers and senior officers is the only comparison that is not significant. The graph illustrates a consistent trend. The higher a wife's consonance, the lower her chance of having psychological distress. This effect is most pronounced in the lowest enlisted ranks.

Figure 5

Life Event +ACS Effect on K6

.099



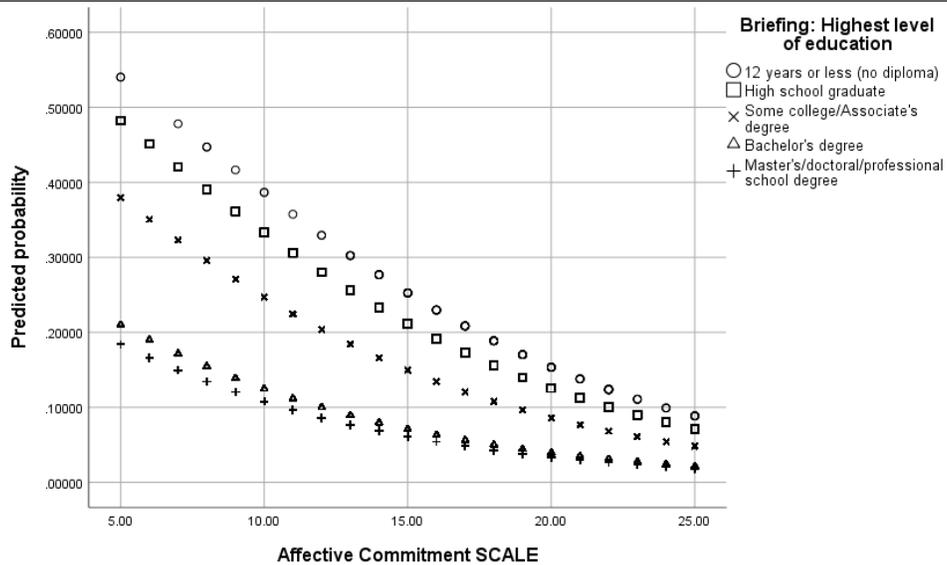
Overall, life events were a significant predictor of a distressed K6 score, given a particular ACS score, ($p < .000$). This combination accounted for 10% of the variance in K6 status. The more often life events occurred, the more the probability of psychological distress went up in rather evenly spaced increments. The group reporting the greatest frequency of major life events in the past 12 months (very often or always) had the most dramatically increased likelihood of having a distressed K6. They were 3.7 times as likely to have a distressed K6 as the group reporting major life events as “very seldom or never.” The “very often or always” group had about a 44% chance of having a distressed K6 score if they also had low consonance. The trend in every variable is that positive consonance is protective for all groups.

Figure 6 shows the effect of education combined with ACS score on probability of psychological distress.

Figure 6

Education + ACS Effect on K6

.097



Education (Figure 6) and income (Figure 7) had the next highest R-square numbers, with education explaining 9.7% of the variance, and income explaining 9.4%. The lowest levels of both education and income showed the most pronounced effect of consonance on psychological distress. The odds ratio of 5.21 says that a wife without a high school diploma was five times more likely to have a distressed K6 score than a wife holding a post graduate degree. A wife with a high school diploma was four times more likely. The graph shows that a wife with no high school diploma was 55% more likely to have a distressed K6 if she had a low ACS score of 5. Only the difference between bachelor's degree and post graduate was not significant.

Figure 7

Monthly Household Income + ACS Effect on K6

.094

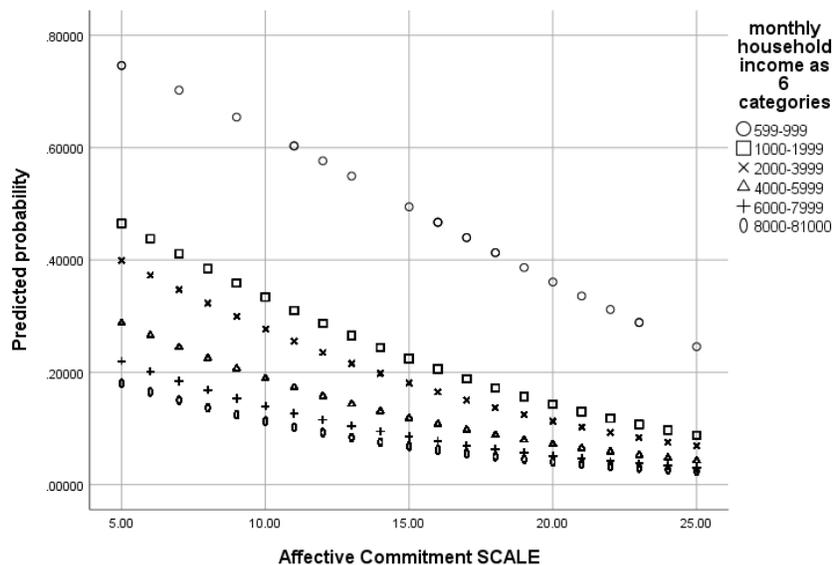
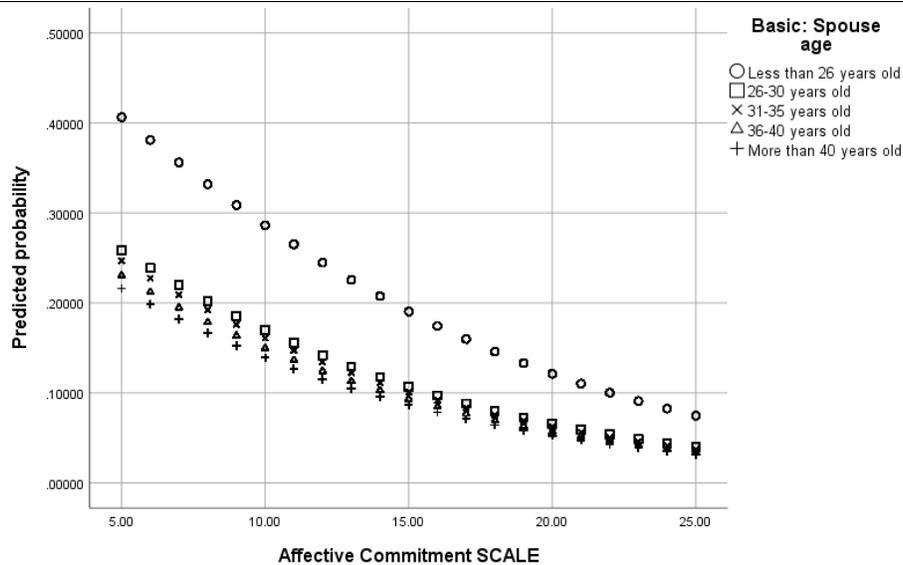


Figure 8

Spouse Age + ACS Effect on K6

.077



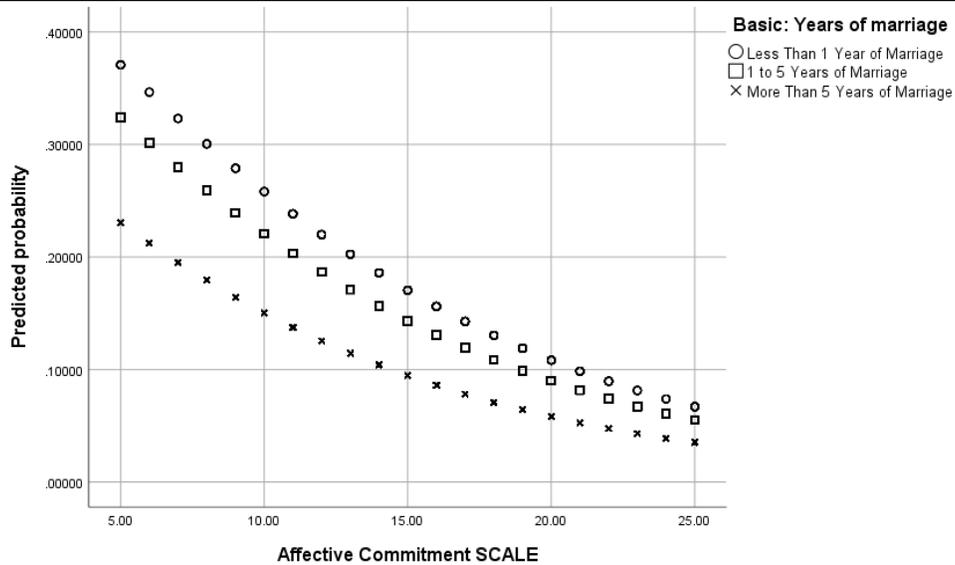
Spouse age was a significant variable, but only when comparing the youngest to the oldest.

What is noticeable is that wives under 26 years old were 41% more likely to have a distressed K6 when their consonance was low. They were 2.5 times more likely to have a distressed K6 than the reference group, which was wives over 40 years of age. The other age group comparisons were not significant. The model of spouse age + ACS explained about 8% of the variance in K6 scores.

Figure 9

Years of marriage +ACS Effect on K6

.065



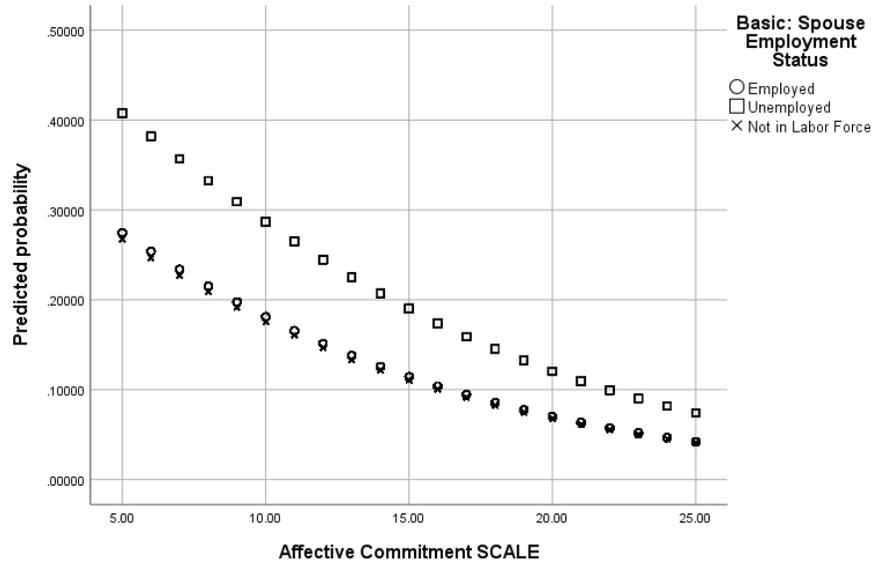
Years of marriage have a significant effect on K6 score when combined with ACS. Wives married more than five years are about 23% more likely to be in the distressed Kessler 6 category if their consonance is low. Those married less than one year are twice as likely to have psychological distress than those married more than 5 years and are 38% more likely to have a negative K6 if they have a low ACS. Wives married 1-5 years are 1.6 times more likely to have psychological distress than those married more than five years

Figure 10 shows the effect of employment status combined with ACS on probability of a distressed K6 score

Figure 10

Employment Status + ACS Effect on K6

.060

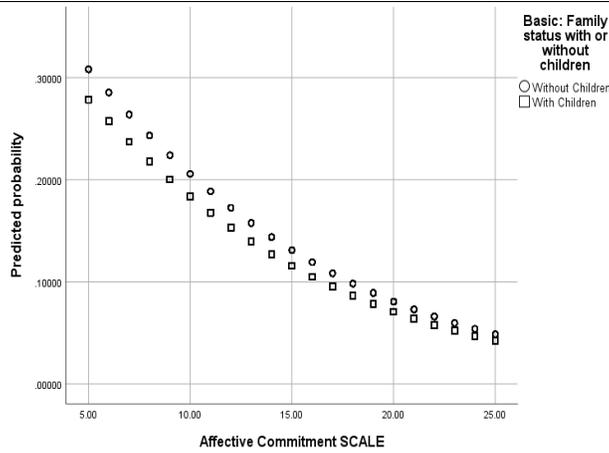


Employment status looks like it has only two probability lines, but there are three. The *employed* and *not in labor force* groups are virtually identical. The *unemployed* wives are twice as likely to be in the distressed K6 category as the *not in labor force*. The difference between *not in labor force* and *employed* is not significant. The model explains only 6% of the variance in the K6 scores

Figure 11

Children (Family Status With or Without) +ACS Effect on K6

.053

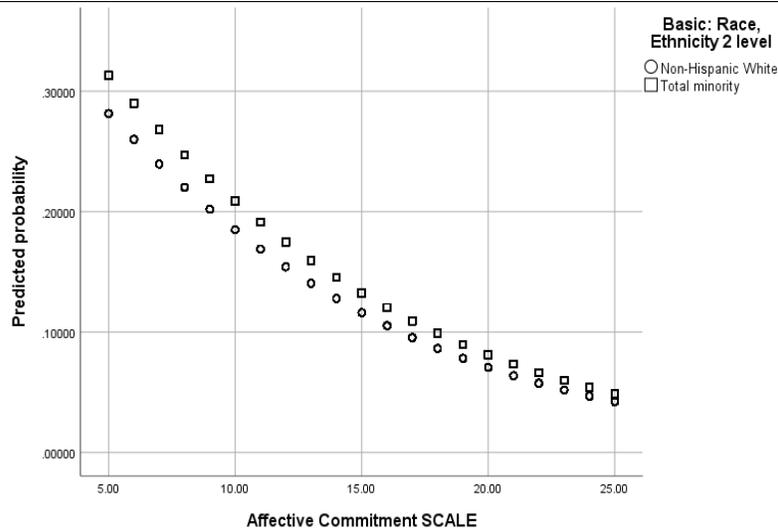


The variable of being with or without children is barely significant. It explains 5.3% of the variance, which is hardly more than the ACS by itself (5.2%). Those with children are slightly less likely to have a distressed K6 score. Both groups are around 30 % more likely to have psychological distress given low consonance.

Figure 12

Ethnicity + ACS Effect on K6

.053



Race/ethnicity also has virtually no significance at ($p < .048$). It explains 5.3% of the variance, while ACS alone explains 5.2% of the variance in K6 scores.

Logistic regressions highlight the dramatic effect of poor cultural consonance when combined with what might be considered either stressful conditions, or low status in a hierarchy. For example, experiencing many major life events in the absence of the service member spouse or being unemployed increased the odds of psychological distress when combined with a low sense of cultural consonance. Wives with the lowest income, least education and married to men of lowest rank all had increased odds of psychological distress when they had poor consonance. Frequent life events and low income were the strongest predictors of psychological distress in the state of having low cultural fit. Low ACS is on the left hand side of X axis. Notice that, for every variable, the curve goes way down as the ACS scores go up toward the right end of the X axis. Wives with the same predictor, such as many life events, did not get so distressed if they had a high ACS score. These results show that strong cultural consonance is protective in every case. Table 9 and figures 13-22 show the same analysis on the PSS-4 stress scores.

PSS-4 Logistic Regression Results

Table 9 – Part 1

Binary Logistic Regression Analysis – PSS-4 (Outcome) Predicted by ACS Plus Controls

Predictor	Sig.	Exp (B) Odds Ratio	(Nagelkerke) R squared
ACS (scale) X PSS-4 (categorical)	.000	.872	.078
In the past 12 months, how often was it a problem that I experienced a major life event without my spouse present?			.108
ACS only	.000	.889	
Reference category = “very seldom or never”	.000	Blank	
Seldom	.040	1.254	
Sometimes	.001	1.464	
Often	.000	1.762	
Very often or always	.000	3.032	
Table 9 – Part 2			
Household income – \$/Month			.124
ACS only	.000	.871	
Reference category = 8000 - 81000	.000	Blank	
599-999	.000	7.425	
1,000-1,999	.000	5.284	
2,000-3,999	.000	3.324	
4,000-5,999	.000	2.007	
6,000-7,999	.032	1.329	
Highest level of education			.114
ACS only	.000	.860	
Ref. catg. = Master’s/Doctorate/Professional	.000	Blank	
12 years or less (no diploma)	.000	4.183	
High school graduate	.000	3.667	
Some college/Associates degree	.000	2.639	
Bachelor’s degree	.242	1.179	
Paygroup/Rank			.128
ACS only	.000	.873	
Reference category = O4 – O6	.000	Blank	
E1 –E4	.000	5.264	
E5 – E9	.000	2.941	
W1 – W5	.000	2.234	
O1 – O3	.341	1.385	

Table 9 – Part 2

Predictor/IV	Sig.	Exp (B) Odds Ratio	(Nagelkerke) R squared
Employment Status			.087
ACS only	.000	.873	
Reference category = Not in Labor Force	.000	Blank	
Employed	.872	.988	
Unemployed	.000	1.984	
Years of marriage			.086
ACS only	.000	.875	
Reference category = more than 5 years marriage	.000	Blank	
Less than 1 year	.001	1.609	
1 to 5 years	.000	1.516	
Spouse Age			.097
ACS only	.000	.875	
Reference category = over 40	.000	blank	
Less than 26	.000	2.623	
26-30	.000	1.587	
31-35	.004	1.481	
36-40	.139	1.243	
Children (Family Status with or without)			.078
ACS only	.000	.872	
Reference category = Without Children	blank	Blank	
With children	.806	1.019	
Ethnicity			.078
ACS only	.000	.872	
Reference category = Non-Hisp White	blank	blank	
Total Minority	.805	.980	

Figures 13-22 are graphs of probability lines to give visual presentation of the logistic results from table 9. The trend is the same as for the K6. Lower consonance raises the odds of a negative stress score. Higher consonance predicts lower stress. The effect is stronger for the PSS-4 than the Kessler 6. The *Perceived Stress Scale 4* (PSS 4) was categorized with the most negative 11% of scores as *negative* and everyone else as *positive*. Logistic regression looks at

whether the ACS score (consonance) affects the PSS-4 category as outcome, first alone, then combined with control variables.

Figure 13

Binary Logistic Regression Analysis – PSS-4 (Outcome)

Predictor/IV	Sig.	Exp (B) Odds Ratio	(Nagelkerke) R ²
ACS	.000	.872	R²=.078

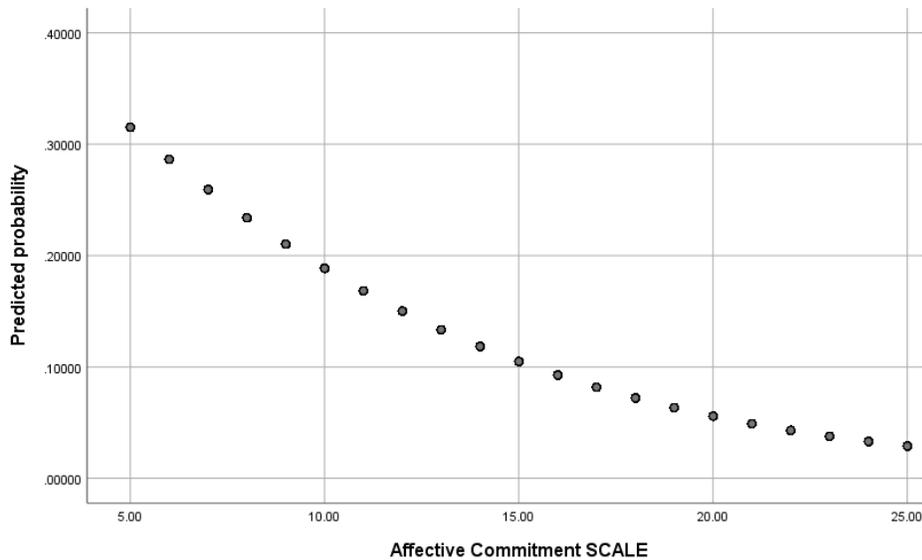
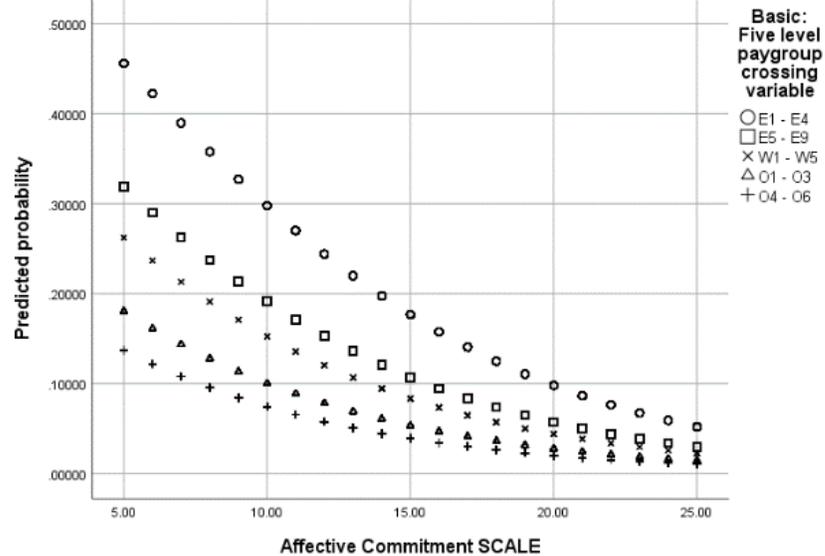


Figure 13 is a *probability scale* based on odds ratios. The Y axis is the probability of having a negative PSS 4 category outcome with a given ACS score. The ACS scores range from 5 on the left end of the X axis to 25 on the far right. The graph shows that as a wife’s ACS score goes down, the odds of her having a negative PSS-4 go up. The better her consonance with the military, the less likely she is to have negative stress. The r-square of .078 in Figure 13 means that the ACS score accounts for about 8% of the variance in the PSS-4 by itself. The graph shows that the wives with the lowest ACS scores have over a 30% greater probability of having a negative PSS 4. Even though it accounts for only 8% of the total variance, that is a dramatic drop in stress as consonance goes up.

Figure 14

Paygroup/Rank + ACS Effect on PSS-4

R²=.128

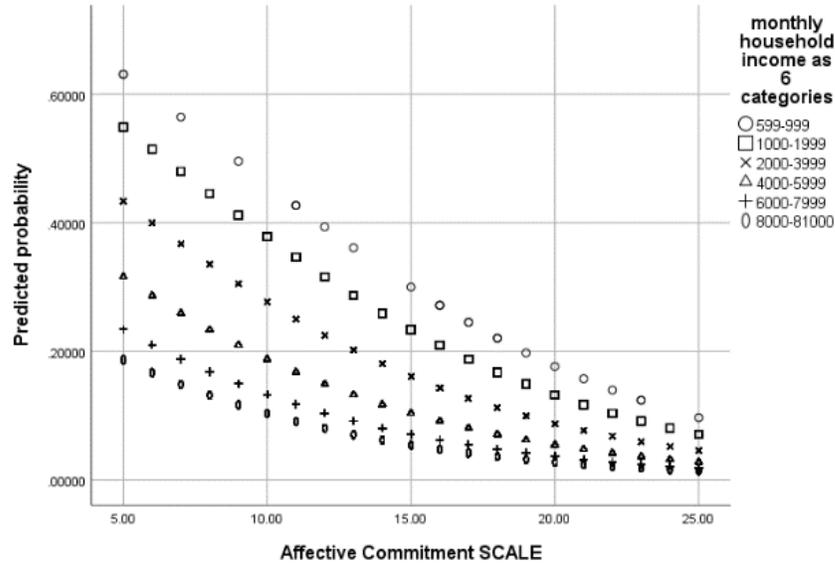


As other variables are added to the ACS, the combined effect can be seen. *Rank* was the variable in which ACS affected PSS 4 the most, with 13% of the variance explained. The results show that the wives of men in the lowest ranks are affected the most. The odds ratio of 5.264, shown in Table 9, shows that the wife of a junior enlisted service member is five times more likely to have a negative PSS-4 than the wife of a senior officer. The top line of the graph represents the lowest enlisted ranks. It shows that for that group, wives with the lowest ACS scores had about a 46% greater probability of being in the negative PSS 4 category. The middle ranks are less strongly affected. The difference between junior officers and senior officers is the only comparison that is not significant. The graph illustrates a consistent trend. The higher a wife's consonance, the lower her chance of being highly stressed. This effect is most pronounced in the lowest enlisted ranks.

Figure 15

Household Income – \$/Month + ACS Effect on PSS-4

R²=.124

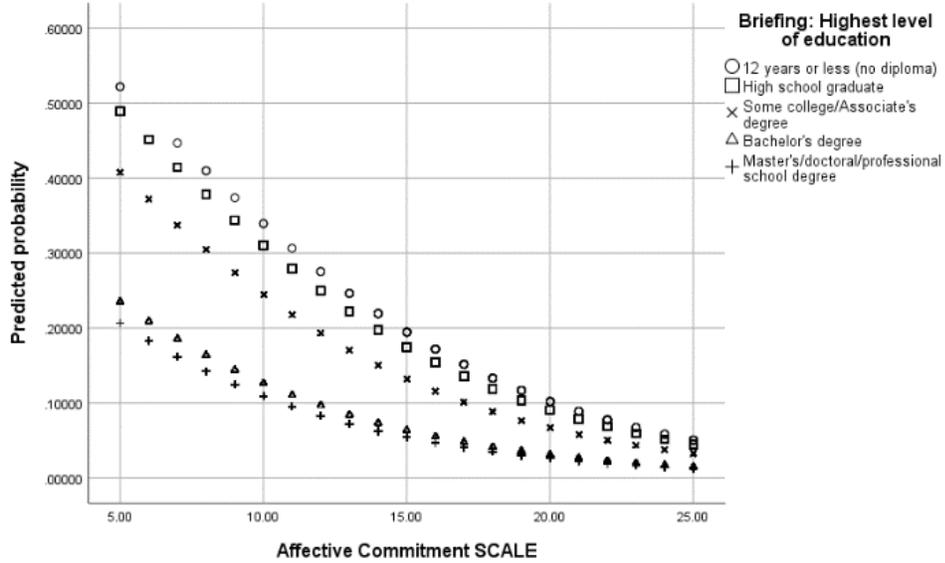


The model of monthly household income combined with ACS explained 12.4% of the variance in PSS-4 outcomes. The odds ratio of 7.425 shows that wives with income of less than \$1,000 /month were almost 7.5 times more likely to fall into the negative PSS-4 category compared to wives with income of \$8,000 per month or more. The graph shows that as income goes up, the probability of being highly stressed goes down in an evenly spaced progression. The top two income levels were not very far apart. The difference between making \$6000/month and \$8000+/month was barely significant at ($p<.032$). A wife with less than \$1,000 per month of income has over a 60% greater probability of being in the high-stress PSS 4 category.

Figure 16

R²= .114

Highest Level of Education + ACS Effect on PSS-4

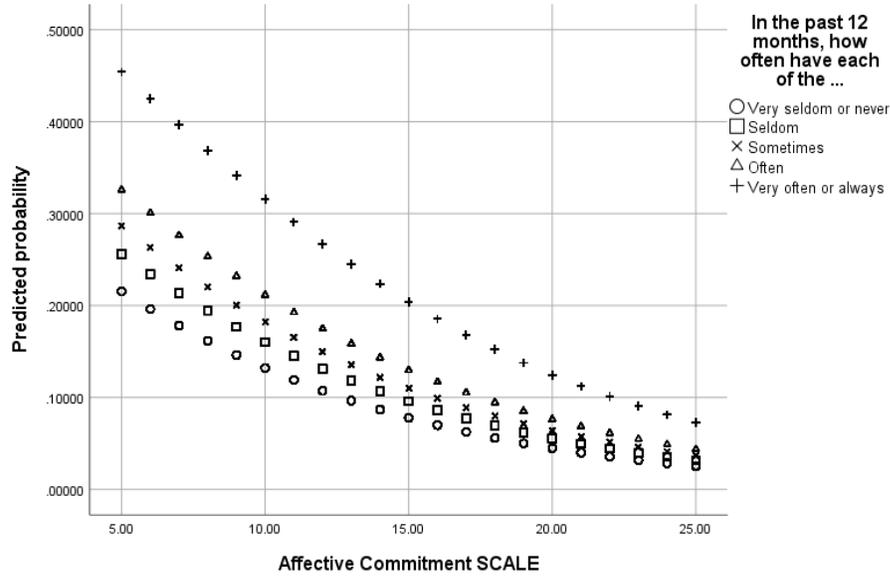


Education level was the third most influential covariate with ACS for effect on stress. The model explains 11.4% of the varainace in PSS-4 categories. The odds ratios demonstrate that income does have a significant effect on stress. The odds ratio of 4.183 says that a wife without a high school diploma was four times more likely to have a high-stress PSS-4 score than a wife holding a post graduate degree. A wife with a high school diploma was 3.7 times more likely. The graph shows that a wife with no high school diploma was 52% more likely to have high stress when she also had a low ACS score of 5. Only the difference between bachelor's degree and post graduate was not significant.

Figure 17

$R^2=.108$

Frequency of Major Life Events

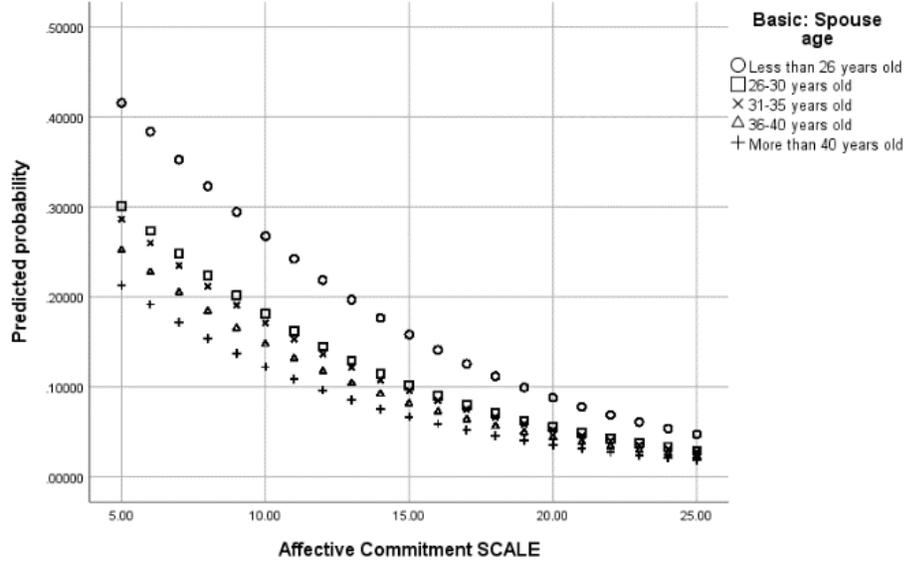


Overall, major life events were the fourth most significant predictor of a negative PSS-4, given a particular ACS score, ($p < .000$). This combination accounted for 11% of the variance in PSS-4 status. The more often life events occurred, the more the probability of negative stress went up. The progression was evenly spaced except for the group reporting the greatest frequency of major life events in the past 12 months (*very often or always*). They were three times as likely to have a high-stress outcome as the group reporting major life events as *very seldom or never*. The *very often or always* group had about a 46% greater chance of being highly stressed if they also had low consonance. The trend in every variable is that positive consonance is protective for all groups.

Figure 18

$R^2=.097$

Spouse Age + ACS Effect on PSS-4

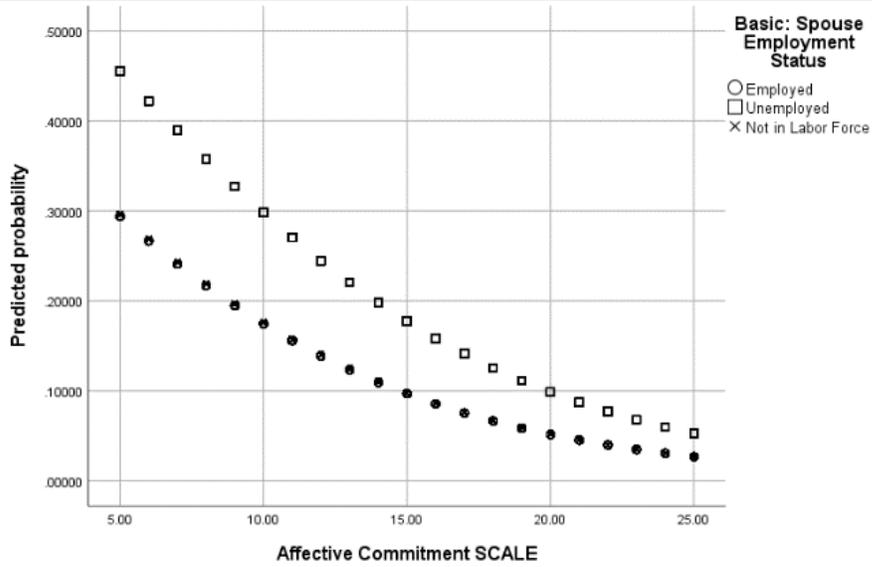


Spouse age was a significant variable, most noticeably when comparing the youngest to the oldest. Wives under 26 years old were 41% more likely to have a negative PSS-4 when their consonance was low. They were 2.6 times more likely to be highly stressed than the reference group, which was wives over 40+ years of age. The other age group comparisons were closer together. The difference between being 36-40 versus 40+ years was not significant. The model of spouse age + consonance explained about 10% of the variance in PSS-4 scores.

Figure 19

Employment Status + ACS Effect on PSS-4

R²=.087

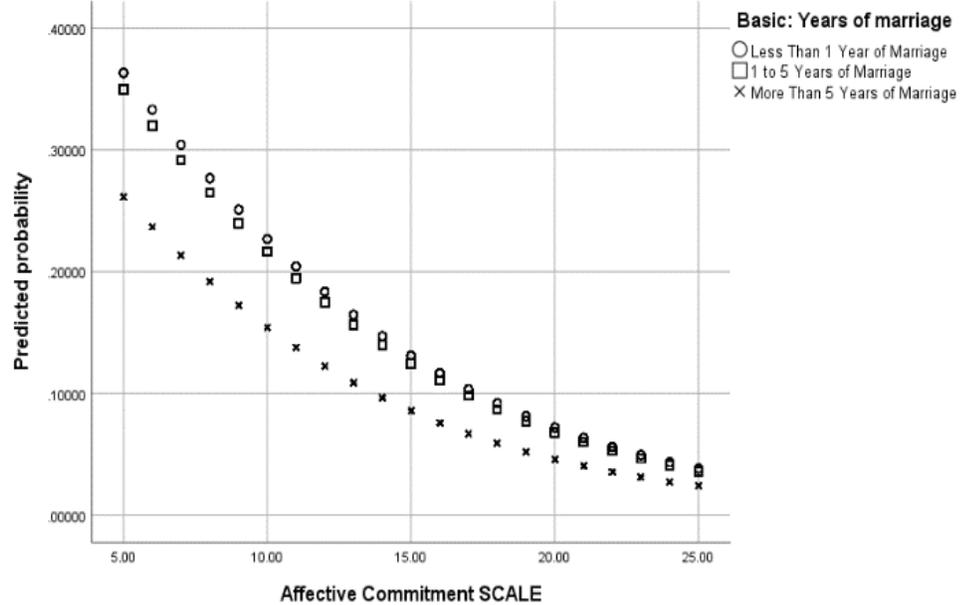


Employment status looks like it has only two probability lines, but there are three. The *employed* and *not in labor force* groups are virtually identical. The *unemployed* wives are twice as likely to be in the negative PSS-4 category as the *not in labor force* or *employed*. The difference between *not in labor force* and *employed* is not significant. The model explains 9% of the variance in the PSS 4.

Figure 20

Years of Marriage + ACS Effect on PSS-4

.086

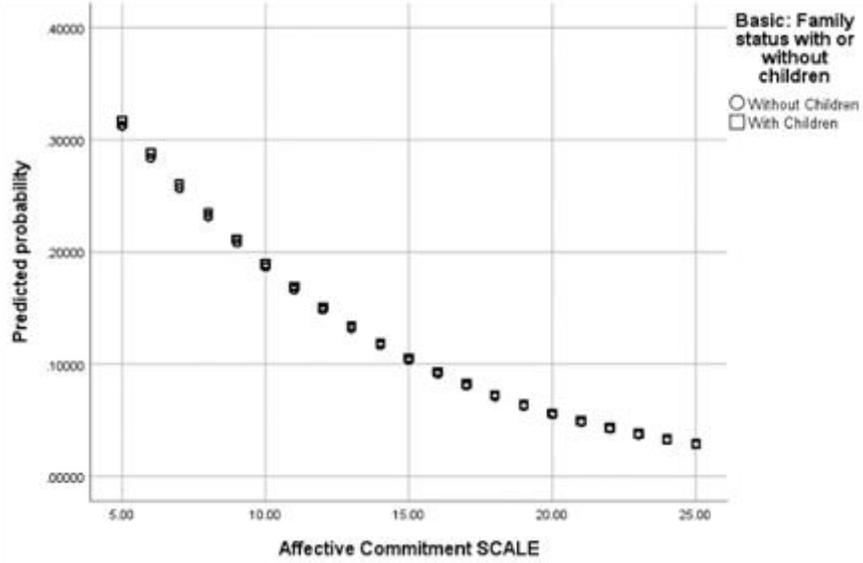


Years of marriage has a significant effect on PSS 4 score when combined with consonance. Wives married more than five years are about 26% more likely to be in the high-stress category if their consonance is low. Those married less than one year or 1-5 years are at least 45% more likely to have a negative PSS-4 if they have low consonance. Wives with less than five years of marriage are about 1.5 times more likely to have high stress than those married more than 5 years. The model explains 8.6% of the variance.

Figure 21

Children + ACS Effect on PSS-4

R²=.078



The variable of being with or without children is not significant. It explains exactly the same amount of variance as ACS by itself. As demonstrated by the visual overlay of the two groups, there is virtually no difference.

Figure 22

Ethnicity + ACS Effect on PSS-4

R²=.078

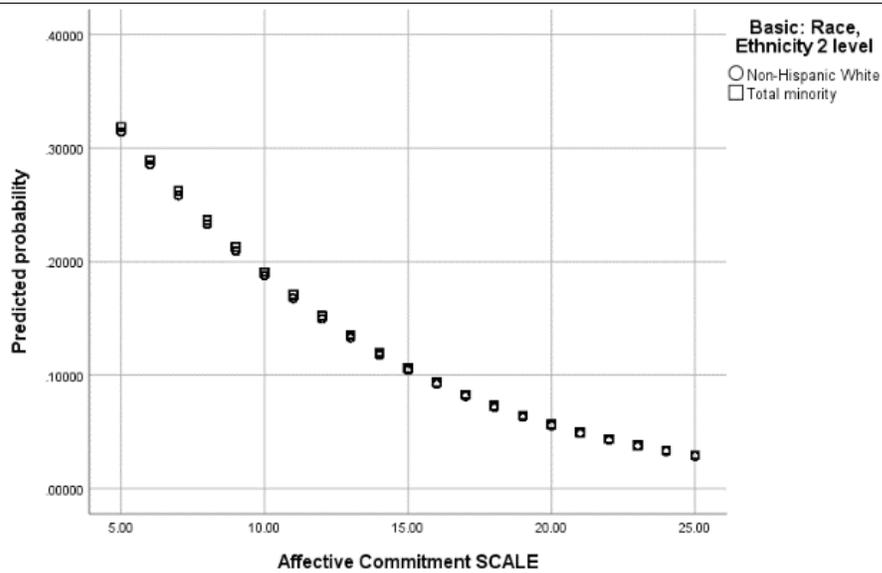


Table 10

Comparison of Nagelkerke R² values for Binary Logistic Regression of DV by Covariate ACS & IV Ranked by Significance

Kessler 6 x ACS & IV		PSS-4 x ACS & IV	
Categorical variables	Nagelkerke R ²	Categorical variables	Nagelkerke R ²
Paygroup/Rank	.110	Paygroup/Rank	.128
Life Events	.099	Income	.124
Education	.097	Education	.114
Income	.094	Life Events	.108
Age	.077	Age	.097
Years Married	.065	Employment Status	.087
Employment Status	.060	Years Married	.086
FamilyStatus/Children	.053 (NS)	Family Status/ Children	.078 (NS)
Ethnicity	.053 (NS)	Ethnicity	.078 (NS)

Summary of Findings by Hypotheses

Hypothesis 1. Military wives with positive cultural consonance in the military community, as measured by high ACS scores, will have lower psychological distress. The results consistently confirm this hypothesis.

Hypothesis 2. Military wives with positive cultural consonance in the military community as measured by high ACS scores will have lower perceived stress. The results consistently confirm this hypothesis.

Conclusion of Results

The linear regression analysis confirmed the hypotheses that cultural consonance, as measured by the Affective Commitment Scale (ACS), is positively related to the mental well-being outcomes of a positive score on the Kessler 6 (K6) and the Perceived Stress Scale (PSS-4). Analysis of Covariance (ANCOVA) confirmed that ACS remained a significant predictor of the outcomes when adjusted in combination with 9 demographic control factors. In all cases the demographics boosted the amount of variance explained when combined with ACS but the effect size of ACS was diminished. The biggest combined effect sizes were found with rank, income, education, life events and spouse age. Binary Logistic Regressions produced odds ratios and probability graphs of participants being in negative mental well-being categories in relation to ACS score for various demographic categories. That step showed where ACS had the largest effect size. The homogeneity of the military sample makes differences hard to see and makes small differences important. Two variables that turn out to have no practical significance are race/ethnicity and family status with or without children. It may be that the meritocratic professional environment and the benefits provided by the DoD for families on active duty tend to equalize the effects of race and parenthood on mental well-being. This analysis has identified a subset of military wives who are at increased risk for symptoms related to perceived stress and non-specific psychological distress. They are the youngest, with the lowest rank, lowest income, lowest education and those who report the highest frequency of major life events in the absence of the service member. Wives are more likely to experience negative mental well-being when these circumstances are combined with low cultural consonance in the military community.

CHAPTER 5

DISCUSSION

Overview of Study Findings

The overall aim of this study is to explore the effect of cultural consonance with the military community on the psychological well-being of military wives. This was addressed through secondary analysis of data collected by the DMDC's 2008 Survey of Active Duty Spouses (ADSS). Using a sample of 8,748 respondents the study examined cultural consonance and psychological well-being. The sample included all eligible female spouses of active duty male service members, excluding those who were also employed in the armed services.

Research Question 1: Do military wives with strong cultural consonance within the military community experience better mental health?

Hypothesis 1: Military wives who respond positively to questions indicating good cultural consonance will have more positive scores on a scale measuring non-specific psychological distress.

Hypotheses 2: Military wives who respond positively to questions indicating good cultural consonance will have more positive scores on a scale measuring perceived stress.

Confirmation of Hypotheses

Both hypotheses were confirmed. Linear regression showed a significant relationship between the main effect variables. Psychological distress was measured with a scale score from the Kessler 6 (K6) with a range of 6-30. The mean scale score for the entire sample was 24.7, which indicates the sample was skewed toward a positive outcome. Cultural consonance, or a

sense of cultural fit with the military, was measured by the Affective Commitment Scale (ACS) with a range of 5-25. The mean score for the sample was 15.9, which indicates the sample leaned somewhat toward positive consonance with the military, but had basically a normal distribution. The statistical significance of the regression association between the K6 and the ACS was $p < .000$. That significance confirms hypothesis one. The wives who had higher ACS scores also scored more positively regarding psychological distress. The r-squared value for the K6 was .056, indicating that the ACS score accounted for about 6% of the variance in the K6 by itself. Perceived stress was measured by the Perceived Stress Scale (PSS-4) with a range of 4-20. The mean score for the sample was 14.6, which indicates the sample leaned somewhat in the direction of positive, i.e., good stress outcome, but was normally distributed. In regression with the ACS the significance was $p < .000$, which shows that wives who had more positive cultural consonance also had a more positive stress outcome. The r-square value was .072, which shows that the ACS score accounted for 7% of the stress outcome. Both hypotheses were confirmed at this point.

ANOVAs of eight demographic variables showed significance, as did a question concerning frequency of major life events. ANCOVAs further showed that the ACS retained a significant effect on the outcome measures after adjusting for the effect of other factors considered to be possible confounds. No other predictive factor presented a stronger alternative explanation for the outcomes than the ACS score. ANCOVAs also showed that, while the combined effects of the control variables plus the ACS as a covariate explained more of the variance than either one alone, the effect size of the ACS was diminished to just 1% - 5% of the variance after the adjustment for the effect of each control. Binary logistic regressions, with the outcome measures divided into negative and positive outcome categories showed the most

striking results in the form of odds ratios and predicted probabilities. For example, income combined with cultural consonance showed that wives with the lowest consonance scores and income of \$1,000/month or less were thirteen times more likely to fall into the negative psychological distress category. High frequency of major life events, lowest rank and income, and lowest educational levels were among the factors producing the largest effects when combined with low cultural consonance. Race/ethnicity and family status with or without children had no significance.

The results show that ACS/consonance score does have a significant positive relationship with psychological distress and perceived stress, and it maintains this significance after adjustment for potential confounds. Frequency of life events, low rank, low income, nor any of the other control factors alone accounted for more of the variance in the outcome measures than the ACS. The results show that low cultural consonance, when combined with other potentially adverse conditions, dramatically raises the odds of negative mental health outcomes. High cultural consonance was associated with lower risk of psychological distress and perceived stress. This was a modestly robust finding of the study. The effect sizes of ACS in logistic regression matched up closely with the effect sizes found in ANCOVAs, which shows internal consistency of the effect of ACS as a predictor of stress and distress even when adjusted for nine other factors. However, the findings accounted for about 10% up to a maximum of 13% of the variance in outcomes. That leaves about 90% of the variance unexplained.

Strength of ACS Effect Size Relative to Other Research

The ACS has been widely used in organizational research on various populations in the context of employment or membership in a group. As noted in METHODS, the number and content of items used for measurement of *affective commitment* has routinely been adapted by

researchers for various purposes. Therefore, any reference to an *Affective Commitment Scale*, even when Meyer and Allen's original scales are referenced as the source, should be understood to include a cafeteria style selection and adaptation of items (Allen, 2003). Also, a literature search revealed that ACS is often used as an outcome (Gupta, Agarwal, & Khatri, 2016; Thompson, Beauvais, & Lyness, 1999) or as a factor in structural equation modeling, where multi-directional relationships are tested (Nazir, Qun, Hui, & Shafi, 2018). Many studies have been done using factor analysis (Gade, Tiggle, & Schumm, 2003; Tremble, Payne, Finch, & Bullis, 2003). When ACS is a predictor, it is often used in hierarchical regression analysis or other multi factor analysis (Karrasch, 2003; O'Shea, Goodwin, Driskell, Salas, & Ardison, 2009; Vuga, & Juvan, 2013). In regression models or analysis of variance, especially in larger sample sizes, r-square values from 1% to 15% are common (O'Shea et al., 2009; Richardson, 2011; Vuga & Juvan, 2013). In their study to discern which institution is *greedier*, families or the military, Vuga and Juvan found that 11 selected variables establishing service member identification with the Slovenian Armed Forces, produced a combined effect size explaining only 22.3% of the variance. This information pertains to establishing that the effect size of the ACS in the current study is strong enough to be considered meaningful. The question of validity of the ACS as a proxy measure of cultural consonance is addressed in a separate section.

Interpretation of Study findings

Cultural Consonance Literature Supported

The results of the study are consistent with the findings of numerous studies on cultural consonance theory. Cultural consonance theory would predict that a military wife with strong cultural consonance in her role would experience more positive outcomes of mental well-being than a wife with low cultural consonance. A body of empirical research by Dressler and

colleagues has established that low cultural consonance in specific areas of life consistently predicts higher stress and psychological distress. Several of these studies used the ten-item version of the Perceived Stress Scale (Cohen et al., 1983) along with arterial blood pressure and saliva cortisol levels to measure stress as an outcome variable in efforts to examine culture in the stress process (Dressler, 2007; Dressler, 2011b; Dressler & Bindon, 2000). As cultural consonance research progressed, the PSS was used as part of a composite scale to measure psychological distress. These studies, with increasingly complex research questions and designs, continued to find repeated confirmation that low cultural consonance is associated with stress, depressive symptoms, psychological distress and lower physical and mental well-being generally (Dressler, Balieiro & dos Santos, 2002; Dressler et al., 2007a; Dressler, 2007b; Dressler et al., 2011b; Dressler et al., 2015; Dressler et al., 2017; Dressler et al., 2018). Other studies have found cultural consonance or related constructs around cultural fit to be predictive of psychological well-being, including in military wives (De Leersnyder et al., 2015; Reyes-Garcia et al, 2010; Wang et al., 2015).

The current study results found a consistent trend that, combined with control variables, lower consonance predicted higher (negative) perceived stress and psychological distress. The categories of wives with the most adverse circumstances, such as lowest rank/income, lowest education, and highest frequency of major life events in the absence of their service member spouse had the most dramatic increase in risk for negative mental well-being outcomes. The graphs and the trend lines make this effect striking in its consistency repeated across different control variables. In the presence of a stressful condition, low consonance raises the probability of negative mental health symptoms. Good cultural consonance was shown to be a protective factor for all groups. These results gave a clear and consistent answer to the research question:

Do military wives with strong cultural consonance within the military community experience better mental health? The answer in this cohort with the variables examined was yes, they do. The results confirmed the researcher's idea that military wives who are comfortable and confident in their role are bolstered in their mental well-being, and that wives who experience conflict or failure in the role, or who reject the identity of *military wife*, would suffer in terms of well-being.

Limitations and Strengths

The following is a discussion of limitations of the study that may affect the validity or the generalizability of the results. One obvious question is whether the *Affective Commitment Scale* is a valid proxy measure for cultural consonance. The reader may ask what makes the ACS a measure of culture rather than simply a measure of participants' taste for the military or comfort in a social environment? The researcher made a case for a substantive alignment between the language in the ACS reflecting concepts and terminology from studies of cultural consonance and organizational culture. Yet the question remains. What does ACS measure? Is cultural consonance different from the harmony of needs, values, goals, comfort, competence and enjoyment of day to day life in the military that is measured in ACS questions? Definitions of *culture* vary greatly by discipline. One of the strengths of cultural consonance theory is that it has a set of methods to operationalize the theoretical construct. An old problem with the various and amorphous definitions of *culture* is that if it includes any or every aspect of life then it means nothing at all. The question of what is actually being measured by the ACS also remains debatable in organizational theory. The mix and match approach to the use and adaptation of questions from Meyer and Allen's original work is an accepted practice in organization research but it muddies the water (Allen, 1996). The researcher recognizes that the ACS may measure the

influence of social environment rather than cultural consonance. The meaning of research constructs is bound up with semantics in the social sciences. The differences may be in the eye of the beholder. The differences may come down to the use of language and terms reflecting the viewpoint of different disciplines that are measuring a very similar thing; the harmonious fit of a person in an environment.

There are limitations on a study based on cultural consonance as a theoretical framework without being able to use cultural consonance methods to investigate the research question. The methods of cultural consonance require that a cultural model be established in a particular domain of life, such as being a military spouse, and that cultural consensus be established to show that members of that group have broad agreement about the ideal. Those steps require mixed methods and several stages of work with participants to establish the model and consensus before cultural consonance statistical methods and measurements can be applied. Cultural consonance as a research method cannot be done on survey data alone. Unless those methods are used to establish the cultural model and measurable consensus among military wives, and then the ACS is tested for correlation with subjects having known responses to those measures, the validity will remain as face validity only. That is why this is an exploratory study.

Regarding measurements, there is another limitation to be noted. While cultural consonance methods have measured both mental and physical health outcomes, the current study looked only at mental health measures of well-being, without using the participant's self-rating of overall health. Dressler's work incorporated physical measures of stress such as arterial blood pressure and cortisol in saliva. The current study uses only answers to survey questions to operationalize the construct of stress.

The method of secondary data analysis of a survey constructed by the DoD for its own research purposes imposed some unavoidable limitations. The researcher had no control over the content of the questions, or how they were asked. There are many potential questions that would have strengthened the validity and generalizability of the current study. One such question regards the family background of the participant's family of origin. It would have been desirable to know whether respondents had any trauma in their personal histories pre-dating exposure to the military environment, whether they came from chaotic or dysfunctional homes, and particularly whether they came from military families themselves. A search for alternative explanations for why some participants handle stress in the military environment quite well, demonstrating resilience in the face of adversity, while others do not, should include information about participants' personalities and backgrounds before they entered the military environment. This whole area of possible factors affecting personal coping and resilience was not possible to investigate with the 2008 ADSS. A prime example of a question that is *not* there is: *Did you come from a military-connected family?* However, a question about military background does exist in the 2006 version of the survey (DMDC, 2007).

It is worth noting that at least one study exists in which a researcher used the DMDC 2006 *Survey of Active Duty Spouses* to investigate which wives held the strongest cultural identification with the military (Montgomery, 2011). The DMDC survey for that year used some of the same questions as the 2008 ADSS and some slightly different ones. The researcher in that study selected the ACS questions along with some additional survey items to make a scale that she thought would measure cultural identity. She had preliminary findings indicating that stronger connections outside the military such as high education and employment had an inverse relationship with identification with the military wife cultural role. However, that study appears

to have been a thesis and a conference presentation, but never published in a peer reviewed journal.

Because participants are only eligible if they are married and the service member husband remains on active duty at the time of the survey response, the 2008 ADSS excludes a spouse whose service member husband was killed or injured in the line of duty or who is separated from the military for any reason. That condition excludes a highly distressing situation that could affect a spouse. Also, the survey does not ask whether the spouse had any previous marriage to a service member or was herself a member of the armed services in the past. It is possible that some respondents had adverse experiences related to the military in their personal pasts. That is a condition that would confound survey findings, and there is no way to control for it. Fortunately, the sample size is so large that any wives who had previous negative experiences would likely be a small number and would not distort the results of the current analysis.

Another limitation of the survey method is that self-reporting limits knowing the reliability of the answers. The way participants answer is subjective. The cross-sectional survey method precludes any ability to form an experimental design. There is no way to assess causation or know a clear direction for the associations. ACS predicts increased odds of having negative mood symptoms. It is also possible that negative mood symptoms affect the way the participant answers the ACS. Furthermore, self-selection for response allowed the possibility of selection bias. It is possible that the people who were motivated to answer the lengthy survey were people who were generally involved and invested in the military and inclined to participate because the DoD made the request, or that people with some dissatisfaction in the military were more motivated to express their opinions. Last, non-traditional families are excluded from the

sample entirely because unmarried couples, same-sex couples and single parents were not eligible

The study had some strengths. Sample size was a strength. It allowed enough subjects in each category to make a detailed analysis and to run many statistical tests without losing power. The DMDC used sound methods for sampling and weighting so that normalcy was virtually guaranteed. They took care to solicit a sample with relative equality of representation for all groups. Also, a version of this survey had been conducted every two to three years since 1985. Similar survey content is included in the 2006 and 2010 versions of the ADSS, which the researcher has available for comparison. The survey contains multiple content areas, so it will be possible to do additional related studies from these data sets.

Implications

Findings from this study may be used to add cultural consonance as a factor to be considered relevant to military wife well-being. Cultural consonance could also be considered in policy regarding support of well-being, development of cultural competence in education and practice, and research on retention and organizational commitment in military wives.

Implications for the DoD in Research.

The military has studied spouses with the same methods and goals as formally employed service members. It is accurate that military wives function like unpaid employees. The DoD seems unaware of an important difference about spouses. The spouse's connection to the military is deeply personal. For them it is not a profession and they do not receive the same glory and ritual accolades as the service members. The military community is the context in which family life and all other things wives find meaningful takes place. The DoD could adapt the questions of the ACS or add questions to their surveys of spouses to include more emphasis

on sense of sense of community, belonging, validation, competence and meaning (Allen, 2003). For example, an adapted ACS or other proxy for cultural consonance could be added to *military context variables*, found to support subjective parental well-being, which in turn influences adolescent outcomes in military families (Degraff, Oneal, & Mancini, 2016).

The DoD suffers from a problem of measurement common to other organizations that cultural consonance can address. One of the virtues of cultural consonance methods is that it can form a bridge from culture inside the mind of an individual to something measureable in a group (Jaskyte & Dressler, 2005). The DoD would likely benefit from commissioning research to define military spouse culture, identify the features of the cultural role and eventually work with cultural consonance methods to work toward a scale measure of cultural consonance. Any researcher wishing to pursue inquiry into a cultural model of military spouses could refer to the survey developed by Durand (2000). Also, the DoD can apply the findings of this study into new research on national guard and reserve wives because the likelihood of alienation is higher. A separate study of national guard wives and their culture is warranted because they may have a different relation to military culture, although they are still subject to it.

DoD Policy and Practice Implications.

The DoD has particular concern about wives' influence on retention of trained service personnel and the stability of the family. It is also very interested in promoting family well-being and spouse satisfaction. If the DoD wants to identify the spouses most likely to experience mental health symptoms, be dissatisfied, and those most likely to want out, they should adopt a measure of cultural fit into screening surveys or interviews. They should take account of the difference between public and private conformity they should acknowledge informal, unspoken versus formal overt expectations. In the development and evaluation of support programs and

policies, the DoD should recognize that community contexts, informal networks, cultural roles of shared responsibility and the perception of the military as an environment supportive of work-family balance may be more important than any formal benefits package (Thompson et al., 1999; Totenhagen et al., 2018).

The DoD should continue to develop ways to welcome, include and orient wives who are new to an installation or to the military in general, such as mentoring or a buddy system. They could include an orientation module on understanding military culture for wives new to the military, especially those who do not live on an installation. Providers should know that wives who live away from installations may be trying to cope with separations and deployments alone. They may feel stressed, overwhelmed, confused and feel like they are failing. Practitioners can help by normalizing the need to cope with stress. They should emphasize that being overwhelmed is not the wife's fault and they should encourage connections accessing formal and informal social supports even though the wife may be geographically removed from the installation. One area that the DoD has tried to address with limited success is helping military spouses with employment and education. That was reported as a leading cause of dissatisfaction with military lifestyle from the mid-1980s and continues today (Blue Star Families, 2018). For example, the MyCAA program to support wives' education and career goals only applies for licensing, certification up to a four-year degree. Policy could respond to military wives' desire for help with graduate level degrees and professions rather than just jobs or even *portable careers* (Ott, Kelly Morgan, & Akroyd, 2018).

Social Work Policy Implications

Social work can continue to act as a policy leader to push forward recognition and response to the unique culture, experiences and needs of military spouses and connected persons.

The main policy makers are the National Association of Social Workers (NASW) and the Council on Social Work Education (CSWE). They have begun and can continue to push forward an agenda regarding education of social workers and informed practice standards that includes awareness and military cultural competence. Courses and concentrations in service to military connected populations are included in some MSW programs, but expanding awareness about this group could be made more pervasive or become part of the requirements in social work education (Canfield & Weiss, 2015; Clever & Segal, 2013; Cole, 2014; Council on Social Work Education, 2010; Frey et al., 2014; Martin et al., 2008; National Association of Social Workers, 2012; Savitsky, Illingworth, & DuLaney, 2009)

Practice Considerations for Social Workers and Civilian Providers

Since the adoption of the *total force* and all volunteer military concept, there has been a growing need for social work and other social service providers to understand military-connected populations and extend practice models to accommodate them (Knox & Pryce, 1999). The calls to incorporate recognition of military culture and the needs of military connected people as a special population have intensified since 9/11. Those calls continue and responses are intermittent. Social work can lead the way to better service provision for military-connected people, especially by addressing the aspects of social and emotional support, rather than simply instrumental support. (Green, Nurius, & Lester, 2013; Hall, 2011; Knox & Price, 1999; Kuehner, 2013; Martin, Albright, & Borah, 2017; Padden & Posey, 2012; Westphal & Convoy, 2015). Social workers can get involved in helping employers to understand the challenges faced, not just by veterans, but by reintegrating military wives as well (Redmond et al., 2015). Social work with older adults can be more sensitive to the needs of retired military wives, such as a possible

sense of loss of the military community or a desire to stay close to military culture during retirement (Frese, 2003; Frese, 2008).

Based on this study, civilian and military practitioners could be responsive to military wives by addressing their sense of comfort, belonging and acceptance in the military community. They could simply include questions about *fitting in* or a sense of belonging in the military community as part of screenings or assessments. The question of whether a person feels comforted by group identity or alienated from her dominant cultural group may be a key predictor of coping under stressful conditions (Hall, 2011). Lastly, a feminist lens may help inform service and care providers about military wives' unique position in what they may feel is a three-way marriage with their service member husband and the demands of the military. Issues of power, control, and priorities in marriage and family life affect military wives more than civilian wives. Loyalty to the military may be something military wives embrace, or it may be something they object to but feel silenced (Vavrus, 2013).

Social Work Research

Social workers can pursue their own research on military spouses and military culture. In the tradition of interdisciplinary collaboration, nursing, psychology, public health, and anthropology are fields that could be willing collaborators. Previously cited articles addressed the need to recognize culture as a social determinant of health and as having path to reduce healthcare disparities. Social workers can pick up this thread in healthcare disparities (Harris, 2011). Also, the line of research that lead to cultural consonance started partly with research on the stressful effects of rapid culture change due to migration and forced migration (Dressler, 2011). Military spouses do experience rapid culture change and a loss of control when they join the military, having to adapt to that culture and when they relocate to unfamiliar locations,

including foreign countries (Blakely et al., 2014a; Blakely et al., 2014b). Relocation that is involuntary due to marriage to a military member has been referred to as *tied migration* (Payne, Warner, & Little, 1992).

Directions for Future Research

Multivariate Analysis

The next step toward a more complete picture of the effect of cultural fit on military wives is multivariate analysis of the same sample. With this step, it is possible to look at the combined effect of multiple variables and/or an interaction effect. The obvious remaining question is *what accounts for 90% of the variance in outcomes?* No analysis is likely to explain all the variance in outcomes, and much of it could come down to unique individual differences. However, an investigation into relevant factors not included in this study as well as combinations and possible interactions of predictors is warranted.

Stress, Status in a Hierarchy and Culture as a Mitigating Variable

Rank was the variable in which ACS affected K6 the most, with 11% of the variance explained. The results show that the wives of men in the lowest ranks are affected the most. The odds ratio of 5.134 shows that the wife of a junior enlisted service member is five times more likely to have a distressed K6 than the wife of a senior officer. The effect was more pronounced in the PSS-4. Rank and income explained 13% and 12% respectively of the variance in stress scores when combined with ACS. Wives with the lowest ACS scores whose husbands were in the lowest group of enlisted ranks had about a 46% greater probability of being in the high-stress PSS 4 category than low ranking wives with higher consonance. Wives of low ranking men were more than five times more likely to be in the negative stress category than wives of the senior officers. This result aligns with a 2015 study of the effect of cultural consonance as a

mediator of health disparities in social class (Dressler et al., 2015) as well as a 2008 public health study of social determinants of health being a key factor in health equity (Marmot et al., 2008). The findings of this study raise the questions of whether position in a social hierarchy is a factor in stress by itself, or may be mediated by cultural consonance. The researcher encountered discussion of these components in several articles and could begin a new literature review to explore this concept (De Botton, 2008; Maclean & Edwards, 2010; Myers, Lindenthal & Pepper, 1975; Redmond et al., 2015; Scheepers, Ellemers, & Sintemaartensdijk, 2009).

Additional analysis of the 2008 ADSS

Additional research could be done with the 2008 ADSS. For example, the researcher could look for an association of cultural consonance with Body Mass Index. Such an association was found by Dressler, Oths, Ribeiro, Baliero, & dos Santos, (2008). Another logical next step would be to run the same data analysis on the males in the 2008 ADSS respondents, separating civilian males from armed forces employed males. Additionally, the 2006, 2008 and 2010 versions of the ADSS could be used to explore differences between members of dual military career couples and their civilian counterparts.

Conclusions

Military wives carry great responsibility. Those who are mothers and caregivers especially need support. Military wives generally do have resilience and do cope well with the chronic stress of uncertainty, deployments, moves and a demanding role. Strong cultural consonance strengthens their ability to cope with multiple stressors. Low cultural consonance exacerbates or fails to protect from effects of adverse events. The validation that one is accepted in a community and successful in a role with which they identify imbues strength and promotes resilience. The opposite of cultural consonance is a feeling of insecurity about status within the

community, self-doubt, and incoherence about whether life makes sense. If there is cognitive dissonance in an individual about their primary cultural role, they are likely to interpret that either the expectations of the culture are flawed or the individual is doing it wrong. Either interpretation can lead to feeling overwhelmed and incompetent. Military life includes chronic uncertainty, frequent need for re-adaptation and constant coping. Chronic alienation by itself leads to chronic stress, which has many harmful effects on health. If military wives cannot find a sense of fit, belonging and acceptance within the military community, any stressor will be exacerbated. In the presence of strong cultural consonance, military wives can handle just about anything.

I can do all things in cultural consonance, which strengthens me.

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APPENDIX



Office of the Vice President for
Research & Economic Development
Office for Research Compliance

September 20, 2018

Kimberly Anderson, MSW
School of Social Work
The University of Alabama
Box 870314

Re: IRB # EX-16-CM-117-R2 "Effects of Cultural Fit on Military Wives"

Dear Ms. Anderson:

The University of Alabama Institutional Review Board has granted approval for your renewal application. Your renewal application has been given exempt approval according to 45 CFR part 46.101(b)(4) as outlined below:

(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Your application will expire on September 19, 2019. If your research will continue beyond this date, complete the relevant portions of Continuing Review and Closure Form. If you wish to modify the application, complete the Modification of an Approved Protocol Form. When the study closes, complete the appropriate portions of FORM: Continuing Review and Closure.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number.

Good luck with your research.



Carpantato T. Myles, MSW, CIM, CIP
Director & Research Compliance Officer
Office for Research Compliance

 Rose Administration Building | Box 870127 | Tuscaloosa, AL 35487 0127
205 348 8461 | Fax 205-348 7189 | Toll Free 1 877 820 3066