

Does Couple Wellbeing Mediate the Relationship Between Military Stressors/Supports and Psychological Outcomes in Military Wives?

by

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ABSTRACT

This study examined the relationships between military stressors and supports, couple wellbeing, and the psychological outcomes of military wives. Systems focused theories, specifically the ABCX Model of Family Stress and the Marital Discord Model of Depression, were used to identify and explain such relationships. A structural equation model indicated that social support from the military community was directly associated with higher levels of personal wellbeing among military wives. In addition, military wives who were more satisfied with military life tended to indicate higher levels of couple wellbeing, suggesting an association with healthier interpersonal dynamics with their active duty partner, which also was associated with better psychological health, namely lower levels of depressive symptoms and higher levels of personal wellbeing. Results demonstrated that the couple relationship appeared to be the most salient resource and leverage point for intervention. Moreover, bivariate correlations indicated that military wives who were married longer tended to report greater community connections and that wives of enlisted service members reported being more dissatisfied with aspects of military life. The implications of these findings and areas of further research in the field of counseling and for the United States Armed Forces are discussed.

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CHAPTER I

INTRODUCTION

Military spouses have been described as the barometer of military families, as they are the individuals who often take primary responsibility for preserving the stability and overall health of their family units (Lara-Cinisomo et al., 2012; Palmer, 2008). While working to maintain good family dynamics, military spouses not only experience the same stressors as American non-military spouses such as finances, familial role disparities, and parenting children (Bowen & Orthner, 1983), but they also experience stressors unique to their community. These unique stressors include but are not limited to multiple life transitions such as frequent relocations and thus repeated change of employment, distance from primary support networks, and stress that results from their service member leaving home for training and/or deployment (Lester et al., 2010; Palmer, 2008). How military spouses react to stressors and transitions is indicative of their coping abilities and how they tackle challenges, which effects their psychological health (MacDermid Wadsworth, 2010), and in turn the psychological health of their families (Green, Nurius, & Lester, 2013). According to systems theorists, family members, such as military spouses, who have high levels of support and resources as well as more positive perceptions regarding stressors, are more likely to handle stressors and transitions better and, therefore, report higher levels of psychological functioning (Karney & Crown, 2007). Typical sources of support for military spouses include social support from their military community and from their military partner. However, sources of support can also create stress, as a military partner can be considered both a positive and negative source of social support (Green, Nurius,

& Lester, 2013). For example, systems researchers have also identified how stressful interpersonal processes between couples, such as marital discord, were significantly associated with relationship dynamics and depressive symptoms of spouses (Beach, Sandeen, & O'Leary, 1990), with some asserting that marital discord can be one of the leading causes of negative mental health symptoms in married couples (Coyne & Downey, 1991). Other sources of stress for military spouses can be their own negative perceptions of military life demands, with demands including the unique stressors mentioned previously and that are connected to their military partner (e.g., amount of time a service member is away from home, relocations; Spera, Kunz, Meiman, Jones, & Whitworth, 2003).

According to the most recent demographics report of the military community (U.S. Department of Defense, 2018), the majority of military spouses are female (91.3%), and therefore the present study chose to focus on the subpopulation of military wives. Using a sample of active duty Army wives, the present study used systems theory models to expand the knowledge of the relationship between both military stressors and supports (i.e., number of months deployed, social support from the military community, and perception of military life satisfaction) and the psychological health of military wives (i.e., depressive symptoms and personal wellbeing). The present study also examined how couple wellbeing (i.e., marital quality, relationship communication satisfaction, relationship warmth) mediated this relationship between military stressors/supports and the psychological health of military wives. Moreover, because military rank, which signifies pay grade and socioeconomic status, and number of years married have been shown in the literature to influence outcomes (Clark et al., 2018, Kim & McKenry, 2002), they were accounted for in this study. In sum, suppositions from research and theory were that military stressors and supports were expected to be associated with the

psychological outcomes of military wives through couple wellbeing, or that couple wellbeing was expected to mediate the relationship between military stressors and support and the psychological outcomes of military wives.

Theory

The present study invoked multiple systems focused theories to understand the relationships between military stressors and supports, couple wellbeing, and the psychological outcomes of military wives. Specifically, the present study utilized the ABCX Model of Family Stress (Hill, 1958) and the Marital Discord Model of Depression (MDMD; Beach, Sandeen, & O'Leary, 1990) to identify how and why couple wellbeing might mediate the relationship between military stressors and supports and the psychological outcomes of military wives. The ABCX Model of Family Stress is used to examine stress and coping in families. The model consists of (A) stressors, (B) resources (or lack thereof), (C) perceptions of stressors, and (X) the probability of crisis, with B and C ascertaining whether stressors (A) lead to crisis (X). The MDMD asserts that marital discord is a critical precursor to depressive symptoms in spouses, with marital discord conceptualized as a decrease (or lack thereof) in social supports paired with an increase in interpersonal stress. The present study utilized both theoretical models in identifying whether couple wellbeing was a potential resource for military wives that mitigated the link between military-related stressors and negative psychological outcomes. While researchers have used the ABCX Model to investigate military family processes (MacDermid Wadsworth, 2010), there is no study to date that has coupled the MDMD as a theoretical guide in examining military couple dynamics.

Purpose of the Present Study

A large portion of the literature examining military stressors and supports, psychological outcomes, and couple wellbeing have largely focused on the experiences and psychological outcomes of service members. Specifically, researchers have focused tremendous efforts on examining how combat-related stress symptoms from deployment impacts service members and their relationships given that deployment has been identified as the most salient stressor in the military community (Knox & Price, 1995). Deployment is defined as “the rotation of forces into and out of an operational area” (Yablonsky, Barbero, & Richardson, 2016, p. 66) as well as the relocation of and material to areas of operations and/or the arrangement of forces into formation for battle/combat (Center for Army Lessons Learned, n.d.). These research efforts have spanned multiple wars including the Vietnam War (Lasiuk & Hegadoren, 2006) as well as the Global War on Terrorism (Galea et al., 2012; Hoge et al., 2004; Hoge, Auchterlonie, & Milliken, 2006; Milliken, Auchterlonie, & Hoge, 2007; Vasterling et al., 2010).

The need to examine deployment effects stems from the United States military’s recent history of higher operational tempo and increase in the number of deployments to either Iraq and/or Afghanistan, which have greatly affected service members and the families in which they reside (Lester et al., 2010), with the military community experiencing the lingering effects of the Global War on Terrorism despite a current lower operational tempo and decrease in number of deployments in recent years. Since 2001, roughly three million United States service members deployed to Iraq or Afghanistan across approximately five million tours of duty, with around 1.5 million of those service members experiencing more than one deployment. (Institute of Medicine, 2010; Schneiderman, Braver, & Kang, 2008; Wenger, O’Connell, & Cottrell, 2018). Over half of service members who have deployed reported being married and roughly 50%

reported having children. According to the RAND Corporation (Wenger, O'Connell, & Cottrell, 2018), the Army has contributed most to deployment operations, as the Army deployed 1.33 million soldiers between 2001 and 2015, with approximately 225,000 soldiers having deployed three times or more. In comparison, the Navy deployed 563,000 troops and the Air Force and Marine Corps deployed 518,000 and 367,000 troops, respectively. Research findings indicated service members who deployed to these areas were not only at a higher risk of experiencing posttraumatic stress disorder (PTSD) than the general population (Kessler et al., 2014; Norris & Slone, 2013), but there was also a 13% - 30% prevalence rate of PTSD among these members (Eber et al., 2013; Fulton et al., 2015; Holdeman, 2009; Sundin et al., 2010; U.S. Department of Veteran Affairs, 2015). In regards to couple dynamics, researchers have also found a significant relationship between service members' trauma symptoms (e.g., irritability, anger, sleep difficulties, and emotional numbing) and their marital satisfaction levels, whereas higher levels of trauma symptomatology were associated with poorer marital satisfaction (Goff et al., 2007). Additionally, since 2001, divorce rates gradually increased for veterans involved in the Global War on Terrorism due to the negative impact separation and combat-related stress had on their relationships (Booth, Segal, & Place, 2009).

Although research focusing on how deployment impacts service members is important, military spouses have also been suffering. Researchers who have examined psychological outcomes of military spouses have found that spouses experience similar levels of anxiety and depression as their deployed service members and have experienced other psychological symptoms that impact their overall wellbeing, such as secondary traumatic stress and sleep difficulties (Eaton et al., 2008; Goff et al., 2007; Lester et al., 2010; Renshaw, Rodrigues, & Jones, 2008). Moreover, spouses of deployed service members typically report higher levels of

depression than spouses whose military members are not deployed as well as lower levels of both communication and interpersonal satisfaction (Hinojosa, Hinojosa & Högnäs, 2012; Lester et al., 2010; Mansfield et al., 2010; Merolla, 2010).

Researchers who have examined marital satisfaction levels in military spouses found that, similar to their service member, spouses typically report lower levels of marital satisfaction when their service members return from deployment. In fact, military spouses, particularly wives of Vietnam veterans, were at risk for both marital dissatisfaction and negative psychological symptoms when their service member returned from deployment with a PTSD diagnosis (Dekel, Solomon, & Bleich, 2005; Evans, et al., 2003; Gallagher, et al., 1998; Solomon, et al., 1991; Westerink & Giarratano, 1999).

Despite focusing a portion of efforts on the experiences and psychological outcomes of military spouses, some researchers believe spouses have still been largely excluded from the research narrative, with their voices being sidelined or marginalized partly by the military rhetoric of mission first (Davis, Ward, & Storm 2011; Wheeler & Torres Stone, 2010) and have even been described as lost casualties of war (RNRMCF, 2009). As a result, although military wives make up a large portion of the military community, they remain one of the most underserved and under-studied populations given the amount of trauma they've experienced (Runge et al., 2014). According to the 2018 demographics profile report for the United States military (U.S. Department of Defense, 2018), the majority of active duty soldiers are married (671,591 out of 1.3 million), creating a large community of wives who have been affected, likely in both positive and negative ways, by deployment as well as from the daily demands of military life stressors. In turn, the present study aimed to empirically examine the links between military stressors and supports, couple wellbeing, and the psychological outcomes of military wives.

Suppositions from the ABCX model of family stress and MDMD suggest that couple wellbeing would mediate the relationship between military contextual factors and psychological outcomes.

One reason why there might not be substantial published research on military wives in comparison to service members could be that there still remains a stigma surrounding mental health issues in the military community (Greene-Shortridge, Britt, & Castro, 2007). Many service members refrain from utilizing mental health services due to the concern about whether or not information regarding their psychological health will be reported to their commanders, and if so, whether they will be perceived as weak and/or not fit for duty in a culture of masculinity and toughness (Greene-Shortridge, Britt, & Castro, 2007; Hoge et al., 2004; Jakupcak et al., 2014; Nash, Silva, & Litz, 2009). Mansfield and colleagues (2010), who examined the effects of deployment on military wives whose soldiers were deployed between 2003 and 2006, estimated this health stigma most likely was also felt by military wives. Joseph Shapiro, a writer for National Public Radio (NPR), interviewed researcher Alyssa Mansfield and Army wife Keli Lowman in 2010 (Shapiro, 2010). According to Mansfield, military wives most likely internalize stigma surrounding their own mental health issues, which may impede them from seeking services. Additionally, Lowman stated, “You're viewed as weak or a complainer by other wives. Because everybody is in the same situation. All of our husbands are gone.” Whatever the sources of stigma, more research is needed to examine the psychological outcomes of military spouses, particularly spouses whose service members have deployed in more recent conflicts.

Researchers have recently identified the mental health of deployed service members as a large public health issue due to numerous service members having returned from the Global War on Terrorism deployments with negative psychological symptoms and diagnoses such as PTSD (Galea et al., 2012; Reisman, 2016). Consequently, if the mental health of deployed service

members is a public health issue, then the mental health of their spouses most likely impacts their communities as well. Military wives are impacted by both the psychological health of their service members and other additional military and non-military stressors, and because they have been described as the barometer of military families, their mental health plays a key role in the overall functioning of their families. Therefore, examining factors that affect their mental health is not only important for them individually, but is also vital to the functioning and health of their families and communities (Park, 2011).

Explanation of Terms

Those who serve in the Army are called soldiers. The term service member represents those who serve in all branches of the United States military, and different designations (e.g., soldier) are used in describing military personnel from each branch. For example, those who serve in the Marine Corps are called marines, those who serve in the Air Force are given the label airmen or Air Force personnel, and those in the Navy are designated as sailors. Due to the present study having focusing focused on the psychological outcomes of Army wives, the term *soldier* or *service member* was used to describe the active duty service member of wives included in the study. In addition, a large portion of researchers who have examined service members and their families have done so by surveying and interviewing Army soldiers and their families, and thus the term soldier and Army wives will be used in describing outcomes in the literature unless researchers examined different service members from other military branches (e.g., Air Force). Moreover, the structure of military couple relationships vary, including but not limited to male service members and civilian female spouses, female service members and male civilian spouses, dual service members in heterosexual, gay, and lesbian relationships, etc. Due to the present study focusing on the psychological outcomes of wives of male active duty Army soldiers as well as a majority of military spouses being female, the term *military wives* will be used in describing both the spouses surveyed in the present study and in the literature.

Present Study Variables

Military-Specific Stressors/Supports

The present study included three predictor variables that represented salient stressors (the A part of the ABC-X Model), characterized as stressful experiences or the absence of support unique to the military community.

Total Number of Months Deployed Since 2001. Defined as the length of time a soldier was deployed since 2001, which was measured in total months and was answered by active duty soldiers.

Social Support from the Military Community. Defined from a strengths-based perspective to measure perceived level of military community support experienced by Army wives within their community on base (as opposed to a stressor characterized as a lack of social support), which was measured by using items from the Air Force Community Survey (Spera et al., 2003) and answered by Army wives.

Military Life Satisfaction. Defined as the level of satisfaction Army wives reported regarding the characteristics and demands of military life in their community (e.g., how long their soldier was away from home, perceived support from Army), which was measured by using items from the Air Force Community Survey and answered by Army wives.

Couple Wellbeing

A latent variable, labeled couple wellbeing, served as the mediator and was comprised of three salient couple factors, reflecting resources available to military wives (B of ABCX Model).

Marital Quality. Defined as the subjective evaluation of the relationship between military wives and their active duty partner (as perceived by military wives), which was measured by the Quality Marriage Index (Norton, 1983) and answered by Army wives.

Relationship Communication Satisfaction. Defined as the perceived communication satisfaction levels of Army wives in regards to communication with their soldiers about topics that might be considered difficult (e.g., money, sex, child-rearing), which was measured by the Relationship Communication Satisfaction Scale (adapted from the Dyadic Adjustment Scale; Spanier, 1976) and answered by Army wives.

Relationship Warmth. Defined as the level of support perceived by Army wives that their active duty soldier demonstrated through acceptance, care, praise, and being helpful, which was measured by using items from the Measures of Authoritative Parenting (Conger et al., 1989-1992) and answered by Army wives.

Psychological Outcomes

Two psychological outcomes were assessed in examining the mental health of Army wives, depressive symptoms and personal wellbeing; these variables served as a proxy for assessing whether military wives were in a state of crisis (X of the ABCX Model).

Depressive Symptoms. Defined as the levels of depressive symptomatology of Army wives, which was measured by the Abbreviated Center for Epidemiologic Studies Depression (CESD7; Santor & Coyne, 1997) and answered by Army wives.

Personal Wellbeing. Defined as the levels of satisfaction Army wives had with various aspects of their life, including their life as a whole, which was measured by using items from the Personal Wellbeing Index (International Wellbeing Group, 2013) and answered by Army wives.

Exploratory Questions

The present study included two exploratory questions to determine if and how the control variables, number of years married and rank, would be accounted for in the primary analyses.

Exploratory question 1 examined the number of years married and exploratory question 2 examined rank.

Question 1

Is years married significantly associated with military-specific stressors/supports (i.e., levels of social support from military community and military life satisfaction), couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth), or the psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing)?

Question 2

Is soldier rank significantly associated with military-specific stressors/supports (i.e., levels of social support from military community and military life satisfaction), couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth), or the psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing)?

If years married and/or soldier rank were associated with the variables that made up military-specific stressors/supports, couple wellbeing, or the psychological outcomes of military wives, then they would be statistically accounted for in the model.

Hypotheses

The primary analyses of this study examined the relationship between military-specific stressors/supports and psychological outcomes of military wives with an emphasis on the indirect effect of couple wellbeing in this process. In other words, this model examined the direct effects of *military-specific stressors/supports* (i.e., total number of months deployed, social support from the military community, and military life satisfaction) on *psychological outcomes of military wives* (i.e., depressive symptoms and personal wellbeing), and the linking role of couple wellbeing (a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth). Predictions regarding the direct effects included the following: (a) greater total months a soldier was deployed would be associated with higher levels of depressive symptoms and lower levels of personal wellbeing, (b) higher levels of social support from the military community would be associated with lower levels of depressive symptoms and (c) higher levels of personal wellbeing, and higher levels of military life satisfaction would be associated with lower levels of depressive symptoms and higher levels of personal wellbeing. Three hypotheses (noted below) focused on the indirect association between military-specific stressors/supports and psychological outcomes of military wives through couple wellbeing.

Hypothesis 1

Couple wellbeing will partially mediate the relationship between greater total months deployed since 2001 and psychological outcomes of military wives. Specifically, greater total months a soldier was deployed will be associated with lower levels of couple wellbeing, and in turn, lower levels of couple wellbeing will be associated with both higher levels of depressive symptoms and lower levels of personal wellbeing in military wives.

Hypothesis 2

Couple wellbeing will partially mediate the relationship between social support from the military community and psychological outcomes of military wives. Specifically, higher levels of social support from the military community will be associated with higher levels of couple wellbeing, and in turn, higher levels of couple wellbeing will be associated with both lower levels of depressive symptoms and higher levels of personal wellbeing in military wives.

Hypothesis 3

Couple wellbeing will partially mediate of the relationship between military life satisfaction and psychological outcomes of military wives. Specifically, higher levels of military life satisfaction will be associated with higher levels of couple wellbeing, and in turn, higher levels of couple wellbeing will be associated with both lower levels of depressive symptoms and higher levels of personal wellbeing in military wives.

CHAPTER II

LITERATURE REVIEW

Since the late nineteenth century, divorce rates in the United States have gradually increased, climbing from 10 per 1,000 married heterosexual couples to 24 per 1,000 after World War II, with rates peaking at 40 per 1,000 in the 1970s (Shiono & Quinn, 1994). While divorce rates have declined within the past ten years, particularly dropping between 10% - 21% (Cohen, 2019; Hemez, 2017), divorce rates for younger American couples continue to remain high and divorce rates for Americans over the age of 50 have steadily increased since the 1990s (Cohen, 2019). Researchers proposed that high levels of marital dissatisfaction have been found to predict an increased risk in separation and divorce (Devine & Forehand, 1996; Rodrigues, Hall, & Fincham, 2013), and that between one-half and two-thirds of all marriages will ultimately end in separation or divorce (Martin & Bumpass, 1989), with the United States having one of the highest divorce rates in the world (Kennedy & Ruggles, 2014). Due to the documented increase in divorce rates as well as high divorce rate projections, researchers began focusing scientific efforts on the topic of marital discord. Coyne (1976a, 1976b) was one of the first scholars to inquire about the relationship between interpersonal relationships and depression; findings suggested that marital discord was one of the leading causes of depression due to an increase in disagreements, lack of communication, and a deficiency in overall stability (Coyne & Downey, 1991).

Research efforts examining the relationship between marital and family processes and depression rapidly increased in the 1980s (Nelson, 1990), but there was not a consensus of how

to define marital discord. Throughout the literature, the definition of marital discord has varied, with the definition depending on the type of constructs being studied and the measurements that were utilized. For example, according to Sayers, Kohn, & Heavey (1998), a portion of researchers who have studied marital discord have done so by examining marital interaction (i.e., observable samples of interpersonal interaction) and marital quality (i.e., the evaluation of one's marriage), while others have examined individual emotional reactions to one's spouse (Karney & Bradbury, 1997). In terms of measures used, some have utilized measures that represent marital discord as a single, continuous dimension (e.g., negative affect; Fincham, Beach, & Kemp-Fincham, 1997), as a categorical variable (e.g., presence or absence of negative behaviors; Fincham & Beach, 1999), and as a latent construct (Beach et al., 2005). The present study conceptualized marital discord as a latent construct, labeled couple wellbeing. Couple wellbeing comprised three measures that assessed marital quality, relationship communication satisfaction, and relationship warmth; low levels of couple wellbeing reflected higher levels of marital discord. A latent construct was utilized in the present study in order to include several observed variables that captured the essence of couple wellbeing as well as to allow for more sophisticated analyses (i.e., structural equation modeling).

Marital Discord and Depression

Regardless of how researchers have chosen to examine and/or define marital discord, there is a consensus that marital discord is often a precursor to adverse mental health symptomology, particularly depression, and can augment one's vulnerability of experiencing depressive symptoms (Beach & O'Leary, 1993b; Nelson & Beach, 1990; O'Leary, Christian, & Mendell, 1994). In particular, researchers have found correlations between marital discord and elevated levels of sadness, appetite and sleep issues, and irritability and decreases in libido

(Beach et al., 2003). Marital discord also had the ability to predict increases in depressive symptoms in both male and female spouses over a period of time (Beach et al, 2003; Beach & O'Leary, 1993a, 1993b; Fincham et al., 1997). Additionally, marital discord appeared to generate the onset of depressive episodes (Beach, Whisman, & O'Leary, 1994; Nelson & Beach, 1990; O'Leary, Christian, & Mendell, 1994), as well as predict a depressive relapse from an acute depressive episode (Hooley & Teasdale, 1989). In regards to gender differences, research has indicated marital discord can be a particularly salient precursor to depression for wives (Brown, Harris, & Hepworth, 1995; Christian-Herman, O'Leary, & Avery-Leaf, 2001).

Based on these findings, researchers explored which forms of therapy addressed the relationship between marital discord and depression, with preliminary results indicating the benefits of marital therapy for the treatment of depression. Specifically, in examining both depression symptoms and marital adjustment ratings, researchers found that wives who engaged in either behavioral marital therapy or cognitive therapy reported greater decreases in depressive symptoms than wives who were assigned to a wait-list control group (Beach & O'Leary, 1992). Moreover, they found that wives who engaged in behavioral marital therapy reported greater increases in marital adjustment than wives who engaged in cognitive therapy or who were in the wait-list group. After conducting process analyses for all three conditions, Beach and O'Leary (1992) also found that the decrease in depressive symptoms of wives who engaged in behavioral marital therapy were mediated by the increase in marital adjustment, further underscoring the importance of couple wellbeing for individual mental health.

Along with Beach and O'Leary (1992), Jacobson and colleagues (1991) conducted trials of marital therapy for depression. They similarly examined both depressive symptoms and marital satisfaction ratings in those who engaged in behavioral marital therapy and those who

participated in cognitive therapy. However, a third condition was investigated, which combined the use of behavioral marital therapy and cognitive therapy. Similar to Beach and O'Leary's results (1992), Jacobson and colleagues (1991) demonstrated that when comparing the effects of behavioral marital therapy and cognitive therapy, both treatment modalities were equally effective in decreasing depressive symptoms. However, only those who engaged in behavioral marital therapy reported a significant increase in marital satisfaction. When examining the effects of the combined treatment condition (i.e., those who engaged in behavioral marital therapy and cognitive therapy), researchers found that the combined treatment condition did not provide greater benefits in decreasing depressive symptoms when compared to either the behavioral marital therapy and cognitive therapy conditions (Jacobson et al., 1991). Furthermore, while those in the combined condition did report comparable increases in marital satisfaction to those in the behavior marital group, such increases were not statistically significant.

In part, as a result of Beach and O'Leary (1992) and Jacobson and colleagues (1991) asserting the benefits and superiority of behavioral marital therapy on depression, the American Psychological Association noted the importance of marriage counseling in treating depressive symptoms in their 1993 Practice Guidelines for Major Depressive Disorder in Adults (APA, 1993). Specifically, the APA asserted that marital therapy had the ability to "reduce depressive symptoms and the risk of relapse in patients with marital problems" (APA, 1993, p. 98). Due to the increase in scientific knowledge regarding the relationship between marital discord and depression as well as marital therapy showing promise in the literature, theoretical models were further developed to explain the processes of marital discord and its link to adverse mental health. One such model, the Marital Discord Model of Depression (MDMD), is a behavioral model developed by Beach, Sandeen, and O'Leary (1990). This model was developed to shed

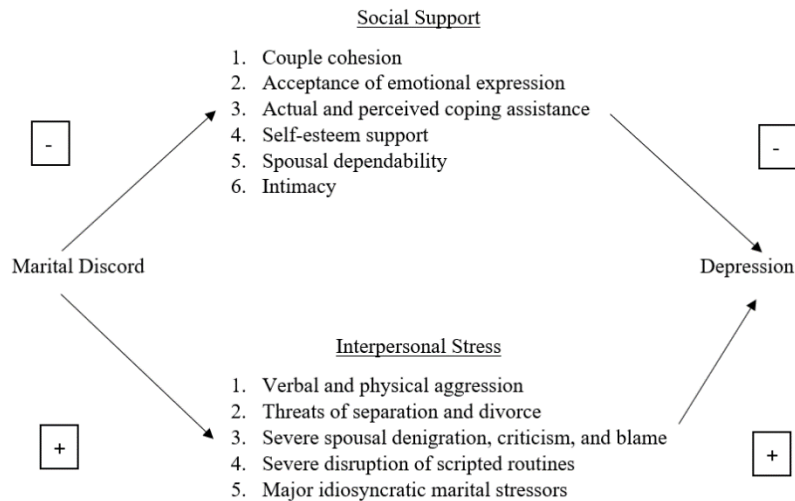
more light on the relationship between marital discord and depression and to also manage and direct therapy interventions for married couples who experience marital discord.

Marital Discord Model of Depression

The Marital Discord Model of Depression (MDMD; Beach, Sandeen, & O'Leary, 1990) theorizes that marital discord is a prominent risk factor for depressive symptoms in married couples, and that marital satisfaction can mediate the effect of marital therapy on depressive symptoms for both spouses and used as an intervention tool to prevent depressive symptoms (illustrated in Figure 1). In particular, the model identifies how the relationship between six social support factors and five interpersonal stress factors can lead to depressive symptoms (Beach & Cassidy, 1991; Beach, Sandeen, & O'Leary, 1990). MDMD asserts that decreases in social support factors, such as intimacy, paired with increases in interpersonal stress factors, such as physical aggression, can lead to depressive symptoms in spouses (Beach, Sandeen, & O'Leary, 1990). The six social support factors are targeted in therapy for enhancement, and the five interpersonal stress factors are targeted for reduction and elimination.

Figure 1

Marital Discord Model of Depression



Note. Taken from Beach, S. R., & Cassidy, J. F. (1991). The marital discord model of depression. *Comprehensive Mental Health Care*, 1(2), 119-136.

Support for the Marital Discord Model of Depression. Several studies have found support for the MDMD. For example, researchers set out to determine whether MDMD was feasible in explaining the relationship between marital discord and depression (Beach et al., 1993). Their goal was to determine whether marital satisfaction not only predicted depressive symptoms above other sources, but also whether the marital relationship was identified as the most prominent source of both social support and interpersonal stress (factors identified in MDMD). Specifically, Beach and colleagues examined the relationship between depressive symptom ratings and sources of interpersonal stress and support, with the sources including spouses, families, friends, co-workers, and identified others. While other sources besides one's spouse did contribute to depressive symptoms, one's spouse (i.e., marital relationship) was the single most predictive source for depressive symptoms. Additionally, spouses were identified as the most prominent source of both social support and interpersonal stress, with co-workers being

identified as the second most prominent source. Based on these results, they asserted the strong utility of MDMD and stated that marriage was a “viable point of intervention for depression” (Beach et al., 1993, p. 322). These findings suggest that when examining marital satisfaction in military wives, high levels of marital satisfaction, and perhaps strong couple wellbeing more generally, are likely to be associated with the mental health of military wives while couple wellbeing may mediate the relationship between military stressors and depression.

In addition to examining the relationship between marital discord and depressive symptoms, Christian, O’Leary, and Vivian (1994) sought to examine specific variables they believed impacted the relationship between marital discord and depression, and how such variables correlated with the social support factors and the interpersonal stress factors identified in MDMD. While they viewed MDMD to be a comprehensive model in identifying the relationship between marital discord and depression, they argued the model lacked a detailed description of which spousal intrapersonal resources and characteristics mediated depressive symptoms. They hypothesized that a more detailed description of such resources and characteristics would help further illustrate the details surrounding the predisposition of depressive symptoms as well as facilitate marital therapy interventions. Moreover, they also wanted to assess whether any gender differences existed in examining the correlation between marital discord and depression due to a large majority of studies primarily sampling wives.

Specifically, Christian and colleagues assessed variables that represented both individual and interpersonal characteristics in married couples who attended marital therapy. The variables chosen were ones that were identified in previous studies to be linked with marital discord and depression, particularly variables that illustrated the social support factors and interpersonal stress factors of MDMD. Intrapersonal/individual characteristics assessed included general

problem-solving ability, employment status, and assertiveness with one's spouse. The interpersonal/dyadic characteristics assessed included aggression towards one's spouse, the amount of time the marital discord occurred, and the beliefs and expectations regarding the marriage. Similar to findings from previous studies, the results demonstrated a significant correlation between marital discord and depressive symptoms. This correlation was significant for both husbands and wives, with wives having a higher mean score for both depressive symptoms and marital discord.

Moreover, mean scores of depressive symptoms for both husbands and wives were noted to be three times higher than community samples from previous studies (Beach & O'Leary, 1993), which led to further assertions of the robust association between marital discord and depression. When examining the variables involving both individual and interpersonal characteristics, the researchers found differences related to gender. Specifically, interpersonal characteristics, such as lower assertiveness from one's spouse, unemployment, the belief one's spouse engaged in mindreading, and the belief that disagreement was detrimental to the marriage, were associated with depressive symptoms for wives but not for husbands. Additionally, physical aggression from one's spouse, lower problem-solving ability, and lower perception communication skill ratings predicted depressive symptoms only for wives. In regards to husbands, results only identified an intrapersonal variable, low problem-solving ability, as a variable that predicted depressive symptoms. Furthermore, discordant husbands, on average, reported higher marital satisfaction than discordant wives.

The finding that marital discord was strongly associated with depressive symptoms for both husbands and wives in Christian and colleagues' study (1994) was unsurprising given similar results from previous studies. However, the gender-related differences in regards to

intrapersonal and interpersonal characteristics as they related to marital discord and depressive symptoms provided new insight into how such differences could be addressed in therapy. For example, findings that demonstrated interpersonal characteristics (e.g., beliefs/expectations regarding marriage, aggression) were more likely to be associated with depressive symptoms for wives than husbands, placed a spotlight on dyadic and relationship building variables that wives believed were most vital when addressing marital discord and depressive symptoms. Moreover, the findings that discordant husbands reported higher marital satisfaction, paired with the outcome that an intrapersonal characteristic (i.e., problem-solving ability) was more likely to be associated with depressive symptoms for husbands, indicated that husbands placed less emphasis on interpersonal factors and more prominence on autonomy and achievement.

Beach and colleagues (2003) also compared gender differences in relation to MDMD. Similar to what Christian and colleagues found (1994), their results indicated that the correlation between marital discord and depressive symptoms was significant for both husbands and wives, with wives reporting higher mean scores of depressive symptoms. Additionally, they collected depressive symptom ratings one year after the initial ratings were collected, with results suggesting that initial marital satisfaction levels predicted later depressive symptoms for both husbands and wives over time, but more so for wives. However, depression remained more stable for husbands. According to Beach and colleagues, this finding was “a key prediction of the marital discord model of depression” (2003, p. 367) since the results signified how marital satisfaction was a vital intervention tool to prevent/decrease the risk of depressive symptoms for both genders.

The previously mentioned studies demonstrated strong support for the utility of MDMD in conceptualizing the relationship between marital discord and depressive symptoms. However,

Whisman (2001) noted that the majority of those studies lacked samples of ethnically diverse couples, and he urged others to use diverse samples in determining whether the theoretical model was adequate in explaining the relationship between marital discord and depressive symptoms. In turn, Hollist and colleagues (2007) examined whether MDMD could be replicated in a Latino sample; more specifically, they sought to determine whether marital discord was a precursor to depressive symptoms among Brazilian wives using longitudinal data collected over a period of two years. As predicted, marital satisfaction at Time 1 predicted depressive symptoms at Time 1 and Time 2, which provided support for using MDMD with a Latino sample as well as supporting the theory that marital discord both caused and sustained depressive symptoms.

When Hollist and colleagues compared Brazilian wives' standardized parameter estimates with the standardized parameter estimates of American wives (American estimates reported by Beach et al., 2003), Hollist and colleagues found about a 46% increase in the standardized parameter estimate in Brazilian wives regarding the relationship between marital discord and depressive symptoms. This finding led to the indication that "marital satisfaction may have a stronger cross-sectional relationship with depression among Brazilian women than women in the United States" (Hollist et al., 2007, p. 493). Based on previous research on Brazilian families (Korin, 1996), they speculated that this finding might have resulted from cultural-specific variables regarding relationships. Specifically, the Hollist and colleagues believed that the responsibility of Brazilian women to maintain relationships was far greater than for American women, which most likely explained why the relationship between marital discord and depressive symptoms was more prominent in Brazilian wives.

In conclusion, scholars have dedicated research efforts on examining the relationship between marital discord and depressive symptoms. Beach, Sandeen, and O'Leary (1990) created

MDMD not only to shed more light on the relationship between marital discord and depressive symptoms, but to also identify helpful interventions, both prevention and therapeutic in nature, for married couples. In accordance with the theoretical underpinnings of the model, research suggests that marital discord is a salient risk factor for depressive symptoms in both husbands and wives. However, one study's results indicated that the relationship between marital discord and depressive symptoms for wives was due to interpersonal characteristics (e.g., aggression from husbands), while intrapersonal characteristics (i.e., problem-solving ability) better explained the relationship for husbands.

Due to support for MDMD's ability to identify marital discord as a prominent risk factor for depressive symptoms and doing so for different samples, the present study expected MDMD to support/explain a relationship between marital discord and adverse mental health symptoms among military wives. This dissertation incorporated the main principles of the theory, namely how couple wellbeing, a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth, were associated with depressive symptoms and personal wellbeing of Army wives. The design of the present study did not directly assess each of the six social support factors nor each of the five interpersonal stress factors outlined in the MDMD. Rather, suppositions of this theoretical model were applied to create the couple wellbeing variable (to include components of intimacy, aggression, and self-esteem support, and couple cohesion) and guide our assumption that military wives who reported lower levels of couple wellbeing (thus, reflecting discord) would report more psychological distress, specifically higher levels of depressive symptomology and lower levels of personal wellbeing. In line with the MDMD, it may be that a healthy couple relationship (a lack of marital discord) may be

associated with better psychological health; thus, a couple wellbeing may be a resource for individuals.

In addition to using MDMD to examine psychological symptomatology of military wives, the present study utilized Family Stress Theory, namely the ABCX Model of Family Stress. Specifically, suppositions of the ABCX Model of Family Stress were used to assess how stressors (or lack thereof) related to military life impacted the psychological outcomes of military wives. An explanation of Family Stress Theory as well as representations of the ABCX Model of Family Stress in the literature are discussed in the next section.

Family Stress Theory

The Family Stress Theory has been used in examining both military and non-military family processes, with recent focus on how military families handle stressful life demands, such as deployment and other daily stressors unique to military life (MacDermid Wadsworth, 2010). The Family Stress Theory posits that the ability of a family to maintain a strong and connected unit is based on principles of crisis and adjustment, with family cohesion depending largely on the structure and roles of the family at the time of the stressor, stressors they face, resources a family has, and how they define/perceive events (Bowen, Martin, & Mancini, 2013; Hill, 1949; Jessor et al., 1995). In addition, Family Stress Theory claims that families who experience greater levels of support and resources as well as have more positive perceptions will handle stress and transitions better than families who do not have high levels of support and resources nor have positive perceptions of events (Karney & Crown, 2007).

Researchers have used Family Stress Theory to theorize the relationship between deployment stressors and family adaptation processes with military families of recent wars, particularly focusing on resilience factors (Bowen, Martin, & Mancini, 2013). For example, Family Stress Theory has been applied to research regarding the challenges military families face in the pre-deployment stage and been used to identify specific protective factors, such as preparation, that can buffer the impact of stress on the family system (Collins, Lee, & MacDermid Wadsworth, 2017). Results indicated that aspects of “stress pileup”, which is defined by McCubbin and Patterson (1983) as the collected amount of stress families experience (i.e., health, financial, legal, work, relational), was associated with higher levels of depressive symptoms in both soldiers and their spouses during the pre-deployment stage. This pileup of stressor also explained a large portion of the variance above and beyond the control variables

(i.e., rank, gender, marital happiness). Results also demonstrated that informal sources of support, such as social support from family, were negatively associated with symptoms of depression among both soldiers and spouses during the pre-deployment stage. Based on this finding, it is expected that among military wives in the present study, higher social support would be associated with fewer negative psychological symptoms.

Deployment creates considerable stress for military wives, requiring them to adjust both on an intrapersonal level and within the family system, and other risk factors associated with deployment via the Family Stress Theory lens have been found. For example, military wives reported experiencing emotional and physical isolation from others while their active duty spouses were deployed, especially if they were geographically located great distances from their main support system as a result of a military relocation (Burrell et al., 2006). Therefore, it was expected that military wives in the present study whose soldiers experienced greater number of months deployed and wives who did not experience sources of support during deployment were more likely to report higher levels of depressive symptoms as well as lower levels of personal wellbeing.

In addition to experiencing emotional and physical isolation during deployment, Wiens and Boss (2006) found Army wives also experience boundary ambiguity, or doubt and confusion about their role in the family while the soldier is away. Many Army wives experience the peak of identity role conflict and confusion when soldiers return from deployment and find this stress factor also impacts relationship satisfaction between soldiers and their wives (MacDermid Wadsworth, 2010; Pincus et al., 2001). For example, the extended absence of soldiers during deployment results in wives assuming multiple roles simultaneously (e.g., child caretaker, manager of household functions, manager of finances), thus creating role boundary issues when

soldiers return home and attempt to assimilate back into the family system (Davis, Ward, & Storm, 2011; Faber et al., 2008; Peebles-Kleiger & Kleiger, 1994). For example, some Army wives adopt family financial responsibilities from their soldiers once they leave for deployment, which can cause confusion and frustration as to who will continue such responsibilities upon the soldiers' return, and longer time away can exacerbate role confusion. According to Sgt. First Class Kent Phylfe,

“While I was away doing Army things, my wife had to be the wife/husband/mother/father all rolled into one and handled all of the other daily chores. When I came home, I wanted to jump in and take back those roles that I felt were mine. My wife did not want to go through the process of releasing those duties only to be thrust back into them again at a moment's notice. This strain of that coming and going is amplified in a military family” (Burton, 2012, p. 1).

The strain of having a soldier gone for long periods of time as a result of deployment, often times at a moment's notice, undoubtedly impacts Army wives and the relationships they have with their soldiers, making their role at times quite difficult. However, there remains to be limited research examining how deployment duration is associated with the overall wellbeing of Army wives, despite the increase in deployments since 2001 to Iraq and Afghanistan (MacGregor et al., 2012). While deployments have substantially subsided in recent years and are no longer increasing, residual deployment effects have been noted to occur long after service members return home (Toomey et al., 2019). Therefore, investigating the role of deployment in the present study not only helped inform understanding of the association between the variables under investigation, but could also have future practical implications for the mental health of Army wives.

While most research efforts investigating the effects of multiple deployments and/or the duration of deployment have largely focused on service member wellbeing, there have been researchers who examined the relationship between deployment and spousal wellbeing. Lester and colleagues (2010) compared the mental health of wives whose service members were soldiers or marines and were either currently deployed or had recently returned from deployment at the time of the survey. The majority of wives reported clinical levels of negative psychological symptoms such as depression, anxiety, and posttraumatic stress, with wives whose service members were currently deployed reporting up to 12% more symptoms than wives whose service member had already returned from deployment. Results also indicated that wives whose service members were deployed longer (typically active duty Army) also experienced more psychological distress than wives whose service members were not deployed as long. Based on the results of that study, it was expected that Army wives in the present study whose soldiers experienced more total months deployed would experience more psychological distress.

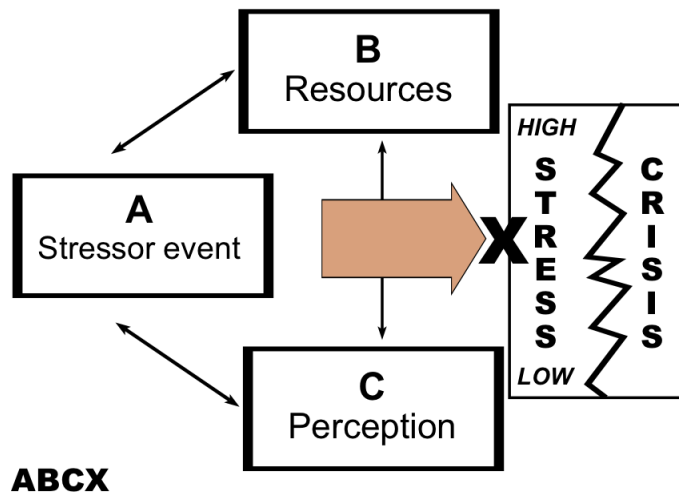
ABCX Model of Family Stress

The Family Stress Theory originated from Rueben Hill's examination of military families during the post-World War II era, with Hill being one of the first researchers to study, and theorize about, the impact deployment had on military families (Boulding, 1950; Hill, 1949). In 1958, Hill introduced the ABCX Model of Family Stress, which can be found in Figure 2. The *A* component of the model symbolizes a stressful event or experience, *B* represents a family's available resources to address the stressor event, *C* is how the family defines and perceives the event, and *X* reflects whether the family is in a state of crisis as a result of the stressor event (Hill, 1958). Hill defined crisis as "any sharp or decisive change for which old patterns are inadequate" (Hill, 1949, p. 51) and believed families' adjustment to crisis was similar to a roller

coaster ride, with families moving from crisis to patterns of inefficiency, then to recovery, and subsequently to restructuring the family unit. According to Hill, contingent upon how families interpreted deployment and the amount of resources at their disposal, separation could negatively impact military families, or be viewed as a crisis with possible long-term effects (Bowen, Martin & Mancini, 2013; Hill, 1958). Over the years, others found support for Hill’s assertions and military families specifically (e.g., Peebles-Kleiger & Kleiger, 1994) and the ABCX Model more broadly.

Figure 2

ABCX Model of Family Stress



Note. Taken from From Hill, R. (1958). Generic features of families under stress. *Social Casework*, 49, 139-150.

The present study incorporates suppositions from Beach and colleagues’ Marital Discord Model of Depression (MDMD) and Rueben Hill’s ABCX Model of Family Stress to conceptualize and evaluate how stressors related to military life may have some bearing on the

psychological health of military wives. More specifically, military-specific stressors (the A component of the ABCX Model) were expected to be associated with some levels of crisis for military wives (the X component of the ABCX model). This study identified three salient military-specific stressors: the total number of months one's spouse was deployed, (lack of) social support from the military community, and (poor) military life satisfaction. In the presence of these stressors, military wives were expected to report more adverse psychological health symptomology, specifically higher levels of depressive symptomology and lower levels of personal wellbeing. Furthermore, the B component of ABCX Model suggests that there are potential resources available for individuals and families that may mitigate the impact of stressors. With guidance from the MDMD and existing empirical literature, having a healthy couple relationship was identified as a potential resource for military wives that may explain the link between military-related stressor and adverse psychological outcomes. The next section of this dissertation provides an overview of each of these study variables with regard to relevant empirical literature and potential relationships between variables.

Present Design Variables

Military-Specific Stressors/Supports: Total Number of Months Deployed, Social Support from Military Community, and Military Life Satisfaction

Total Number of Months Deployed. Researchers who have included deployment data in their studies have found deployment duration and cumulative months deployed across one's career as negatively correlated with service members' wellbeing and overall mental health (e.g., Buckman et al., 2010; Rona et al., 2007), but less is known about the relationship between deployment duration and military wives' psychological health. Those who have investigated how deployment duration affected military wives found that deployment, specifically extensions to deployment, were adversely associated with depression and anxiety in military wives (SteelFisher, Zaslavsky, & Blendon, 2008). Moreover, Mansfield and colleagues (2010) found that in comparison to Army wives whose active duty service member had not deployed, wives whose active duty service member deployed 1-11 months were given more diagnoses of depressive and anxiety disorders (2.74% and 1.57% additional cases, respectively). Wives whose active duty service member deployed for more than 11 months were given more diagnoses of depressive and anxiety disorders (3.93 and 1.87 additional cases, respectively).

Researchers who have examined the relationship between duration of deployment and relationship distress have found that military couples were more likely to report higher levels of relationship turmoil when the soldier was deployed for longer periods (> 9 months), compared to soldiers for less time (~1 month). Additionally, military separations have been associated with increased risk for negative relational and familial outcomes such as divorce and reduced employment for spouses due to dedicating time for childcare (Angrist & Johnson, 2000) as well as to lower levels of marital satisfaction (Burrell et al., 2006). Furthermore, two of the main hallmarks of OIF and OEF deployments, enhanced pace of deployment and increased length of

deployment, have been associated with increased divorce rates among military couples across multiple studies (Alvarez, 2006; Fiore, 2005; Jaffe, 2005).

Although most research has identified deployment duration and cumulative months deployed as risk factors for individual and couple wellbeing, Karney and Crown (2011) found divergent results regarding the relationship between length of deployment and marital dissolution when examining military records since 2001. They examined personnel records and the Department of Defense's deployment history data from all branches of the military and found that for most branches of the United States military, deployment length was associated with a decreased risk of couples terminating marriages, with longer deployment lengths associated with greater decreases in marital termination risk. Only one branch of the military, the Air Force, presented data that indicated longer deployments were linked to increased risk of military couples terminating marriages. Additionally, results showed that young military couples, or military couples who were married for "less time" (p. 28), had the greatest benefits of deployment, or had the greatest reduction in risk for marital termination. Overall, these results led Karney and Crown to stress more research was needed in examining both the negative and positive effects of deployment, specifically what resources and supports military couples have at their disposal in regards to deployment. The current study examined the relationship between total number of months a soldier was deployed and psychological outcomes of military wives.

Social Support from Military Community. In general, having access to support is crucial for military families due to the tendency for these families to be isolated from their main support system as they frequently relocate to different duty stations. For example, soldiers and Army wives who experienced large losses in support, particularly social support, due to relocations, often over-relied on immediate family members for support, resulting in further

isolation from outside supportive resources, which in turn advanced the need for military families to utilize both military and non-military community resources (Clark, Jordan, & Clark, 2013; Orthner & Brown, 1985). In fact, levels of social support (e.g., neighbors, leadership) demonstrated to be negatively associated with depressive symptoms for airmen even when airmen had experienced a stressful/negative deployment (Welsh et al., 2015). Thus, a lack of support for military families may be conceptualized as risk factor or potential stressor for military wives.

Recognizing that social support comes from different sources (e.g., one's spouse, the military community), Solomon and colleagues (1991) investigated the role of different social support networks and how each uniquely reduced the risk of negative psychological symptoms in wives whose marriages were strained due to a PTSD diagnosis for their service member. While previous researchers claimed social support networks can counteract the decrease in marital satisfaction in non-military samples (Mueller, 1980), Solomon and colleagues' study did not replicate this finding. Instead, only positive marital interactions/processes significantly reduced levels of hostility, anxiety, and depressive symptoms in military wives. While social support was viewed as an important variable, only military partners played a key role in the psychological outcomes of wives.

Andres (2014) collected data from wives of Dutch service members before, during, and after deployment, particularly examining the impact social support had on various outcomes. Overall, Andres found that social support levels for wives were highest prior to deployment but then gradually decreased over the course of deployment and even more so after a service member's return. In comparing the relationship between social support and relationship satisfaction, Andres found a positive relationship between levels of social support and

relationship satisfaction levels, and that social support levels prior to deployment predicted relationship satisfaction levels three months after a service member returned home. Social support consisted of both informal networks outside of the military as well as military resources/services. Approximately 51% of the wives surveyed utilized military support/services provided by the Home Front Committee, which was a military organization comprised of volunteers who offered information services and social activities. Services were also provided by the Netherlands Defense organization, which assisted with communication between wives and their service members via professionals (i.e., psychologists, chaplains, and social workers). The percentage of wives who utilized social support services from both of these organizations reported valuing the services and finding them helpful. Andres asserted that these results reiterated how critical social support services are to military couples, especially during and after deployment, and a lack of support may provide a context for stress.

Support from the military community is important for military couples, not only to obtain support from their own community and neighborhood, but to also feel a sense of belonging from individuals and families who share similar experiences. For example, Bowen and colleagues (2003) surveyed an Air Force base to examine the relationship between formal community-based social networks (i.e., military unit), informal community-based social networks (i.e., non-military support such as friends), and sense of community with adaptation in Air Force communities (i.e., perceptions of family members regarding working together in dealing with stressors, commitment, cohesion, and handling responsibilities). They defined sense of community as, “reflecting the degree to which members feel positively attached to the Air Force/military as an organization and view the base community as a source of support and connection to others and to the institutional Air Force” (p. 35). While results did not demonstrate

a significant relationship between formal sources of support from the military unit and only showed a moderate direct effect of informal community connections, they discovered the importance of sense of community. Specifically, they found sense of community mediated the relationship between formal support (i.e., Air Force unit support) and informal support (i.e., friends) and family adaptation. In turn, the researchers concluded that military families, if able, should not rely solely on one source of support, and that sources of support might only become significant for family adaptation processes when they influence sense of community.

Spera (2009) examined how social support in the form of community resources impacted coping levels in Air Force wives. Specifically, Spera examined whether Air Force unit relationship quality, Air Force leadership effectiveness, and social support from community sources predicted military wives' abilities to cope with the demands of the Air Force, or buffered against negative psychological outcomes in military wives. Findings indicated that military wives who were married fewer years and whose airmen were lower in rank were more likely to have problems coping with military life stressors (i.e., they reported more psychological distress). In particular, compared to 14% of officers, approximately 35% of junior enlisted airmen perceived their spouses would have a serious or very serious issue coping. Compared to 10% of airmen who were married 20 years or more, 30% of airmen who were married less than three years believed their spouse would have a serious or very serious issue coping. However, results also demonstrated that coping levels were higher when unit relationship quality, leadership effectiveness, and social support were perceived as higher. The finding that length of marriage was correlated with the perception of coping levels in military wives is not necessarily surprising, given that relationship length was found to influence outcomes. For example, using

an Attachment Theory perspective (e.g., Bowlby, 1969, 1973, 1980), Feeney (2004) found that secure attachment was positively correlated with relationship length over time.

One limitation of Spera's study was that military wives were not directly surveyed, as the results were based on the airmen's perceptions of their wives' abilities to cope. The current study utilized data collected directly from military wives in regards to levels of community resources, and based on the above findings, was initially believed to have a positive direct effect on personal wellbeing and a negative direct effect on depressive symptoms. Additionally, similar to the previously mentioned research findings that indicated soldier rank and number of years married were significantly correlated with psychological outcomes in spouses, rank and the number of years married were also controlled in the present study. Additionally, the current study defined social support from a strengths-based perspective to measure perceived level of military community support experienced by Army wives within their community on base (as opposed to a stressor characterized as a lack of social support).

Military Life Satisfaction. Military wives experience stressors common to non-military spouses, such as employment, parenting, and marital concerns, but also experience military-specific stressors including frequent relocations, deployment, fear for soldiers' safety, and re-acclimation once a soldier returns from deployment (Drummet, Coleman, & Cable, 2003; Wright et al., 2006). While experiencing these stressors, military wives also often face pressure to conform, or obey certain behavioral standards, as the behavior of family members can negatively affect the careers of soldiers (Albano, 2002). In addition, the military routinely places high demands on soldiers, which indirectly impacts military wives. Specifically, following the terrorist attacks of September 11, 2001, the United States government previously required the involvement of numerous service members in operations correlated with OIF and/or OEF as well

as other national security/terrorist-related operations in the Middle East (Drummet, Coleman, & Cable, 2003). In particular, the demands on service members who served in Iraq and/or Afghanistan increased tremendously since the war in Vietnam, with deployment operations having been more frequent in number and included longer durations (Hosek, Kavanagh, & Miller, 2006). Deployment statistics indicated that service members in the Army and Marines were especially impacted by longer, more frequent deployments, as well experienced a decrease in interludes between deployments (Defense Manpower Data Center, 2004). Consequently, it comes as no surprise that these high demands were correlated with military wives at times feeling dissatisfied with military life (Burrell et al., 2006).

One could also contend that a large part of stress experienced by military wives includes certain aspects unique to the military community. For example, Black (1993) found that in addition to deployment being correlated with lower levels of military life satisfaction in military wives, they also discovered other military life factors that contributed to spousal satisfaction, including level of support from the military (e.g., Army) as well as factors involved with a soldier's job (e.g., pay, benefits, rank). There currently remains limited information pertaining to military life satisfaction post-9/11, and Segal (1986) continues to be one of the most prominent researchers to examine the impact military-specific demands have on military families. Segal identified four demands that greatly impact military families: (a) geographic mobility, (b) residence in foreign countries, (c) periodic separations from family, and (d) risk of service member injury or death. Others have echoed the impact of these demands, particularly finding that enlisted soldiers who move overseas, specifically to Europe, had the most relocation issues/stressors (Croan, LeVine, & Blankinship, 1992). However, other scholars have also noted that difficulty adjusting to relocation is not necessarily isolated to a certain rank (Croan, LeVine,

& Blankinship, 1992; Orthner & Rose, 2006). Segal also identified other factors that greatly impacted military family members, such as masculinity of the military institution, pressures for family members to conform to standards of expected behavior, and long and often unpredictable hours of service members.

Burrell and colleagues (2006) were some of the first to incorporate Segal's four demands in determining how such demands impacted the following four outcomes of Army wives who were living overseas: (a) physical health, (b) psychological health, (c) marital satisfaction, and (d) Army life satisfaction. Based on Segal's theoretical assumptions and past studies, they expected all four demands to have a significant relationship with all four outcomes, including Army life satisfaction. Overall, results indicated that the impact of moving and separations were significantly negatively related to Army life satisfaction. Burrell and colleagues noted that while there was a negative relationship between the impact of moving and Army life satisfaction, the impact of moving was not correlated with physical health, psychological health, or marital satisfaction. This indicated that lower levels of Army life satisfaction in regards to one demand may not necessarily impact other areas of spousal functioning. Interestingly, they also examined whether the number of moves impacted Army life satisfaction, with findings denoting a positive relationship between number of moves and Army life satisfaction. The researchers asserted this finding demonstrated how spousal perception of the number of moves was perhaps more important than the actual number of moves, possibly due to spouses relocating to desired areas.

Overall, the military has underestimated the effect military life factors have on military wives, and subsequently on the family unit (Kelley et al., 2001), and there are few studies that have examined military life satisfaction in military wives whose soldiers have deployed to Iraq and Afghanistan since 2001. Based on the above research findings, military wives who reported

less satisfaction with military life were expected to report higher levels of depressive symptoms and lower levels of personal wellbeing. The present study defined military life satisfaction as the level of satisfaction Army wives reported regarding the characteristics and demands of military life in their community (e.g., how long their soldier was away from home, perceived support from Army).

Couple Wellbeing

According to the ABCX Model of Family Stress, the availability and use of resources impacts how individual family members adapt to stressors (Hill, 1958; McCubbin and Patterson, 1983). Specifically, three main resources were identified that family members can utilize in adapting to a stressor: 1) personal resources (individual characteristics of family members, such as self-esteem), 2) family system resources (cohesion and communication), and 3) social support resources (people, communities, or institutions outside of family; Olson, 2000; Pearlin, & Schooler, 1978; Pilisuk & Parks, 1981). For this study, three resources were identified that reflect both familial and social support resources within the context of the couple relationship, specifically marital quality, relationship communication satisfaction, and relationship warmth.

Marital Quality. Marriage has been identified as one of the great casualties of war (Cohan, Cole, & Davila, 2005), and marriages have been greatly impacted by the recent conflicts in the Middle East. Between 2001 and 2008, divorce rates gradually increased for both OEF and OIF veterans due to the negative impact separation and combat-related stress had on their relationships (Booth, Segal, & Place, 2009). In particular, when male service members' trauma symptoms increased (e.g., irritability, anger, sleep difficulties, and emotional numbing), the less emotionally available they were to their wives, which in turn produced relationship deterioration. Others OIF and/or OEF veteran studies have found similar results, indicating that increased

levels of trauma symptoms predicted lower levels of marital satisfaction in Army soldiers who recently returned from their deployments (Goff et al., 2007). In fact, those who have studied deployment and combat-related effects have asserted that there is an increased risk of service members experiencing marital discord after they return from deployment, with some experiencing marital discord within the first six months of return (Milliken, Auchterlonie, & Hoge, 2007; Peebles-Kleiger, & Kleiger, 1994). Some have suggested that veterans who experience combat increase their risk of divorce by 60% (Ruger, Wilson, & Waddoups, 2002).

Overall, there is a consensus that deployment and combat-related stress, whether from current or past conflicts, plays a negative role on the health and quality of military marriages, especially if service members return from deployment with PTSD (Dekel & Solomon, 2006; Evans et al., 2003; Gallagher et al., 1998; Goff & Smith, 2005; Hendrix, Erdmann, & Briggs, 1998). For example, Riggs and colleagues (1998) found that 70% of Vietnam veterans who reported having PTSD also reported high levels of marital discord, as compared to 30% of veterans who had not reported having PTSD. These results coincide with Solomon and colleagues' findings (1991), which indicated wives' negative psychological outcomes did not necessarily originate from marital interactions but were due to the negative effects PTSD had on the relationship. In particular, they found a negative correlation between the service members' PTSD symptoms and expressiveness in a relationship as well as social intimacy.

As indicated previously, a large portion of the literature has examined marital discord distress primarily from the viewpoint of service members and not their spouses, and primarily from service members who reported having a PTSD diagnosis. Researchers who have surveyed marital discord from the viewpoint of spouses have found that, similar to service members'

reports of marital satisfaction levels, there was a strong relationship between PTSD and lower levels of marital satisfaction in military wives (Allen et al., 2010).

Studies have shown that wives of Vietnam veterans, were at risk for both marital dissatisfaction and negative psychological symptoms when their military partner returned from deployment with a PTSD diagnosis (Dekel, Solomon, & Bleich, 2005; Evans, et al., 2003; Gallagher, et al., 1992; Riggs et al., 1998; Solomon, et al., 1991; Westerink & Giarratano, 1999). In particular, military wives were at an increased risk for both marital distress and negative psychological symptoms when their military partner returned with specific PTSD symptoms such as anger, emotional numbing, and avoidance (Evans et al., 2003; Riggs et al., 1998; Solomon et al., 1991). Similarly, researchers examined the relationship between marital satisfaction levels of Bosnian and Herzegovinian spouses and specific PTSD symptoms of military partners who returned from deployment (Klaric et al., 2011). Results indicated that a military partner's PTSD diagnosis was significantly associated with lower levels of marital adjustment for both military partners and their wives. Wives whose military partners did not have PTSD had significantly higher levels of marital adjustment than wives whose military partners did have PTSD. They also found a significant relationship between a service member's avoidance behavior and lower levels of marital adjustment scores of wives.

In addition, a more longitudinal approach has been taken in assessing marital satisfaction of wives by examining marital satisfaction before, during, and after deployment. When surveying Dutch wives whose service members were deployed for 6 months, results demonstrated that overall, deployment had a negative impact on marriage (Andres, 2014). Moreover, marital satisfaction levels of wives were lowest during deployment, or when wives were physically separated from their service member. Additionally, the largest predictor of

wives' marital satisfaction levels upon a service member's return was the wives' marital satisfaction levels prior to the service member's departure. As a result, researchers asserted that identifying marital issues among veterans and their spouses prior to deployment was crucial, as relationship stability was an important precursor to maintaining healthy marriages upon return from deployment.

The finding that marital satisfaction levels in military couples prior to deployment influences marriages after a service member's return from deployment has been replicated in other studies. For example, when surveying Army wives whose military partners deployed to Iraq for Operation Desert Storm, Rosen and colleagues (1995) found that marital satisfaction levels prior to the deployment predicted marital satisfaction levels one year after the service member's return, or that lower marital satisfaction levels prior to deployment predicted lower marital satisfaction levels one year later. Moreover, Schumm, Bell, and Gade (2000) also found that wives reported the lowest marital satisfaction levels during deployment, and that more stable marriages did not report any long-term detriments to marital satisfaction or quality after a service member's return.

As demonstrated in the aforementioned studies, a large portion of studies examining marital discord in military couples have predominately used marital satisfaction as an outcome variable rather than as a mediator. Researchers who have used marital quality factors as a mediator have done so by applying the Marital Discord Model of Depression (see earlier discussion of MDMD in detail). For example, Beach, Sandeen, and O'Leary, (1990) created and evaluated MDMD in order to explain how relationship factors either decreased or increased a person's risk of depressive symptoms when involved in an acrimonious marriage. Specifically, they asserted that when marital difficulties are present, or when higher levels of marital

dissatisfaction are reported, supportive characteristics (e.g., intimacy, acceptance, cohesion, etc.) are not as accessible to shield against marital stressors, such as aggression, criticism, and blame. In turn, they proposed that this presence of stressors, combined with a lack of supportive factors, mediated the relationship between marital discord and depression. Both Beach and O'Leary (1992) and Jacobson and colleagues (1991) found that posttherapy marital satisfaction levels for both husbands and wives completely accounted for the effect of behavioral marital therapy on depression. In turn, they emphasized that couples who experienced marital discord would experience decreases in depressive symptoms if they participated in behavioral marital therapy.

Currently, there are no studies to date examining whether marital quality mediates the relationship between military-specific stressors/supports and psychological outcomes in military wives. While Family Stress Theory models do not strongly identify mediator categories, or guidelines on how to choose mediators for research purposes, the reason for using marital quality as a mediator is based on previous research, and the notion that a large portion of military wives' psychological functioning is related to interpersonal dynamics with their active duty partners. Additionally, using marital quality as a mediator is supported by the theoretical premise and testing of MDMD, which indicates that marital satisfaction is an important mediator. While this present study did not intend to replicate Beach, Sandeen, and O'Leary's MDMD in full (i.e., no inclusion of behavioral marital therapy), MDMD was used as a guide in determining whether marital quality mediated the relationship between military stressors/supports and psychological outcomes of military wives. The present study defined marital quality as the subjective evaluation of the relationship between military wives and their active duty partner, as perceived by military wives.

Relationship Communication Satisfaction. A main characteristic of damaged or low levels of communication satisfaction in couples is a decrease in warmth, support, and cohesion, which in turn impacts how couples and their family units adapt to life's stressors (Walsh, 2007, 2012). Researchers have asserted that military stressors, such as deployment, can greatly impact interpersonal processes in military couples. For example, deployment can greatly impact "adaptive processes" of military couples, which include "all the ways that spouses interact, communicate, resolve problems, provide support, and understand each other" (Karney & Crown, 2007, p. 24). In regards to communication, Karney and Crown highlighted that deployment can directly impact positive communication processes by limiting occurrences couples can converse with one another, decreasing vital nonverbal communication processes, and limiting topics military partners are able to share with their wives. They also found that deployment can indirectly impact positive communication processes in military couples via combat-related stressors soldiers experienced during deployment. Specifically, as military partners' PTSD symptoms increased or intensified, positive communication between military partners and their wives declined, which lead to lower levels of marital satisfaction.

In addition to Karney and Crown, Allen and colleagues (2010) examined how "adaptive processes," such as communication, played a role in the relationship between PTSD and marital satisfaction in Army couples whose soldier had recently deployed (i.e., returned from deployment within one year of the study) and in Army couples whose soldier had not recently deployed. Results indicated that when controlling for PTSD symptoms, there was not a difference in marital satisfaction levels in couples whose soldier had and had not recently deployed. However, results did suggest negative communication levels (i.e., escalation, invalidation, negative interpretation, and withdrawal) mediated the relationship between PTSD

symptoms and marital satisfaction. For example, the researchers investigated the degree to which negative communication and other “adaptive processes” (i.e., parenting alliance and positive bonding) mediated the relationship between soldiers’ PTSD symptoms and marital satisfaction. Results indicated that soldiers’ reports of negative communication, their own PTSD symptoms, and positive bonding all predicted marital satisfaction levels for soldiers. Similarly, spousal, reports of negative communication, positive bonding, and their soldiers’ PTSD symptoms predicted marital satisfaction levels for wives. When collectively controlled for adaptive processes, soldiers’ PTSD symptoms continued to negatively impact soldier marital satisfaction. When collectively controlling for adaptive processes of wives, soldiers’ PTSD symptoms no longer negatively impacted marital satisfaction levels. Based on these findings, they asserted that therapy interventions should focus on building/improving communication skills (along with positive bonding) in military couples in order to protect and/or repair their marriage from the impact of PTSD.

Researchers have also examined how communication impacted both intrapersonal and interpersonal functioning of wives during deployment (Baptist et al., 2011). Specifically, military couples were interviewed regarding their experiences of deployment and relationship functioning, with couples reporting that marital intimacy, emotional regulation processes, and adapting to change were highly impacted by communication processes. Furthermore, these couples noted that communication was the primary factor that impacted their interpersonal functioning and individual wellbeing. For example, even though military couples reported at times not fully understanding the experience of the other person, both soldiers and wives reported that communication offered support, increased trust, and provided relief from worry and stress. Moreover, Baptist and colleagues found that safety of their active duty partner was the

main worry dominating wives' thought processes and emotions, but that frequent communication with them helped manage this concern. Others have found similar results, in particular that communication between military family members can decrease negative psychological symptoms (e.g., anxiety) surrounding deployment (Walsh, 2012), increase resilience and adaptation processes (Jumper et al., 2005; MacDermid Wadsworth, 2010), and increase closeness and intimacy (Rosen et al., 1995).

Pincus et al. (2001) examined the communication processes in relation to various stages of deployment (i.e., pre-deployment, deployment, and post-deployment). They reported that multiple factors relating to communication impacted outcomes relative to different stages of the deployment cycle, namely pre-deployment and post-deployment. Pincus and colleagues stressed that military couples can face challenges in each stage of deployment, and how couples maneuver the challenges involved in each stage is critical to both interpersonal and intrapersonal functioning. Communication is a critical tool for each stage, as it plays a major role in how military couples navigate challenges. During pre-deployment, which consists of the warning of an upcoming deployment, military wives find themselves trying to organize affairs that can include the creation or renewal of power of attorney and preparing in a variety of ways for the possibility of their active duty partners not returning home. These stressors can lead to an increase in arguments, which subsequently affects spousal functioning (Black, 1993; Pincus & Nam, 1999). For some couples, arguing is believed to be easier than addressing the pain and sadness of saying goodbye before a deployment, with this type of maladaptive communication process serving as a short-term and superficial buffer against the sadness and depression of a soldier leaving (Logan 1987; Pincus & Nam, 1999).

Post-deployment or reintegration/reunion is when the service member returns home from deployment (Pincus et al., 2001). This stage can consist of a variety of feelings and relationship dynamics from both soldiers and their wives. In particular, military wives typically feel a combination of anxiety and excitement regarding the soldier's return, with some wives mourning a loss of independence (Morse, 2006; Pincus et al., 2001). Overall, reconnecting both emotionally and physically after a long separation can be quite stressful for military wives, bringing about issues with communication and relationship satisfaction (Orthner & Rose, 2005). As the soldier returns home, some wives find relinquishing control difficult and the soldier may have difficulty reintegrating with what appear to be new routines (Bowling & Sherman, 2008). Even if couples experience close communication processes during deployment, post-deployment can end such positive communication due to both military partners and their wives not knowing where to begin in discussing certain life details, having difficulty deciding how much attention to pay towards to other's experiences, and the possibility of feeling like their partner will not understand specific experiences (Andres & Rietveld, 2012). Post-deployment is therefore a critical stage for military wives (Pincus et al., 2001), and successful reintegration is most likely established when flexible and patient communication skills are utilized in discussing relationship factors (Bowling and Sherman, 2008; Logan, 1987; Pincus & Nam; 1999). When flexible and patient communication is not implemented, significant consequences to spousal psychological functioning can occur. Specifically, deficits in communication processes have left military wives feeling estranged from their active duty partners, which can result in less communication satisfaction, and subsequently depression symptoms in wives (Bey & Lange, 1974; Matsakis, 1996; Rosenheck & Thomson, 1986).

Research findings have demonstrated the importance of communication processes in relation to individual psychological functioning and adaptation of military wives during various phases of deployment. In addition, research results identified that communication, namely negative communication levels, mediated the relationship between military partners' PTSD symptoms and both military partners' and wives' marital satisfaction levels. Consequently, studies point toward further investigation of how communication processes impacted military couples and how this information can guide future therapy interventions. Additionally, due to a large portion of military wives' psychological functioning being related to interpersonal dynamics with their active duty partners, more research is needed to determine how communication satisfaction is indirectly associated with the relationship between military-specific stressors/supports and psychological outcomes. The present study defined relationship communication satisfaction as the perceived communication satisfaction levels of Army wives in regards to communication with their soldiers about difficult topics (e.g., money, sex, child-rearing).

Relationship Warmth. Warmth is a positive emotion that people communicate to each other by showing acceptance, care, and concern (Gladding, 2017) and represents, in part, the amount of closeness between individuals in a relationship (Guerrero & Andersen, 1991). Warmth has also been defined as “showing support for a partner such as acts of complimenting, being helpful, praising effort, and attending to a partner’s needs” (Ross et al., 2017, p. 573). Additionally, warmth is recognized as the antithesis of hostility (Rogge et al., 2006), and has been identified as a vital aspect of healthy communication (Karahana, 2007; Sanford, 2003). Warmth is a construct that overlaps and correlates with relationship communication satisfaction primarily because the act of defining the construct of warmth includes acts of communication

and connection, such as “eye contact, touch, body orientation, the use of positive facial expressions, tone of voice” (Brown & Hall, 2009). Deployment can impact levels of warmth for military couples due to their inability to engage in physical touch and/or have limited opportunities for face-to-face communication that allows eye contact and facial expressions (Brown & Hall, 2009). Levels of warmth have also been associated with accounts of marital quality, as levels of marital quality are impacted by positive interactions between spouses (Malinen et al., 2012), with the amount of a husband’s warmth being significantly associated with a wife’s perception of marital quality (Newton & Kiecolt-Glaser, 1995). The present study defined warmth as the level of support active duty soldiers demonstrated towards their wives through acceptance, care, praise, and being helpful, as perceived by Army wives.

Researchers who have studied levels of warmth in military couples have done so by examining how levels of warmth mediated financial concerns and marital quality of soldiers and their wives (Ross et al., 2017). Results indicated that higher levels of financial concerns for wives (but not for soldiers) were associated with poorer marital quality through lower levels of marital warmth. When compared to their soldier, military wives’ marital quality was not associated with warmth, or the interpersonal interactions with their soldier, with military wives having perceived financial stress as more important in assessing marital quality than warmth. On average, soldiers reported higher levels of marital quality when they expressed more warmth towards their wives. Wives and soldiers reported higher levels of marital quality when they expressed more warmth.

The majority of studies examining warmth in military couples have done so by including warmth as an element of positive communication processes. Researchers who have investigated warmth in military couples have examined warmth in accordance to IPV as well as financial

stress and marital quality. While many researchers have used levels of warmth as an outcome variable, like Ross and colleagues (2017), the current study utilized levels of relationship warmth as a mediator.

Together, these three relationship resources - marital quality, relationship communication satisfaction, and relationship warmth - were hypothesized to fit together as a latent variable reflecting couple wellbeing. If couple wellbeing is associated with better psychological outcomes of military wives, even in the context of potential military stressors, then this may be seen as a leverage point for intervention. Prevention techniques could be tailored to assist military wives (and military couples) with these factors in mind.

Psychological Outcomes: Depressive Symptoms and Personal Wellbeing

Overall, researchers who examined the psychological outcomes of military wives have found elevated levels of negative psychological symptoms including low levels of physical and mental wellbeing, depression, anger, and anxiety, particularly in the context of military separation and transitions and when spouses feel burdened by military life and caregiving (Andres, 2010; Caska & Renshaw, 2011; SteelFisher, Zaslavsky, & Blendon, 2008; Wheeler & Torres Stone, 2010). Depressive symptoms of military wives have also strongly been associated with marital distress as well as divorce rate increases, and couples who experienced depression were more likely to report lower levels of relationship satisfaction (Christian-Herman, O'Leary, & Avery-Leaf, 2001; Whisman, 2001), perhaps indicating the cyclical nature of mental health and relationship quality and stability. Additionally, military wives who reported higher levels of marital satisfaction tended to report higher levels of overall wellbeing (Rosen, Carpenter, & Moghadam, 1989; Rosen, Ickovics, & Moghadam, 1990).

A portion of studies examining psychological vulnerabilities in military wives have used qualitative methods (i.e., interviews with open-ended questions) to investigate themes and commonalities wives experienced, particularly related to deployment (De Burgh et al., 2011). For example, Davis, Ward, and Storm (2011) interviewed active duty Army wives and found two themes relating to deployment stressors, which is commonly considered the single most stressful factor in the military community: military wives experienced a “roller coaster” of emotions and felt silenced regarding their struggles. Military wives also reported in interviews that deployment was associated with an increase in role occupancy (e.g., adopting roles their active duty partners performed prior to deployment such as budgeter) and renegotiating roles with their service member and others, which resulted in experiencing high levels of both loneliness and depressive symptoms (Adducci et al., 2011; Faber et al., 2008; Lapp et al., 2010).

When examining mental health symptoms in military wives whose soldiers deployed to Iraq (OIF) and/or Afghanistan (OEF), 17.4% screened positive for generalized anxiety symptoms, with approximately 7% meeting DSM-IV criteria for Generalized Anxiety Disorder, and approximately 12% screened positive for a major depressive episode, with 6.7% meeting DSM-IV diagnostic criteria for Major Depressive Disorder (Eaton et al., 2008). These rates of generalized anxiety and major depression were found to be comparable to the percentage of soldiers who experienced combat (Hoge et al., 2004) and twice the prevalence rates of major depressive disorder in the general population (Kessler et al., 2003). Due to the high rates of depression and anxiety symptoms in military wives, researchers have asserted that military wives, particularly those whose soldiers have been involved in OIF and/or OEF since 2001, are at a greater risk of experiencing negative psychological symptoms; they typically reported lower levels of both physical and mental wellbeing due to being separated from their active duty

partners (Burrell et al., 2006; Gorman et al., 2011; Mansfield et al., 2010). For example, SteelFisher and colleagues (2008) discovered wellbeing was greatly affected in Army wives whose soldiers deployed to Iraq and Afghanistan since 2001, with approximately 78% of wives reporting high levels of loneliness, 52% experiencing high levels of anxiety, and 43% experiencing high levels of depressive symptoms.

Caska and Renshaw (2011) also found high levels of depressive symptoms and anxiety in military wives whose military partners deployed to Iraq and and/or Afghanistan between 2001 and 2008. In addition to examining depressive symptoms and anxiety in wives, they also investigated whether perception of burden (i.e., feelings regarding their military partners and the effect caregiving responsibilities had on their health, social life, and emotions) impacted not only their psychological health, but also the relationship between their perception of burden and their military partners' psychological outcomes. Results indicated that when military wives reported a higher perception of burden, then they also reported higher levels of depressive and anxiety symptoms. Moreover, this perception of burden seemed to spill over to impact the well-being of the service member; specifically, when military wives reported a higher perception of burden, their military partners also reported higher levels of PTSD, depression, and anxiety.

These findings replicated results from previous studies that examined the relationships between Vietnam War era wives' perception of burden, their psychological outcomes, and psychological outcomes of their military partners (Manguno-Mire et al., 2007). However, Caska and Renshaw (2011) were one of the first researchers to not only examine how wives' personality characteristics (i.e., five factors of personality, self-efficacy, and coping styles) affected perception of burden, but were also the first to investigate these variables in OIF and OEF military wives. In examining personality characteristics, they found that higher levels of

both avoidant coping styles and neuroticism in wives were linked to higher levels of perceived burden. While intrapersonal characteristics of military wives were associated with their perception of burden levels, they reported that the greatest predictor of perception of burden in wives was the psychological symptoms of their military partners. In turn, Caska and Renshaw asserted that future research was needed to assess which factors impact military wives and their psychological health so that interventions could be created and/or altered to best suit their needs.

Over the course of two studies, Padden, Connors, and Agazio (2011a, 2011b) examined mental and physical symptoms of active duty Army wives whose soldiers were deployed at the time they were surveyed. Specifically, they found that deployment separation was strongly correlated with lower levels of wellbeing and physical health (i.e., bodily pain and fatigue; 2011b), and that military wives who perceived high levels of stress were more likely to report high levels of both adverse mental and physical symptoms (2011a). Results also indicated that military wives who were married to field-grade officers (i.e., Major, Lieutenant Colonel, General) reported the lowest levels of negative psychological and physical symptoms, followed by wives of junior enlisted soldiers (i.e., Private to Private First Class). Military wives married to company grade officers (i.e., 1st and 2nd Lieutenant and Captain) reported the highest levels of negative psychological and physical symptoms (2011b). The possible reasons for wives of company grade officers being most at risk may be due to lower ranking officers at times being at an increased risk of seeing fellow comrades they are responsible for die during deployment, which in turn would impact wives. Additionally, the combination of deployment and documented increased social pressures and responsibilities that military wives of lower ranking officers experience (Segal, 1986) may explain this finding.

This finding regarding rank by Padden and colleagues (2011b) was the first to find a curvilinear relationship between rank and psychological outcomes of military spouses by identifying military wives of lower ranking officers to be at risk. Most researchers who have examined the relationship between rank and mental health outcomes in military wives have found most risk was associated with enlisted wives. For example, wives of active duty enlisted partners reported more negative psychological symptoms than wives of active duty officer spouses (14.2% vs. 6%; Lester et al., 2010). Similarly, Griffith, Stewart, and Cato (1988) found that 23% of enlisted wives reported negative psychological symptoms, such as depression and anxiety, as compared to 11% of wives of noncommissioned officers (e.g., Corporal, Sergeant, Staff Sergeant, Sergeant First Class, Master Sergeant, First Sergeant, Sergeant Major, and Command Sergeant Major) and 5% of wives of commissioned officers (2nd Lieutenant to General).

Moreover, researchers found that military wives of junior enlisted soldiers reported more coping difficulties with deployment separation when wives were notified that their active duty partners' deployment was extended past the original termination date (Bell, Tiggler, & Scarville, 1991; Wood, Scarville, & Gravino, 1995). The finding that junior enlisted wives had greater difficulty coping during a deployment is unsurprising due to others finding that military couples who were married fewer years reported higher levels of depressive symptoms (Collins, Lee, & MacDermid Wadsworth, 2017). In comparison with the general population, couples in the military tend to enter their workforce (i.e., military branch) at a younger age as well as marry young (Clever & Segal, 2013), thus increasing the possibility that a large portion of junior enlisted service members have not been married long and thus have not had ample time to adjust to marriage and military life demands. Because there is a lack of consensus regarding how rank

is associated with the psychological outcomes of military wives, the current study controlled for rank and was accounted for in the present study's model. Of note, the present study only examined rank as a dichotomous variable, specifically enlisted and officer, and did not differentiate between levels of rank for enlisted or officer.

Researchers who have examined psychological outcomes in military wives have found that these wives are experiencing ongoing challenges that are, at times, spilling over to impact their mental health. This is particularly true for wives experiencing separations from their partner, those with high levels of perceived burden and stress, and those who have been married less time. In particular, wives have reported high levels of depressive symptoms, anxiety, marital distress, fatigue, as well as emotional instability. In examining whether rank was associated with psychological outcomes of military wives, researchers found differing results. While some have found that wives of enlisted service members (i.e., ranks E1-E9) reported higher levels of negative psychological symptoms as compared to officer wives (i.e., ranks O1-O10), others have found that officer wives of company grade officers (i.e., ranks O1-O3) reported the highest negative psychological symptoms. As noted previously, researchers who have examined psychological vulnerabilities in military wives have primarily done so in the context of deployment, but have not always studied how other factors might interact with deployment and be significantly associated with spousal psychological functioning. Expanding our perspective and including more contextual variables to the study of psychological outcomes of military wives will provide a more realistic view of what wives experience as well as what risk and protective factors are involved.

Conclusion

In conclusion, researchers who have studied the psychological functioning of military wives have found that many experience negative psychological symptoms, particularly in relation to military-related stressors. For example, levels of psychological distress in military wives were specifically correlated with fearing for the safety of their active duty partners, adopting multiple roles their partners performed prior to deployment, taking on the role of a single parent, and experiencing loneliness due to the separation and a lack of community.

Researchers have used MDMD to identify and explain the relationship between marital discord and depression in couples; specifically, marital discord was a critical risk factor for adverse psychological outcomes, namely depressive symptoms, in married couples. Thus, suppositions of this theory suggest that couple wellbeing, reflected by relationship quality, healthy communication, and relational warmth, might serve as a resource for married couples. Moreover, results demonstrated that marital satisfaction not only predicted lower levels of depressive symptoms above other sources of stress, but it was also identified as the most prominent source of both social support and interpersonal stress.

In addition to MDMD, scientists have used the ABCX Model of Family Stress to examine complex process within families. Family Stress Theory explains how stressors experienced by the family are associated with being in a state of crisis; when individuals and families are able to mobilize resources in the state of stress, then they are less likely to be in a state of crisis. Accordingly, this study invoked assumptions of this theory and identified couple wellbeing as a potential resource for military wives. To date, most studies have examined marital satisfaction as an outcome variable, with very few studies conceptualizing the couple relationship mediating the relationship between military-specific stressors and the psychological

outcomes of military wives. This study expands the extant literature by moving beyond single indicators of marital quality to examine a latent construct of couple wellbeing that reflects multiple indicators of healthy relationship functioning.

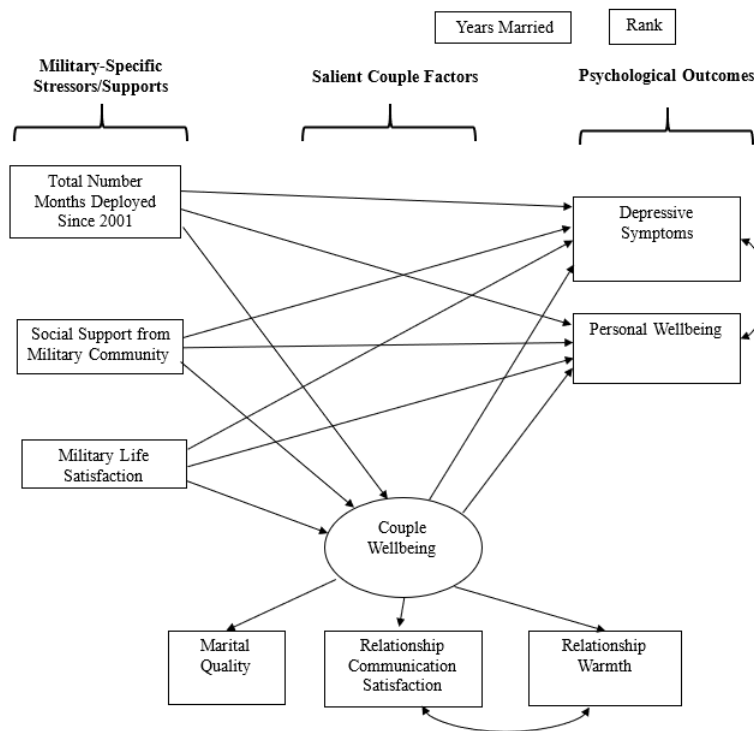
In recent years, branches of the military have identified the importance of spousal resources, for they have focused their attention on resources available to military wives on bases. However, the military has yet to produce evidenced-based findings of the helpfulness of such resources. While the current study's aim was to not explore the utility of resource programs on military bases, there is importance in seeing how established resources (i.e., the existing couple relationship) were associated with individual psychological functioning of military wives.

Present Study

This study (which is illustrated in Figure 3) investigated the relationship between military-specific stressors/supports (i.e., total number of months a soldier was deployed, social support from the military community, and military life satisfaction) and the psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing). Based on theory and existing research, suppositions were that military specific stressors/supports would be indirectly linked to the psychological outcomes of military wives through couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth).

Figure 3

Present Study Model



Note. Conceptual model depicting the direct effect of military-specific stressors/supports on the psychological outcomes of military wives and the indirect effects of couple wellbeing. Years married and rank were included to determine their association with study variables. Depressive symptoms and personal wellbeing were allowed to correlate as well as relationship communication satisfaction and relationship warmth.

Total number of months deployed since 2001, social support from the military community (or lack thereof), and (poor) satisfaction levels with military life were selected as salient stressors (A factor of the ABCX Model) for military wives (Lavee, McCubbin, & Patterson, 1985). A couple wellbeing latent variable was created to reflect multiple dimensions of healthy couple functioning and this variable was posited to be a mediating resource for military wives (B factor of the ABCX Model). Identifying and using mediating factors in research allow researchers to more accurately study and capture the actual processes and/or factors that occur and are associated with experiences of individuals and families as stressors emerge, thus making research more nuanced and generalizable. Finally, depressive symptoms and personal wellbeing were assessed as important psychological outcomes (X factor of the ABCX Model and the primary outcome of the MDMD) to reflect the symptoms of adverse mental health and perceptions of wellbeing, which may or may not be opposite ends of the same continuum.

If couple wellbeing was shown to mediate the relationship between military-specific stressors/supports and psychological outcomes, then perhaps this knowledge could assist in implementing useful interventions for military wives and/or military couples. Military couples continuously face tremendous pressure from multiple sources, and many military couples find they lack control over many aspects of their lives (e.g., deployment, relocation, job assignment). However, relationship factors are one of the main factors military wives can at least partially control (with their active duty partner controlling his own role in the relationship). Thus, knowing whether relationship factors were associated with elevated psychological wellbeing is important.

Military wives have been described as the barometers of military families, as this role is a byproduct of being connected to each family member and being the most consistent part of the family. The present study aspired to shed more light onto the difficulties and struggles, as well as the resources and strengths, of military wives. Like their active duty spouses, their psychological health is important, and their psychological functioning is also important for the vitality of their families and surrounding communities.

CHAPTER III
EXPLORATORY QUESTIONS AND HYPOTHESES

Exploratory Questions

Question 1

Is years married significantly associated with military-specific stressors/supports (i.e., levels of social support from military community and military life satisfaction), couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth), or the psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing)?

Question 2

Is soldier rank significantly associated with military-specific stressors/supports (i.e., levels of social support from military community and military life satisfaction), couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth), or the psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing)? If years married and/or soldier rank were associated with the variables that made up military-specific stressors/supports, couple wellbeing, or the psychological outcomes of military wives, then they would be statistically accounted for in the model.

Hypotheses

The primary analyses of this study examined the relationship between military-specific stressors/supports and psychological outcomes of military wives with an emphasis on the indirect effect of couple wellbeing in this process (shown in Figure 4). In other words, this model examined the direct effects of *military-specific stressors/supports* (i.e., total number of months deployed, social support from the military community, and military life satisfaction) on *psychological outcomes of military wives* (i.e., depressive symptoms and personal wellbeing), and the linking role of couple wellbeing (a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth). Predictions regarding the direct effects (which are illustrated in Figure 4) included the following: (a) greater total months a soldier was deployed would be associated with higher levels of depressive symptoms and lower levels of personal wellbeing, (b) higher levels of social support from the military community would be associated with lower levels of depressive symptoms and higher levels of personal wellbeing, and (c) higher levels of military life satisfaction would be associated with lower levels of depressive symptoms and higher levels of personal wellbeing. Three hypotheses focused on the indirect association between military-specific stressors/supports and psychological outcomes of military wives through couple wellbeing.

Hypothesis 1

Couple wellbeing will partially mediate the relationship between greater total months deployed since 2001 and psychological outcomes of military wives. Specifically, greater total months a soldier was deployed will be associated with lower levels of couple wellbeing, and in turn, lower levels of couple wellbeing will be associated with both higher levels of depressive symptoms and lower levels of personal wellbeing in military wives.

Hypothesis 2

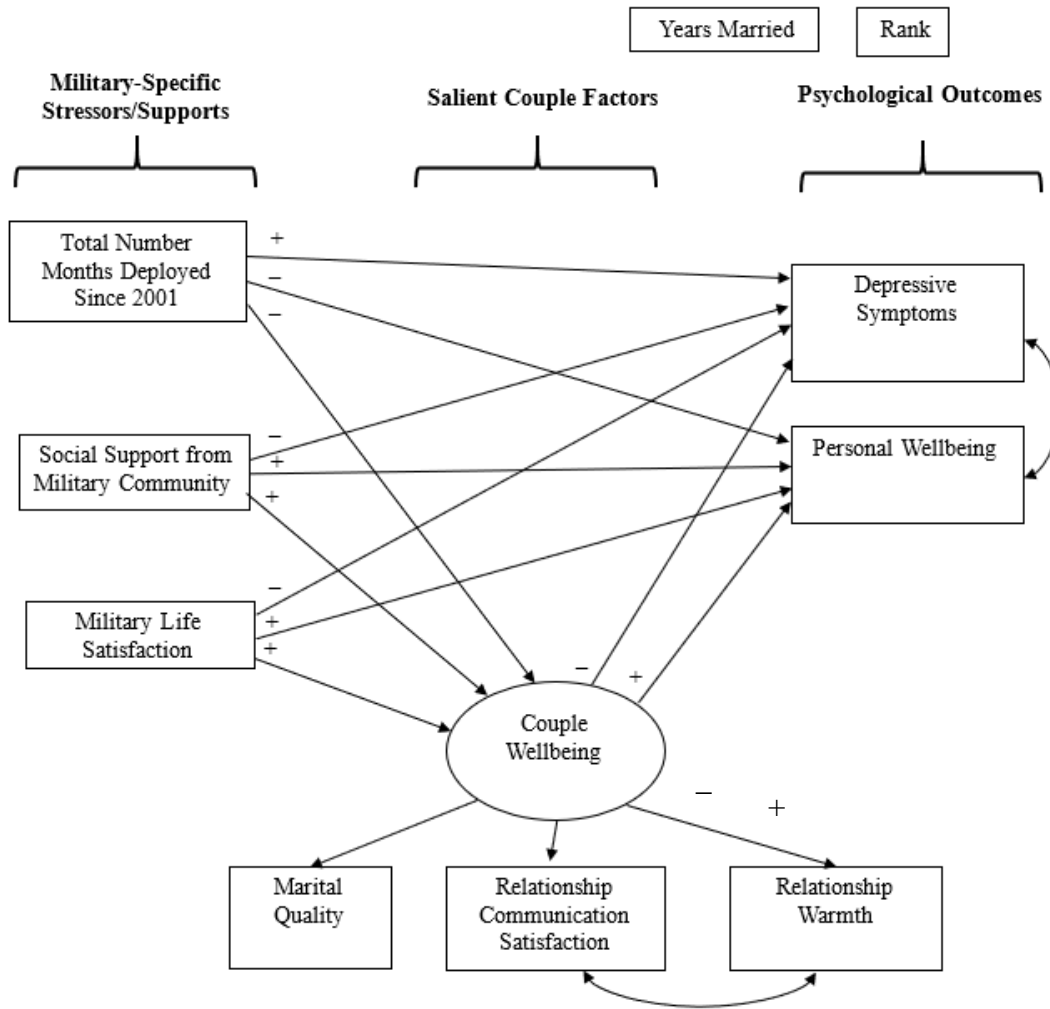
Couple wellbeing will partially mediate the relationship between social support from the military community and psychological outcomes of military wives. Specifically, higher levels of social support from the military community will be associated with higher levels of couple wellbeing, and in turn, higher levels of couple wellbeing will be associated with both lower levels of depressive symptoms and higher levels of personal wellbeing in military wives.

Hypothesis 3

Couple wellbeing will partially mediate of the relationship between military life satisfaction and psychological outcomes of military wives. Specifically, higher levels of military life satisfaction will be associated with higher levels of couple wellbeing, and in turn, higher levels of couple wellbeing will be associated with both lower levels of depressive symptoms and higher levels of personal wellbeing in military wives.

Figure 4

Conceptual Model Depicting Exploratory Questions and Hypotheses



Note. Years married and rank were included to determine their association with study variables. Depressive symptoms and personal wellbeing were allowed to correlate as well as relationship communication satisfaction and relationship warmth. In terms of direct effect hypotheses, a (+) indicates a positive relationship and a (-) indicates a negative relationship.

CHAPTER IV

METHOD

Secondary Data Analyses

The present study utilized already established data and was funded, in part, by the USDA National Institute of Food and Agriculture (Grant Number 2009-48680-06069; PI: Jay A. Mancini). According to Cheng and Phillips (2014), using already established data, whether for a dissertation or other type of research project, is beneficial for many reasons. Typically, utilizing already established data is both time and cost efficient. Additionally, using data previously collected allows for researchers to maximize the data collection efforts by analyzing more variables that were not needed by previous research efforts. Occasionally, those who initially collected the data may not utilize in full the data that were collected due to time constraints, lack of interest, and/or lack of resources. Some experience a continued interest in further analyzing data but do not have the time and/or resources to do so. Thus, having others perform additional analyses can significantly increase productivity of the original research team.

In addition, using established data can allow researchers who ordinarily do not have access to specific populations to complete meaningful research. For example, graduate students typically do not have access to primary data from the military community due to the community being a highly protected population. Consequently, utilizing established data for the present study not only allowed me to conduct a meaningful dissertation, but also provided an opportunity to add to the literature in the future. The data I chose to examine did not only provide meaningful

analyses but also incorporated analyses that have not been previously explored by the primary researchers.

Participants and Procedure

Data were collected from active duty military families ($N=273$) on an active duty Army base in the United States. In order for families to participate in the study, they needed to have at least one family member who was an active duty soldier as well as one adolescent between the ages of 11 and 18. Additionally, all respondents from each family were asked to consent to completing the surveys at the same time. The families completed the surveys in one of three computer labs on base, with each family member taking the surveys in separate rooms from one another so that responses were not influenced by other family members. In nonmarried/single parent families, romantic partners were encouraged to complete the surveys but their responses were not required. Additionally, inclusion criteria mandated wives of married active duty soldiers to participate in the survey (O'Neal et al., 2016a). These participants, the female wives of active duty male soldiers, were the focus of this proposed study.

Multiple advertisements were used to recruit military families for the study, which included radio and print advertisements, printed signs at a youth center on base, and flyers at various restaurants and stores on base. Confidentiality of responses was protected by assigning family members a code that represented their family, with no identifying information linking family members to their assigned code. The research procedure was approved by the University of Georgia's Institutional Review Board for Human Subjects and the United States Army Research Institute (O'Neal et al., 2016b).

The focus of the current study was on female wives within active duty military families who experienced a deployment since 2001. Accordingly, participants in other types of family structures were removed from the analytic sample, including single-parent service member families ($n=32$), dual active duty military couples ($n=7$) (e.g., both male and female partners who

identified as active duty soldiers), and military families in which the service member was the wife ($n=12$). The final sample included data from 222 respondents that were used for the current study. Most (72.1%) female wives were between the ages of 31 to 40, and the average length of time wives were married to their soldier was approximately 12 years ($M = 12.65$, $SD = 5.56$), with most wives reporting higher levels of couple wellbeing. The average total of months their soldier had been deployed was 29.66 ($SD = 14.64$), and the average number of military-related relocations was approximately 3 ($M = 3.79$, $SD = 1.71$). Additionally, most wives completed some college credits (36.9%) and most reported having 1-3 children (77.9%).

Measures

Military-Specific Stressors/Supports

Three predictor variables were examined in this study, total number of months deployed since 2001, social support from the military community, and military life satisfaction.

Total Number of Months Deployed Since 2001. One question was used to determine how many total months each respondent's active duty husband was deployed since 2001. The question, which was answered by active duty soldiers, asked: "Considering all of your deployments since 2001, how many total months were you deployed for all previous deployments? ____ months.").

Social Support from the Military Community (Air Force Community Survey-Appendix A). This instrument was used to measure military spousal community support, or the level of support military wives experienced within their community on base. Spouses responded to seven items, with answer options ranging from 1= *strongly disagree* to 4= *strongly agree* to items such as, "Family members (civilians) find it easy to make connections with other families" and "Family members (civilians) are active in post-sponsored community events and activities." Each participant's score was averaged so that higher scores reflected greater community support.

The scale was adapted by research faculty and assistants at the University of Georgia for military spouses from the Air Force Community Survey, which was funded by the Air Force under a contract with a global consulting and technology services company called ICF International, Inc. (Spera, 2009; Spera et al., 2003). The original survey had active duty Airmen assess their spouses' abilities to cope with deployment and Air Force family demands. The active duty Airmen answered surveys that included three subscales: community support, unit quality leadership effectiveness, and military leadership effectiveness. The measure used for this study was the subscale for community support, which was completed by military wives. Psychometrics

for this measure have not yet been established in the literature as of the date of this study. Cronbach's alpha was highly reliable (seven items; $\alpha = .910$).

Military Life Satisfaction (Air Force Community Survey- Appendix B). This instrument was used to measure military life satisfaction of military wives. Wives were asked to respond to nine items based on the following question: "How satisfied or dissatisfied are you with each of the following aspects of Military life?" Response items ranged from 1= *very satisfied* to 4= *very dissatisfied* to items such as, "Opportunity for _____ (your partner) to develop job skills" and "Amount of time _____ (your partner) is away from home." Each item was reversed-scored and each participant's score was averaged so that higher scores reflected greater satisfaction with military life. Similar to the Community Support measure (Appendix A), this scale was adapted by research faculty and assistants at the University of Georgia for military spouses from the Air Force Community Survey that had active duty soldiers report their perceptions of their spouses' coping abilities regarding deployment and Air Force family demands. Of note, the last two items of the survey ("Overall, how satisfied are you with the Army as a way of life?" and "Overall, how satisfied are you with the support and concern the Army has for your family?") were not taken from the original Air Force Community Survey but were added by the original research team. These two items were included in calculating the average of each participant's score, and higher scores indicated greater levels of satisfaction with military life. Psychometrics for the Air Force Community Survey (including the two items that were added by the research faculty at the University of Georgia) have not yet been established in the literature as of the date of this study. Cronbach's alpha was highly reliable (nine items; $\alpha = .835$).

Couple Wellbeing

A latent variable, labeled couple wellbeing, served as the mediator and was comprised of three salient couple factors. These factors included marital quality, relationship communication satisfaction, and relationship warmth.

Marital Quality (Quality Marriage Index, QMI- Appendix C). This instrument (Norton, 1983) was used as a measure of marital quality of military spouses. Wives were asked to rate their relationship satisfaction on four items. Response options ranged from 1= *strongly disagree* to 4= *strongly agree* to items such as, “I think we have a good relationship” and “I feel like we are a team.” Each participant’s score was averaged so that higher scores reflected greater marital quality.

Strengths of the QMI include the measure being the third most cited measure of relationship satisfaction, as the measure has been and continues to be utilized in numerous studies (Funk & Rogge, 2007). Additionally, the measure has been used to survey diverse samples, including the general population (Morrill et al., 2010), oncology (Zimmermann, Scott, & Heinrichs, 2010), postnatal depression (Nishimura et al., 2015), and military veterans (Doss et al., 2012). The strength of the measure lies in its restrictive view of marriage quality, with restriction intended to “sharpen the focus” (Norton, 1983, p. 151) of the measure. Construct validity and high internal consistency ($\alpha = 0.944$) have been established across numerous studies (e.g., Calahan, 1997; Graham, Diebels, & Barnow, 2011; Woods, Priest, & Denton, 2013). Findings indicate that as the perception of marital quality increased, so did the resemblance or similarity of attitudes between partners (Norton, 1983). Moreover, predictive validity was further evidenced by the finding that couples who reported low levels of marital quality also reported that they had considered ending their marriage.

Relationship Communication Satisfaction (Relationship Communication Satisfaction Scale, RCSS- Appendix D). This instrument was used as a measure of communication satisfaction of military spouses. The measure examines couple satisfaction in relation to difficult topics such as money, sex, child-rearing, etc. Response options ranged from 1= *strongly disagree* to 4= *strongly agree* to eight items including, “I am satisfied with how we talk about money” and “I am satisfied with how we talk about sex.” There is a fifth response option for each item that allows participants to denote if certain topics are not discussed with their active duty spouses (e.g., “we don’t talk about”). If a participant indicated the fifth response, this fifth response item was treated as a missing value in order not to impact the 1 to 4 Likert scale, and a mean score was substituted from the items that were answered. Each participant’s score was averaged so that higher scores reflected greater relationship communication satisfaction.

The RCSS was adapted from the Dyadic Adjustment Scale, which is a 32-item measure, that assessed relationship quality (Spanier, 1976). The original scale has four subscales: 1) dyadic consensus (the degree an individual agrees with partner), 2) dyadic satisfaction (degree person feels satisfied with partner), 3) dyadic cohesion (degree both individual and partner participate in activities together), and 4) affectional expression (degree an individual agrees with partner regarding emotional affection). Spanier’s measure has strong internal consistency (Cronbach’s alpha = .96), and discriminant analysis revealed that most all of the items (except for items 13 and 29, which addressed household tasks and whether one confided in their partner, respectively) were significant ($p < .001$) in discriminating between high and low satisfaction groups (Sharpley & Cross, 1982). Construct validity was high (.86 for married couples and .88 for divorced couples, $p < .001$), as Spanier took items from previously established relationship

adjustment scales (Spanier, 1976). Psychometrics specifically for RCSS have not yet been established in the literature as of the date of this study. Cronbach's alpha was highly reliable (eight items; $\alpha = .914$).

Relationship Warmth (Appendix E). This instrument was adapted from Measures of Authoritative Parenting (Conger et al., 1989-1992) to measure the level of relationship warmth between military wives and their active duty partners from the perspective of the military wives. Wives in the present study were asked to report how often their partner (e.g., active duty soldier) did specific things during the past year, with response options ranging from 1= *never* to 4= *always* to items such as, "help you do something that was important to you?" and "let you know that they appreciate you, your ideas, or the things you do?" Each participant's score was averaged so that higher scores reflected greater relationship warmth. (Where necessary, items are reversed-scored. The following is an example of an item that was reversed scored: "During the past year, when you and _____ spent time talking or doing things together, how often did he or she insult or swear at you?").

The instrument used for the present study includes items assessing warmth (e.g., "let you know that they appreciate you, your ideas, or the things you do?" and "help you do something that was important to you?"). The instrument was adapted from a longitudinal research project called the Iowa Youth and Families Project (IYFP) (Conger et al., 1989-1992). The IYFP was administered between 1989 and 1992 to study processes within families located in rural Iowa. A portion of the four-year project included measuring relationship warmth and hostility between married couples, which was assessed by observational ratings provided by research project observers. Specifically, observers reviewed couples engaging in interaction behavior tasks via two video recordings: one video recording displayed couples discussing their relationship history

and current state of their relationship and a second video recording consisted of having couples attempt to solve a problem in their relationships (Conger et al., 1990). Observers then provided both warmth and hostility ratings for each spouse from both video recording observations, and interrater reliability was .84 and .74 for hostility and warmth, respectively. Researchers chose to create hostility and warmth scales based on video recording observations due to past researchers finding that parameter estimates were often inflated from individuals who self-reported multiple constructs (Bank et al., 1990; Dillon, Kumar, & Mulani, 1987). Moreover, additional psychometrics for this measure have not yet been established in the literature as of the date of this study. Cronbach's alpha was highly reliable (15 items; $\alpha = .917$).

Psychological Outcomes

Two psychological outcomes were assessed in examining the mental health of Army wives, depressive symptoms and personal wellbeing.

Depressive Symptoms (Abbreviated Center for Epidemiologic Studies Depression, CESD7- Appendix F). The CESD7 (Santor & Coyne, 1997) was used to assess the levels of depressive symptomology of military wives. The CESD-7 was adapted from Radloff's 1977 original 20-item CESD-D scale that had individuals report symptoms of depression such as sleep difficulties, appetite issues, and loneliness, with higher scores indicating more depressive symptoms (Radloff, 1977). The CESD7 is a seven-item scale used to measure depressive symptoms in the general population within a one-week period, with response options ranging from 1= *none of the time* to 3= *most of the time* to items such as, "I felt depressed" and "I felt everything I did was an effort." Each participant's score was averaged so that higher scores reflected more depressive symptoms. (Where necessary, items were reversed-scored). The CESD7 includes items that measure dysphoric mood (items 3, 6, and 18), motivation (item 7),

concentration (item 5), loss of pleasure (item 16), and poor sleep (item 11). (All item numbers listed are from the original scale.) The scale has shown good internal consistency (Cronbach's alpha = .82) but poor test-retest reliability ($r = 0.42, p < 0.01$) (Santor & Coyne, 1997).

Many researchers, including Radloff, have revised the original 20-item measure to include fewer items in order to better identify those who meet criteria for a depressive disorder, a proposed weakness of the Radloff's original 20-item measure (Callahan & Wolinsky, 1994; Santor & Coyne, 1997; Schroevers et al., 2000). The CESD-D to over one thousand individuals of varying ages, backgrounds, and ethnicities in order to re-examine the psychometric properties of Radloff's CESD-D (Cosco et al., 2017). Results indicated that Radloff's original four-factor model (e.g., depressed affect, somatic/vegetative, interpersonal, and positive affect) also provided the best model fit for their population. Additionally, there was an overall strong internal consistency (Cronbach's alpha = .90) as well as weak to decent coefficient alphas for each factor (depressed affect = .86; somatic/vegetative = .75; interpersonal .58; positive affect = .79), making the original CESD-D a scale that "reliably captures depression" (Cosco et al., 2017, p. 484).

Personal Wellbeing (Personal Wellbeing Index, PWI- Appendix G). The PWI was used to assess the personal wellbeing of military spouses. The measure consists of eight items used to measure personal wellbeing within a one-week period, with response options ranging from 1= *strongly disagree* to 4= *strongly agree* to items such as, "I was satisfied with my life as a whole" and "I was satisfied with my standard of living." Each participant's score was averaged so that higher scores reflected greater personal wellbeing. The scale was adapted from the Personal Wellbeing Index (PWI) (International Wellbeing Group, 2013), with the original scale utilizing a 0 (no satisfaction at all) to 10 (completely satisfied) scale. The scale has adequate

psychometric properties (convergent validity= .78; construct validity= .78; test-retest reliability=.84) and has been used in numerous countries (Lau, Cummins, & Mcpherson, 2005).

Control Variables

Two control variables were assessed based on their relevance to the wellbeing of military families and military wives, specifically. Years married was a continuous variable in which military wives reported, in years, how long they had been in their current marriage. Rank was a dichotomous variable, such that 0 = officers and 1 = enlisted service members. While these variables were not the central focus of this study, accounting for their role in the current study (i.e., statistically controlling for their association with other variables) allows us to rule out alternative explanations for results (Neter et al., 1996; Schmitt et al., 1991). Including rank and years married as control variables was one of the strengths of this modeling approach used for the present study due to such variables having emerged in the literature as influential (also detailed in previous sections).

Rank (Appendix H). Researchers have identified military rank as an important factor, particularly regarding the psychological health of soldiers and their wives (e.g., Bell, Tiggler, & Scarville, 1991; Griffith, Stewart, & Cato, 1988; Lester et al., 2010; Padden, Connors, and Agazio, 2011b; Wood, Scarville, & Gravino, 1995). In particular, rank has been associated with depressive symptoms (Collins, Lee, & MacDermid Wadsworth, 2017; Kim et al., 2010) as well as the social behaviors of military wives (Padden, Connors, & Agazio, 2011a), which in turn can affect other behaviors, perceptions, and amount of support received. Controlling for rank when studying the military community is also important because rank, which also signifies pay grade, is a sign of socioeconomic status and a family's social standing in the military community (Clark et al., 2018). Consequently, rank/pay grade status has been identified as a military context

variable that both signifies and is associated with family processes/readjustments and the “relationship development and maintenance, as well as the psychosocial outcomes” of military wives (O’Neal, Mancini, & DeGraff, 2016, p. 3).

One item was used to determine the rank of male active duty soldiers. Male active duty soldiers were classified in a total of four categories, with enlisted soldiers classified as 1 or 2, and officers classified as 3 or 4. Specifically, enlisted active duty respondents identified their rank as 1) Private to Corporal (i.e., E1 to E4) or 2) Sergeant to Sergeant Major/Command Sergeant Major (i.e., E5 to E9). Officer active duty respondents identified their rank as 3) Second Lieutenant to Major (i.e., O1 to O4); Warrant Officer to Chief Warrant Officer (i.e., WO1 to CW5) or 4) Lieutenant Colonel to Lieutenant General (i.e., O5 to O9). Answers of either 1 or 2 were identified as enlisted service members and coded as 1, and answers of either 3 or 4 were identified as officers and coded as 0. Enlisted service members were coded as 1 in the present study due to rank having been identified in previous research as a possible risk factor for mental health and wellbeing of service members and in some cases, their families. The following is how the item was listed on the questionnaire:

Your Military Rank:

Enlisted

1) PV1 (E1) to CPL (E4)

2) SGT (E5) to SGM/CSM (E9)

Commissioned/Warrant Officer

3) 2LT (O1) to MAJ (O4); or WO1 to CW5

4) LTC (O5) to LTG (O9)

Years Married (Appendix I). Number of years married, or the length of a relationship, was found to be associated with outcomes, such as perception of coping styles and attachment levels (Bell, Tiggler, & Scarville, 1991; Collins, Lee, & MacDermid Wadsworth, 2017; Feeney, 2004; Spera, 2009; Wood, Scarville, & Gravino, 1995). Researchers have also found years

married to be associated with perception of spouses, perception of self, marital satisfaction across stages of life, and separation during deployment, with those who were married for longer periods reporting a decline in marital satisfaction, particularly for female spouses (Luckey, 1966). In general, researchers have asserted that statistically controlling for the length of a relationship in research is critical, especially when examining the association between relationship factors and wellbeing (Kim & McKenry, 2002; Kitson & Holmes, 1992). For example, couples who reported being married fewer years reported lower levels of depressive symptoms in comparison to couples who were married longer, suggesting that couples who were not married as long still romanticized their relationship (Fitzpatrick & Wampler, 2000). Moreover, marriage not only augments positive physical and psychological health (Wu & Hart, 2002), but longitudinal assessments have shown a positive relationship between wellbeing and establishing committed/longer term relationships (Dush & Amato, 2005).

Army wives were asked specific questions regarding their relationship with their active duty partner. Specifically, wives were asked to report their current legal marital status (i.e., married, separated, widowed, divorced, single/never married). If respondents answered they were married, they were asked the total number of years they were married (i.e., “How long have you been in your current relationship?”).

Data Analysis

First, univariate and bivariate statistics were examined across the variables of the study in SPSS. Descriptive statistics, including mean, standard deviation, missingness, skewness, and range, for all measures as well as bivariate correlations between measures are provided in Table 1. Variables were examined for expected correlation direction, with specific focus on the control variables, years married and rank. This correlational analysis was used to examine the exploratory questions and determine if and how control variables would be accounted for in the primary analyses. For example, if years married or soldier rank were associated with any of the other variables in the present study, then those relationships were modeled in the structural equation model created to address the three study hypotheses.

Preliminary analyses also included assessments of multicollinearity, which could lead to large standard errors, inaccurate coefficient estimates, and inference errors, such as type II error (Mason & Perreault Jr, 1991). Multicollinearity was evaluated by tolerance, with tolerance values below .20 typically regarded as problematic, and by the variance inflation factor (VIF), with values above 5 typically regarded as problematic.

Next, AMOS was used to examine the primary study model, a structural equation model (SEM). Before fitting the full structural model, a measurement model of the latent variable couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth) was fit to assess how reasonable the ‘theory’ of the construct measure was (i.e., do the three variables hang together reasonably well?). This model examines the relationship between the latent variable and the observed indicators, in this case marital quality, relationship communication satisfaction, and relationship warmth, in a fully saturated model. Fit is

determined by examining the regression coefficients between the latent construct and each indicator.

Following the measurement model analysis, the full structural model was fit. This is the model that examines the relationship between the predictor variables, the latent mediator variable, and the outcome variables. Specifically, this study examined the direct effects of military-specific stressors/supports (i.e., total months soldiers were deployed since 2001, social support from the military community, and military life satisfaction) on military wives' psychological outcomes, specifically depressive symptomatology and personal wellbeing. It also examined the indirect effects of couple wellbeing (a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth) on the relationship between military-specific stressors/supports and military wives' psychological outcomes. Researchers have identified SEM as a preferred analysis when examining the direct and indirect effects of variables, particularly in comparison to standard regression analysis, because SEM can provide model of fit information and can easily interpret models involving latent variables (Baron & Kenny, 1986; Bollen & Pearl 2013; Imai, Keele, & Tingley, 2010; MacKinnon, 2012). In addition, SEM allows for one to account for missing data via full information maximum likelihood (FIML) (Enders, 2001). Full information maximum likelihood (FIML) is preferred over listwise deletion, and FIML utilizes all available data when estimating model parameters and standard errors.

Goodness-of-fit was assessed by the root mean square error approximation (RMSEA), comparative fit index (CFI), and Tucker-Lewis Index (TLI). These indices reflect how well the model fits the data. More specifically, RMSEA values less than .08, and CFI and TLI values greater than 0.90 are asserted to be good model fit (Hu & Bentler, 1999; Cangur & Ercan, 2015).

Currently, there is not one specific criterion for evaluating model fit in SEM, which has led to the development of different fit indices (Schermelleh-Engel, Moosbrugger, & Müller, 2003), and it is common for one to report more than one model fit index (Cheung & Rensvold, 2002). The root mean square error approximation (RMSEA) generates a better quality of estimation when a sample size is large and is typically preferred when confirming hypotheses (Rigdon, 1996). Moreover, RMSEA “takes the model complexity into account as it reflects the degree of freedom” (Cangur & Ercan, 2015, p. 157). The CFI is typically used for exploratory purposes (Rigdon, 1996) and is reasonably independent from sample size as well as generates a better model fit when there is a small sample size (Chen, 2007; Hu & Bentler, 1998). The TLI is also less affected by sample size and adjusts for degrees of freedom (Schermelleh-Engel, Moosbrugger, & Müller 2003). The TLI also includes consequences for adding parameters, or hypothesized paths between variables, which aids in adjusting for error (e.g., type I error; Schermelleh-Engel, Moosbrugger, & Müller 2003).

After assessing model fit, the relationships between the variables were examined. Specifically, to address the study hypotheses, the indirect effect of couple wellbeing on the relationship between the total number of months deployed since 2001 and depressive symptoms and the indirect effect of couple wellbeing on the relationship between total number of months deployed since 2001 and personal wellbeing was examined (Hypothesis 1). Then, the indirect effect of couple wellbeing on the relationship between social support from military community and depressive symptoms and the indirect effect of couple wellbeing on the relationship between social support from military community and personal wellbeing was examined (Hypothesis 2). Finally, the indirect effect of couple wellbeing on the relationship between military life satisfaction and depressive symptoms and the indirect effect of couple wellbeing on the

relationship between military life satisfaction and personal wellbeing was examined (Hypothesis 3). Indirect effects were measured in two ways. First, the Sobel test (Sobel, 1982) was utilized to test the significance of the indirect effect of couple wellbeing on the various relationships between military-specific stressors/supports and psychological outcomes of military wives. This approach allowed the use of FIML and retain all the data, including respondents who had some missing data. Then, the same model and the indirect effects was tested using a bootstrapping approach, the preferred method for testing indirect effects. The drawback to this approach is that there cannot be any missing data, but cases with missing data were eliminated from this analysis ($n = 29$) for a total sample of 193. Then, the results were compared.

CHAPTER V

RESULTS

Table 1 provides a summary of univariate and bivariate statistics among study variables. Missingness of the data were minimal and ranged from .45% to 9.9% across the variables of the study. Due to the missingness of the data being minimal across all variables, a mean score was derived from all measures for each participant, thus allowing data from all participants ($N = 222$) to be used in the analytic model. The variables were normally distributed. Bivariate correlations suggested that the relationships between variables were by-and-large in the expected direction of effects. However, the total number months deployed since 2001 was not correlated with any of the study variables, namely depressive symptoms ($r = -.111, p = .117$), personal wellbeing ($r = -.064, p = .367$), marital quality ($r = -.103, p = .150$), relationship communication satisfaction ($r = -.052, p = .472$), and relationship warmth ($r = -.003, p = .969$). While there is a lack of consensus in the literature regarding deployment effects, it remains surprising that total number of months deployed in this study does not appear to correlate with any psychological outcomes of the Army wives surveyed nor with any interpersonal processes between wives and their active duty spouses.

To address Exploratory Question 1, correlational analyses were examined for the years married variable and other study variables to assess if and how it would be used in the primary study model. Years married was significantly correlated with social support from the military community ($r = .168, p = .013$) and military life satisfaction ($r = .156, p = .022$), such that military wives who were married longer tended to report higher levels of support from the

military community and greater military life satisfaction. Accordingly, these relationships were accounted for in the primary study model.

To address Exploratory Question 2, correlational analyses were examined for rank and other study variables to assess if and how it would be used in the primary study model. Rank was significantly associated with military life satisfaction ($r = -.155, p = .021$), such that military wives of enlisted service members (lower ranking service members) tended to report lower levels of satisfaction with military life. This relationship was accounted for in the primary study model.

Table 1
Correlations Between Study Variables

	1	2	3	4	5	6	7	8	9	10
1. Total Number Months Deployed Since 2001	1									
2. Social Support from Military Community	.075	1								
3. Military Life Satisfaction	.095	.188**	1							
4. Marital Quality	-.103	.077	.183**	1						
5. Relationship Communication Satisfaction	-.052	.054	.094	.480**	1					
6. Relationship Warmth	-.003	.048	.179**	.426**	.497**	1				
7. Depressive Symptoms	-.111	-.123	-.163*	-.215**	-.227**	-.357**	1			
8. Personal Wellbeing	-.064	.203**	.200**	.291**	.388**	.424**	-.515**	1		
9. Years Married	.040	.168*	.156*	-.008	.008	-.024	-.115	.042	1	
10. Rank	.101	-.018	-.155*	-.064	-.117	-.033	.118	-.089	-.030	1
Scale range	2-72	1-4	1-4	1-4	1-4	1-4	1-3	1-4	0-25	0-1
Mean	29.66	2.72	3.01	3.45	3.34	3.13	1.58	3.08	12.65	.89
Standard deviation	14.64	.57	.54	.68	.60	.62	.47	.57	5.69	.31
Missing	9.9%	0.0%	0.0%	0.9%	1.35%	0.9%	0.0%	0.0%	1.8%	.45%
Skewness	.58	-.86	-.58	-1.64	-1.12	-.54	.82	-.32	-.25	-2.53

Note. Rank is a dichotomous variable (1 = Enlisted, 0 = Officer). * $p < .05$, ** $p < .01$.

Before examining the full model for the three study hypotheses, the measurement model for the latent variable, couple wellbeing, was fit in AMOS (RMSEA = .449, 90% CI [.382, .520]; CFI = 1.00; TLI = 1.00). Although model fit, particularly the RMSEA, does not demonstrate good model fit as defined within the larger context of structural equation modeling, it is not uncommon to receive unfavorable results when examining only the measurement model (O'Boyle & Williams, 2011). Given the theoretical connection between these variables, their significant, but modest correlations, and prior evidence to suggest that the RMSEA may not be a good indicator of the fit of the measurement model, we retained the measurement model to be included in the structural model. The regression coefficients from the latent variable to each observed variable were significant and in the expected direction, marital quality ($\beta = .626, p < .001$), relationship communication satisfaction ($\beta = .785, p < .001$), and relationship warmth ($\beta = .649, p < .001$). This indicates that the nature of the unobserved, latent construct, couple wellbeing, is related to the nature of the three observed, indicator variables in the expected direction based on my theory of the measure.

Next, the full, SEM was examined (shown in Figure 5) to investigate the mediating role of couple wellbeing (i.e., marital quality, relationship communication satisfaction, and relationship warmth) on the relationship between military-specific stressors/supports (i.e., total number months deployed since 2001, social support from military community, and military life satisfaction) and the psychological outcomes of Army wives (i.e. depressive symptoms and personal wellbeing). Model fit indices suggested the model ($N = 222$) fit the data reasonably well (RMSEA = .035, 90% CI [.000, .067]; CFI = .974; TLI = .946).

Accounting for all else in the model, the total number of months one's active duty husband was deployed since 2001 was not associated with depressive symptoms ($\beta = -.115, p =$

.082) or personal wellbeing ($\beta = -.054, p = .381$) of military wives. With regard to Hypothesis 1, total number of months deployed was also not related to couple wellbeing ($\beta = -.065, p = .399$), thus this hypothesis was not supported.

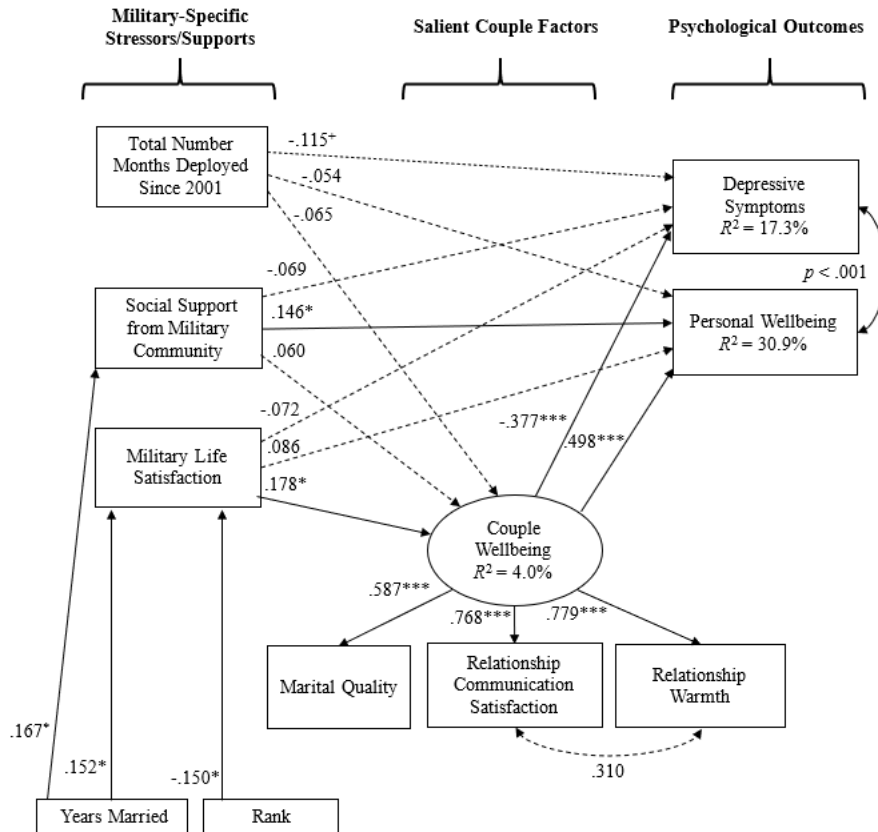
Accounting for all else in the model, social support from one's military community was not associated with depressive symptoms of military wives ($\beta = -.069, p = .273$), but it was associated with their personal wellbeing ($\beta = .146, p = .012$), such that more community support was associated with higher levels of personal wellbeing. With regard to Hypothesis 2, military community support was not related to couple wellbeing ($\beta = .060, p = .412$), thus this hypothesis was not supported.

Accounting for all else in the model, military life satisfaction was not associated with depressive symptoms ($\beta = -.072, p = .263$) or personal wellbeing ($\beta = .086, p = .155$) of military wives. With regard to Hypothesis 3, military life satisfaction was significantly associated with the mediator that measured couple wellbeing. Specifically, military life satisfaction was positively related to couple wellbeing ($\beta = .178, p = .017$), indicating that Army wives who perceived higher levels of military life satisfaction also reported better outcomes with their active duty partner, or higher levels of couple wellbeing. Additionally, couple wellbeing was negatively related to depressive symptoms ($\beta = -.377, p < .001$) and positively related to personal wellbeing ($\beta = .498, p < .001$). Findings also revealed that years married was positively associated with both social support from the military community ($\beta = .167, p = .013$) and military life satisfaction ($\beta = .152, p = .022$). In other words, the longer an Army wife was married, the more likely they were to report higher levels of both social support from their Army community and military life satisfaction. Rank was associated with military life satisfaction ($\beta = -.150, p = .023$),

indicating that wives of enlisted (lower ranking service members) tended to report lower levels of satisfaction with military life.

Figure 5

Model 1 Regression Estimates (N = 222)



Note. Primary model using full information likelihood estimation with standardized coefficients presented. The Sobel test was used to examine the indirect paths ($N = 222$). Note. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. RMSEA = .035; CFI = .974; TLI = .946.

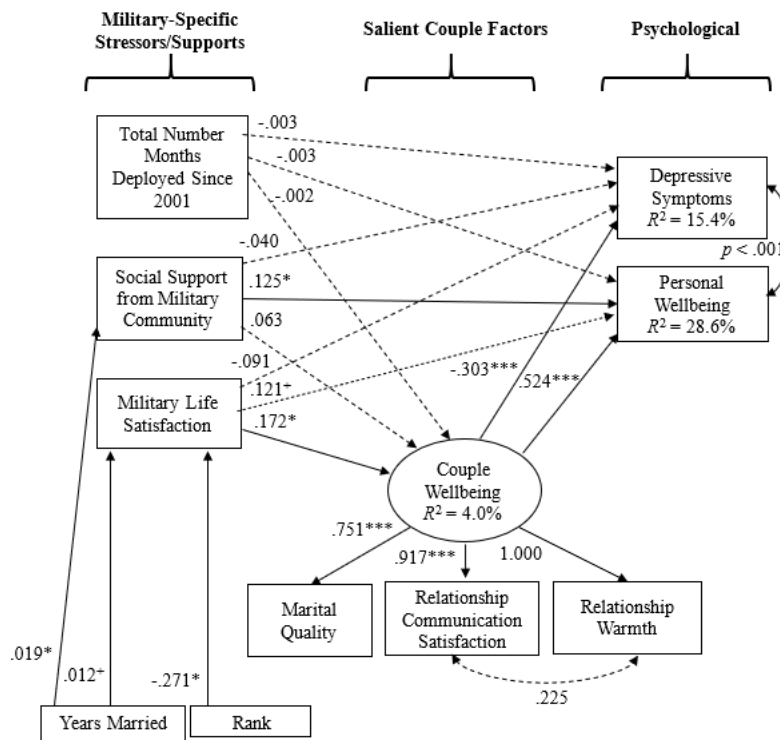
The Sobel test post hoc analysis indicated that couple wellbeing significantly mediated the path between military life satisfaction and depressive symptoms ($z = -2.08, p = 0.04$) and the path between military life satisfaction and personal wellbeing ($z = 2.16, p = 0.03$). This suggests that military life satisfaction is associated with the psychological outcomes in Army wives,

specifically depressive symptoms and personal wellbeing, through the couple relationship. Military life is associated with how the couple interacts and functions, and this, in turn, is associated with the psychological wellbeing of military wives.

To compare and confirm these results, the indirect effects of military life satisfaction on depressive symptoms and personal wellbeing via couple wellbeing were also examined using bootstrapping methods (5,000 bootstrap samples), which can be found in Figure 6. Unstandardized regression coefficients are presented because AMOS does not allow for standardized regression coefficients for bootstrap methods.

Figure 6

Model 2 Regression Estimates (N = 193)



Note. Primary model with unstandardized regression coefficients presented and bootstrapping to test indirect effects ($N = 193$). Note. ⁺ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$. RMSEA = .036; CFI = .973; TLI = .954

In order to utilize bootstrapping methods, participants with missing data were removed ($n = 29$). There were no missing data for the remaining data ($N = 193$), and fit indices suggested the model fit the data reasonably well (RMSEA = .036, 90% CI [.000, .071]; CFI = .973; TLI = .954). Overall, similar trends were observed in the paths between variables with evidence supporting Hypothesis 3. Two statistically significant indirect effects were found. The indirect effect of military life satisfaction on depressive symptoms through couple wellbeing was -.052, 95% CI [-.123, -.01], and the indirect effect of military life satisfaction on personal wellbeing through couple wellbeing was .090, 95% CI [.01, .209].

In summary, the total number months deployed since 2001 was not correlated with any of the study variables. Regarding number of years married and rank, military wives who were married longer tended to report higher levels of support from the military community and greater military life satisfaction, and military wives of enlisted service members (lower ranking service members) tended to report lower levels of satisfaction with military life. In examining the full SEM to investigate the mediating role of couple wellbeing on the relationship between military-specific stressors/supports and the psychological outcomes of Army wives, the total number of months one's active duty husband was deployed since 2001 was not associated with any psychological outcomes of military wives. Additionally, total number of months deployed was also not related to couple wellbeing, so hypothesis 1 was not supported. Social support from one's military community was associated with military wives' personal wellbeing but was not related to couple wellbeing, thus hypothesis 2 was not supported. Military life satisfaction was not associated with psychological outcomes of military wives but was significantly associated with the mediator that measured couple wellbeing, indicating that Army wives who perceived

higher levels of military life satisfaction also reported better outcomes with their active duty partner, or higher levels of couple wellbeing. The Sobel test post hoc analysis and bootstrapping methods both indicated that couple wellbeing significantly mediated the path between military life satisfaction and depressive symptoms as well as the path between military life satisfaction and personal wellbeing.

CHAPTER VI

DISCUSSION

Summary of Study

Military spouses, and most often military wives, have been described as the barometers of military families, as they are the individuals who often take primary responsibility for preserving the stability and overall health of their family units as a result of being connected to each family member and being the most consistent part of the family (Lara-Cinisomo et al., 2012; Palmer, 2008). Therefore, examining factors associated with their psychological health is important, as their psychological functioning plays a vital role in their families and surrounding communities (Green, Nurius, & Lester, 2013; Park, 2011). Rooted in the ABCX Model of Family Stress and Marital Discord Model of Depression (MDMD), this dissertation study was designed to examine the relationship between military-specific stressors/supports and psychological outcomes of military wives with an emphasis on the indirect effect of couple wellbeing. In other words, this study examined the direct effects of military-specific stressors/supports (i.e., total number of months deployed since 2001, social support from the military community, and military life satisfaction) on psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing), and the mediating role of couple wellbeing (a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth). Additionally, rank and years married were controlled for to account for their association in the theory-based model that was tested. This discussion provides an analysis

of each research question and hypothesis, and then provides a synthesis of the findings. Findings were obtained from already established data and was funded, in part, by the USDA National Institute of Food and Agriculture (Grant Number 2009-48680-06069) (PI: Jay A. Mancini).

Conclusion and Discussion

Hypotheses

Three hypotheses examined the relationship between military-specific stressors/supports and psychological outcomes of military wives with an emphasis on the indirect effect of couple wellbeing. Specifically, the present study examined the direct effects of military-specific stressors/supports (i.e., total number of months deployed, social support from the military community, and military life satisfaction) on psychological outcomes of military wives (i.e., depressive symptoms and personal wellbeing), and the linking role of couple wellbeing (a latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth). Therefore, the hypotheses focused on the indirect association between military-specific stressors/supports and psychological outcomes of military wives through couple wellbeing. Accordingly, all findings are discussed within the context of the full model.

Hypothesis 1. The total number of months an active duty soldier was deployed since 2001 was not directly associated with either depressive symptoms or levels of personal wellbeing of military wives. This is contrast to previous research indicating that longer deployment durations were found to be associated with more depressive and anxiety symptoms in military wives (SteelFisher, Zaslavsky, & Blendon, 2008). However, one should not take this as indication that deployment is not associated with the psychological health of Army wives. Instead, given the complexity of the variable and the lack of consensus in the literature as to how deployment is associated with military spousal mental health, additional research is needed to determine the positive and negative effects of deployment.

Moreover, hypothesis 1 was not supported, as the total number of months a soldier was deployed since 2001 was not related to couple wellbeing, meaning that relationship factors of

Army couples (marital satisfaction, relationship communication satisfaction, and relationship warmth) did not account for an association between the amount of time a soldier was deployed and the psychological outcomes of Army wives. In other words, greater total number of months a soldier was deployed was not associated with couple wellbeing, thus no indirect association was observed. This is also in contrast to previous findings in the literature indicating that longer deployment durations were associated with lower levels of marital satisfaction (Burrell et al., 2006), with lower levels of marital quality (Angrist & Johnson, 2000), and with increased divorce rates of OIF and OEF military couples (Alvarez, 2006; Fiore, 2005; Jaffe, 2005). However, military couples who have been married for shorter periods of time also tended to report experiencing benefits of deployment, such as a reduction in risk for divorce (Karney & Crown, 2011).

Perhaps the present study's results could be explained by certain factors experienced at the time the survey was completed. Specifically, the results may have been impacted by wives having greater access to resources (given they were taking the survey in a community center on the installation), experiencing improved levels of resilience since their spouse was at home at the time of the survey, and/or recently having their active duty partner return home from deployment, all which might have positively been associated with perceptions of couple wellbeing and their own psychological health at the time they were surveyed. Additionally, the present study included mostly satisfied couples (per report from wives), which may also explain why there was not an association between deployment and couple wellbeing, as highly satisfied couples may not experience an association between deployment and their relationship functioning.

Hypothesis 2. As highlighted in the ABCX Model of Family Stress, a salient stressor for military and civilian spouses alike is lacking adequate social provisions and support; this is particularly noteworthy for military families because frequent relocations tend to isolate families from their main support systems. Thus, this study accounted for how social support (or lack thereof) was associated with couple wellbeing and psychological outcomes of military spouses. Social support from the military community was not directly associated with depressive symptoms of Army wives, but was associated with their personal wellbeing. Specifically, wives who experienced higher levels of support from their military community tended to report higher levels of wellbeing with regard to their safety, feeling part of a community, standard of living, and their lives as a whole. The association between social support from the Army community and personal wellbeing could reflect how certain aspects of wellbeing, such as feeling part of a community and feeling secure, are highly related to factors of social support from their military community, including making connections and feeling connected with other wives.

The reason why social support from the Army community was only associated with the personal wellbeing of military wives and not also associated with depressive symptoms remains unclear, but researchers have previously found that social support is not necessarily associated with mental health symptomology. For example, while social support was important to military wives, only positive interpersonal interactions with their military partners were associated with psychological outcomes in military wives, particularly depressive symptoms (Solomon et al., 1991). In turn, one might expect social support from the military community to be related to couple wellbeing. Conversely, hypothesis 2 was not supported, as military community support was not related to couple wellbeing, indicating that relationship factors of Army couples did not

account for an association between the amount of social support from the military community and the psychological outcomes of Army wives.

Hypothesis 3. Military life satisfaction (or lack thereof) was not directly associated with either depressive symptoms or personal wellbeing of military wives. However, hypothesis 3 was supported, such that Army wives who were more satisfied with Army life tended to indicate higher levels of couple wellbeing, suggesting an association with healthier interpersonal dynamics with their active duty partner, which also was associated with better psychological health. The finding that couple wellbeing mediated the relationship between military life satisfaction and psychological outcomes of Army wives, particularly depressive symptoms, is in line with the theoretical tenets of MDMD and the research results supporting the model's theoretical constructs. In general, MDMD indicates that relationship factors, such as social support, are associated with depressive symptoms in female spouses. Specifically, lower levels of social support, such as a lack of intimacy, paired with higher levels of interpersonal stress, such as aggression, often are associated with elevated depressive symptoms in spouses (Beach et al., 1990). The present study's couple wellbeing latent variable reflects many aspects of the social support factor described in MDMD, namely intimacy, couple cohesion, and direct self-esteem support (e.g., demonstrating appreciation to one's spouse), which supports the explanation that couple wellbeing is associated with better psychological outcomes of Army wives.

In addition, the finding that couple wellbeing played a role in the psychological outcomes of Army wives corresponds with research highlighting the critical association between interpersonal factors and psychological outcomes among female spouses. Specifically, wives reported placing great emphasis on dyadic and relationship-enhancing variables in addressing

their depressive symptoms (Christian, O'Leary, & Vivian, 1994), thus suggesting that wives view relationship factors as vital to their psychological health. Accordingly, the explanation as to why the present study found that couple wellbeing was associated with the psychological outcomes of Army wives more so than the identified military-specific stressors/supports might be because couple wellbeing is a more proximal factor. Namely, military-specific stressors/supports may have a more distal association with the psychological outcomes of wives as compared to couple wellbeing. Therefore, future research assessing the psychological health of military wives would benefit from further examining how such symptoms are associated with a variety of dyadic marital processes.

Exploratory Questions

Two exploratory questions examined whether there was an association between the control variables, rank and years married, with the primary study variables (military-specific stressors/supports, the psychological outcomes of military wives, and couple wellbeing). Specifically, exploratory question 1 examined the number of years married, and exploratory question 2 examined the rank. As noted in the literature, controlling for rank is important when studying the military community because rank denotes pay grade as well as a military family's social standing and hierarchy in the military community (Clark et al., 2018). Additionally, rank/pay grade status has been identified as a military contextual variable that impacts family processes/readjustments and couple dynamics, as well as psychosocial factors of military wives (O'Neal, Mancini, & DeGraff, 2016). In terms of years married, controlling for relationship length is characteristic of many research studies due to the noted association with various relationship factors and personal wellbeing (Kim & McKenry, 2002; Kitson & Holmes, 1992) as well as the association with marital satisfaction levels, self-perception, and couple dynamics during deployment (Luckey, 1966; Rollins & Feldman, 1970; Spera, 2009).

Years Married. Years married was significantly associated with social support from the military community and military life satisfaction. Specifically, Army wives who were married longer tended to report greater connections with other military families, were more active in military community events, and experienced higher levels of support and concern from other military families. Additionally, Army wives who were married longer also perceived military life as more satisfactory, or indicated higher levels of satisfaction regarding aspects of their active duty partner's career (e.g., pay, benefits, and stability). Military couples tend to enter into the military culture and workforce at a young age and marry young (Clever & Segal, 2013), which

requires military couples to adjust not only to marriage, but also to demands of military life. Thus, those married longer periods of time have had more time to adjust to military life and marriage. In comparison to Army wives who have been married fewer years, one can purport that Army wives who have been married longer have likely learned how to better identify and utilize resources and further develop and strengthen already established military community connections. Additionally, wives who have been married longer might become better prepared to endure military-specific transitions, experiences, and stressors that later help to positively reframe their perspectives of military life and build greater resiliency. The ABCX Model of Family Stress emphasizes this relationship between resources, perceptions of stress, and handling stress long-term, such that wives who have been married longer (and subsequently have been engaged in aspects of military life for longer periods) are more likely to have greater access to resources, more positive perceptions of military life, and are better able to handle transitions and stress individually and with their active duty partner.

Surprisingly, years married was not associated with psychological symptoms of Army wives (depressive symptoms or personal wellbeing), as previous researchers have found an association between relationship length and both depressive symptoms and wellbeing. Specifically, studies have shown that military couples who were married fewer years tended to report higher levels of depressive symptoms, with number of years married having an inverse relationship with depressive symptoms in both wives and their military partners (Collins, Lee, & MacDermid Wadsworth, 2017). Moreover, military wives who were married fewer years were perceived to have greater difficulties coping with military life stressors (Spera, 2009). On the other hand, both male and female spouses who were married fewer years reported lower levels of depressive symptoms, which was theorized to result from both partners idealizing one another

and their relationship during the early stages of their marriage (Fitzpatrick & Wampler, 2000). This contradictory finding may be explained by the association between factors of social support and interpersonal stress highlighted by MDMD, such that couples who are married for fewer years might not be married long enough to experience decreases in support paired with increases in interpersonal stress, thus positively associated with individual wellbeing. Alternatively, even if couples who have been married for fewer years do experience shifts in both support and interpersonal stress, these changes might need time to develop in order to significantly impact individual psychological outcomes of each spouse (Davila et al., 1997).

Rank. In the present study, rank was only significantly associated with military life satisfaction, or how satisfied military wives were with certain aspects of Army life. Specifically, wives of enlisted soldiers reported being more dissatisfied with aspects of military life, including the amount of support and concern their families received from the Army and the financial incentives and benefits. This is congruent with other research that found that wives of lower ranking service members were at higher risk for experiencing negative psychological symptoms compared to officer wives (Griffith, Stewart, & Cato, 1988; Lester et al., 2010) and had more difficulty coping during military separations (Bell, Tiggler, & Scarville, 1991; Wood, Scarville, & Gravino, 1995). The finding that rank was only associated with one variable in the present study is not necessarily surprising given that researchers have previously noted the complexity of rank. Specifically, rank may be confounded with the length of time a service member has served, the amount of professional opportunities, and the number of stressors experienced that result from the type of leadership role and level of responsibility (O'Neal, Mancini, & DeGraff, 2016).

Implications and Recommendations

Although caution is warranted when generalizing these findings to a broader military population (see limitations and future directions below), there appear to be a number of implications and recommendations that can be drawn from this research. Overall, findings from the present study were consistent with both the ABCX Model of Family Stress and MDMD in that social support from the military community and satisfaction with military life played important roles in the psychological health of military wives (namely personal wellbeing), with interpersonal dynamics with their service member playing a pivotal role in the association between satisfaction with military life and their psychological functioning. Therefore, the military will most likely find benefit in continuing to dedicate time and resources in examining factors that impact long-term functioning of military wives, chiefly aspects of social support and military life satisfaction.

Consistent with the ABCX Model of Family Stress, findings from the present study indicated the importance of bolstering military life satisfaction as a means of enhancing couple wellbeing, and in turn, the psychological outcomes of military wives. In particular, military leadership may consider focusing on amplifying support, concern, and resources regarding career-related factors for both wives and their service member (e.g., employment opportunities, financial wellbeing, job stability and security), particularly in regards to military wives who have been married to their service member for fewer years and wives of enlisted service members, as doing so could enhance satisfaction with military life.

Military life satisfaction might also be enhanced with increased access to military-covered medical providers for both wives and their children located both within and outside the military community as well as provide increased opportunities for wives to communicate with

their service member while their service member is away on training or deployment. Of note, spousal satisfaction with aspects of military life have been noted to predict military service retention (Lopez, 2019), with retention of qualified service members being fundamental to military leadership in maintaining unit readiness and decreasing costs of service member replacement (“Military Personnel Retention,” n.d.). Therefore, the military will most likely find direct benefit in continuing to dedicate time and resources in examining factors that positively impact levels of military life satisfaction in military wives because their mental health is associated with the psychological functioning of their family units as well as individual family members (Lara-Cinisomo et al., 2012; Palmer, 2008), including their service member.

Also consistent with the ABCX Model of Family Stress, results of the present study highlighted the importance of strengthening social support, especially to the military community, as doing so is associated with higher levels of personal wellbeing in military wives. Social support may be enhanced by military leadership working and partnering with both military and non-military organizations to promote resilience. Specifically, the military may find benefit in increasing and promoting the number of sponsored community events, workshops, sporting clubs, and social clubs accessible to military wives. Additionally, factors of social support might be augmented when wives experience greater levels of stability in regards to relocations and contact with their primary support group. Specifically, greater periods of time between relocations (e.g., > 3 years) and receiving financial assistance to travel to see family members not located near their service member’s assigned duty station might be associated with higher levels of personal wellbeing. Furthermore, military wives may find benefits in increasing the amount of non-military community connections, particularly if resources are lacking in their military

community. Non-military connections might include religious resources (e.g., attending services and functions), YMCA, sporting clubs, and community volunteer opportunities.

The importance of community support as it relates to the ABCX Model of Family Stress may also be helpful in examining other samples in addition to the military wives surveyed in this study. In particular, first responders are at an increased risk for developing PTSD given their continuous exposure to critical incident stressors (Haugen, Evces, & Weiss, 2012), and the mental health of first responders can in turn be associated with negative psychological outcomes of their family members (Duarte et al., 2006). As the author of this study was finalizing dissertation edits, many medical first responders around the world had been routinely experiencing stressors for months related to the COVID-19 pandemic, including caring for individuals diagnosed with the virus while facing a shortage of medical supplies and resources. Moreover, many first responders have reported experiencing concern of whether they will contract the virus themselves and pass the virus to their loved ones, causing some first responders to physically isolate themselves from their families and communities, which has limited the amount of supportive resources first responders have received.

As indicated by the ABCX Model of Family Stress, a lack of resources, paired with stressors and negative perception of such stressors, could lead to individuals and their families experiencing crisis. Thus, similar to military leadership, healthcare leaders and employers may find benefits in examining aspects of medical and community-based resources as well as job satisfaction levels as they relate to long-term functioning of first responders. As many individuals around the world have increased their use of virtual connections via Zoom, FaceTime, and Skype as a result of the COVID-19 pandemic, perhaps researchers will find an association between technology resources and better psychological functioning. Therefore,

results from this study, in context with the ABCX Model of Family Stress, could be generalizable to medical and other first responders (e.g., psychologists, psychiatrists, counselors, and social workers) as they provide services both during and after the pandemic.

Perhaps most importantly, the findings of the present study were also consistent with MDMD, in that couple wellbeing played a primary role in the psychological health of military wives, and that couple wellbeing appears to be another resource and additional potential leverage point for intervention. A healthy couple relationship might be enhanced through promoting more opportunities for military wives and their service members to spend time with each other. Specifically, decreasing a service member's daily tour of duty and allowing for regularly scheduled low-cost or free childcare services that promote couple cohesion (e.g., spending quality time without childcare distractions) might be associated with higher levels of personal wellbeing of military wives. Additionally, military couples have access to marital therapy resources on and off base, which is important given that previous research has highlighted the positive effects of marital therapy on depressive symptoms of spouses, particularly female spouses (Beach & O'Leary, 1992). However, marital therapy for military spouses is not mandatory, and marital therapy interventions are typically suggested by military leadership when marital discord is associated with a service member's functioning. While military leadership cannot make marital therapy mandatory for all military couples, nor make any action mandatory for military wives, the results of the present study suggest benefits in placing more importance on military marriages and focusing on implementing preventative measures and interventions. Currently, the military has prevention and planning resources in place for service members prior to deployment, including behavioral health resources, with minimal focus on prevention planning and resources for wives. The results of the present study suggest that the military may

find benefits in including wives in deployment-related prevention planning, such as offering behavioral health resources that target military couple wellbeing and subsequently the psychological health of military wives and family readiness.

In addition to preventative programs being positively associated with military couple wellbeing and subsequently the wellbeing of military wives, focusing on improving the health of military marriages will also be beneficial to the military. Cross-spouse effects in relation to MDMD were found in the literature, with findings illustrating an association between one partner's marital adjustment and later reports of his/her partner's depressive symptoms (Beach et al., 2003). This finding denotes the importance of addressing the marital satisfaction component of couple wellbeing, as marital satisfaction of military wives can potentially have a positive impact for service members, thus assisting military leadership with service member readiness.

Limitations and Directions for Future Research

This study provides important insight into the psychological health of military spouses, but findings and implications should be interpreted with study limitations in mind. First, this study focused on couples in which one member was in the Army. Thus, it does not reflect the experiences of every military marriage of the United States Armed Forces. Along with having different types of services represented (i.e., Air Force, Coast Guard, Marines, Navy, and Army), there are different service levels that include active duty, reserve, and National Guard. Moreover, among the different types of service members and service levels within the military, there are several different job categories, professional career fields, years in service, and ranks. In terms of rank, the present study examined this variable as enlisted or officer, and there are other ways to assess the association of rank. Service members also differ in regards to education, ethnicity, age, gender, sexual orientation, marital status, length of marriage, length of service, and both number and duration of deployments experienced. These considerations will be important for future research.

Furthermore, the data collected consisted predominately of male soldiers and their female spouses. The military consists of approximately 16.5% female service members who work in 90% of the professional job fields the military offers (U.S. Department of Defense, 2018); this study did examine the experiences of spouses of male soldiers. Most military spouses are female (U.S. Department of Defense, 2018), so the likelihood of obtaining data from female spouses was higher than obtaining data from male spouses. However, the data collected from female spouses were not intended to represent male spouses, and future research would benefit from including male spouses of female active duty partners as well as examining how the present study's variables are associated with the mental health and relationship functioning of same-sex military couples.

Data were also limited to one military installation in the United States, particularly an active duty Army installation. Army spouses do not fully represent the experiences of all military spouses in each main branch of service of the military nor spouses who live on foreign soil, and therefore were not intended to represent all military spouses. Future research would also benefit from including and comparing spouses of same sex couples, spouses of different military branches, and spouses who are stationed with their active duty partner at different military bases in the United States as well as overseas, as spouses most likely have varying degrees of experiences and access to resources depending on the military branch and location. Additionally, the data set consisted of predominately Caucasian female military spouses, and the reason is unclear. For example, it remains unclear if most military spouses across all branches of the military are Caucasian, if the military base the data was collected from accessed a predominately Caucasian population, or if those who volunteered were predominantly Caucasian. Future research would benefit from obtaining a more heterogenous military demographic sample in order to increase external validity.

In addition, the study was a secondary data analysis of a cross sectional, convenience study intended to provide outcome prevalence and multiple associations with those outcomes. I requested to utilize a secondary data analysis for the present study because obtaining access to military spouses for research purposes is very difficult, and using a secondary data analysis allowed me to have access to a population that I would not have otherwise been able to access as a graduate student. Furthermore, while cross sectional studies have many advantages, these designs collect data at one point in time, thus disallowing one to conclude causality or sequence of events (Levin, 2006). Therefore, certain characteristics, risk factors, or mental health prevalence might be underrepresented, identified as the Neyman bias (Grimes & Schulz, 2002).

Future researchers might benefit from focusing on examining military spouses and their active duty partners across multiple periods of time, such as before, during, and after transitions and/or military life events (deployments, relocations, promotions, and change in job specification).

Additionally, self-report measures were used in obtaining data from participants and such measures can have drawbacks that can impact information reported. When using self-report measures without additional measures that account for response bias and/or desirability, researchers assume honesty of respondents (Stone et al., 1999). Moreover, self-report measures rely on the assumption that respondents have high levels of introspective abilities in accurately assessing themselves as well as the ability to interpret questions and statements on measures accurately (Hoskin, 2012). Furthermore, there is variation in how some people fill out measures with rating scales, or differences in scale interpretation (Austin et al., 1998).

Future research would also benefit from expanding the variables of interest used in this study. The construct of couple wellbeing (latent variable comprised of marital quality, relationship communication satisfaction, and relationship warmth) could be expanded by adding a measure that examines financial matters, as money is often the focus of relationship conflict (Papp, Cummings, & Goeke-Morey, 2009) and can provide further information regarding relationship functioning for military couples. Specifically, the data set utilized for this study showed that Army wives also completed the PREPARE/ENRICH Financial Management Scale (Olson & Olson, 1999), which allowed wives to report how they and their soldier handled money and made financial decisions. Examining how finances shape couple wellbeing could provide insight into couple dynamics as well as specific leverage point of intervention.

In addition to further developing the construct of couple wellbeing, future research might benefit from expanding the measures used in this study to examine psychological outcomes (e.g.,

depressive symptoms and personal wellbeing). Psychological functioning is comprised of many behavioral, cognitive, and emotional facets, which therefore might be better showcased and examined via a latent variable comprised of the following: depressive symptoms, personal wellbeing, self-confidence (via General Self-Efficacy Scale; Bosscher & Smit, 1998; Sherer et al., 1982), and how well wives perceive themselves coping with stress (via Brief Resilient Coping Scale; Sinclair & Wallston, 2004). Including a latent variable of multiple psychological outcome factors would most likely provide a more comprehensive view of psychological functioning, risk factors, and potential leverage points for intervention.

Conclusion

The mental health of military spouses is important to the family system as well as to the military, as the psychological functioning of spouses is associated with family readiness, which in turn is associated with military morale and retention rates. While military-specific stressors/supports have some bearing on the psychological outcomes of military spouses, the couple relationship appears to be the most salient resource and leverage point for intervention. Therefore, increasing resources and research efforts in regards to couple wellbeing might prove advantageous for military spouses, their families, and subsequently the United States Armed Forces. Moreover, future research replicating this study over a longer period of time and with a more diverse sample is warranted. Specifically, future research efforts may find benefit in surveying couples from several branches of the military, including different types of service, as well as include male spouses, spouses of different racial and ethnic groups, and same-sex couples. Additional resources and leverage points for intervention may include enhancing childcare resources, non-military community connections, access to military-covered medical providers, and employment opportunities, as such might be associated with greater levels of military life satisfaction and better psychological outcomes.

Results of this study also indicated the importance of community-based resources, which might be generalizable to other samples. Specifically, examining the relationship between stressors and resources (or lack thereof) of first responders may prove to be beneficial in examining the association between chronic stressors they typically endure and their mental health. Determining whether this study's results are generalizable to first responders may also provide further understanding of both risk factors and protective factors in light of the COVID-19 pandemic.

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APPENDICES

Appendix A: Social Support from the Military Community

Community Support

This section asks about military family members who form the greater community centered on the post. We want to know how you feel about where you live.

Please click on the circle for each statement with the response that best represents how you think **military family members (civilians)** feel about their post.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Family members (civilians) find it easy to make connections with other families.	1	2	3	4
Family members (civilians) are active in post-sponsored community events and activities.	1	2	3	4
Family members (civilians) feel a sense of connection with one another.	1	2	3	4
Family members (civilians) assume responsibility for making this post a better place to live and work.	1	2	3	4
Family members (civilians) join together to solve problems that threaten the safety and well-being of members and families assigned to this post.	1	2	3	4
Family members (civilians) look after and show concern for members and families assigned to this post.	1	2	3	4
Family members (civilians) take advantage of opportunities to support the needs of members and families assigned to this post	1	2	3	4

Appendix B: How Satisfied with Military Life

Military Career

This section asks about _____'s (your partner) military career. Please take your time and answer each question. (This section was only answered by respondents who indicated their partner is in the military.)

How satisfied or dissatisfied are you with each of the following aspects of Military life?	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied
_____'s (your partner) Army job. *RS	1	2	3	4
Opportunity for _____ to serve his/her country. *RS	1	2	3	4
Opportunity for _____ (your partner) to develop job skills. *RS	1	2	3	4
The security and stability of _____'s (your partner) job. *RS	1	2	3	4
_____'s (your partner) pay and allowances. *RS	1	2	3	4
_____'s (your partner) retirement pay and benefits. *RS	1	2	3	4
Amount of time _____ (your partner) is away from home. *RS	1	2	3	4
Overall, how satisfied are you with the Army as a way of life? *RS	1	2	3	4
Overall, how satisfied are you with the support and concern the Army has for your family? *RS	1	2	3	4

Note: Items 12 and 13 were created for this survey and were not taken from the original source (Air Force Community Survey).

Appendix C: Marital Quality

Relationship Satisfaction

These questions ask about your relationship satisfaction. All relationships have strengths and challenges, so please answer these questions as honestly as possible. There are no right or wrong answers.

For each of the following statements, click on the circle that best fits your relationship with (name of partner).

	Strongly Disagree	Disagree	Agree	Strongly Agree
I think we have a good relationship.	1	2	3	4
I think our relationship is very stable.	1	2	3	4
I feel like we are a team.	1	2	3	4
I am committed to making my relationship a success.	1	2	3	4

Note: These questions were only asked to participants who were married, engaged, cohabiting, or in a committed (serious) relationship.

Appendix D: Relationship Communication Satisfaction

Please select the option that best fits your satisfaction level with how you and (partner) communicate about each of the following topics.

	Strongly Disagree	Disagree	Agree	Strongly Agree	We Don't Talk About Note: Treated as a missing value so that it would not alter the 1 to 4 scale
I am satisfied with how we talk about money.	1	2	3	4	5
I am satisfied with how we talk about sex.	1	2	3	4	5
I am satisfied with how we talk about religion.	1	2	3	4	5
I am satisfied with how we talk about politics.	1	2	3	4	5
I am satisfied with how we talk about child-rearing.	1	2	3	4	5
I am satisfied with how we talk about our extended family.	1	2	3	4	5
I am satisfied with how we talk about work.	1	2	3	4	5
I am satisfied with how we talk to each other overall.	1	2	3	4	5

Appendix E: Relationship Warmth

Relationship

The next few questions continue to ask you about your relationship satisfaction. Please answer these questions as honestly as possible. There are no right or wrong answers.

During the past year, when you and _____ spent time talking or doing things together, how often did he or she...

	Never	Sometimes	Often	Always
help you do something that was important to you?	1	2	3	4
get angry at you? *RS for full scale	1	2	3	4
let you know that they really care about you?	1	2	3	4
get so mad at you that they broke or threw things? *RS for full scale	1	2	3	4
listen carefully to your point of view?	1	2	3	4
shout or yell at you because they were mad at you? *RS for full scale	1	2	3	4
act supportive and understanding toward you?	1	2	3	4
criticize you or your ideas? *RS for full scale	1	2	3	4
act loving and affectionate toward you?	1	2	3	4
have a good laugh with you about something that was funny?	1	2	3	4
argue with you whenever you disagreed about something? *RS for full scale	1	2	3	4
let you know that they appreciate you, your ideas, or the things you do?	1	2	3	4
tell you that they love you?	1	2	3	4
insult or swear at you? *RS for full scale	1	2	3	4
understand the way you felt about things?	1	2	3	4

Note: All warmth items are present.

Note: Only items 1, 2, 3, 5, 7, and 12 are present from the hostility subscale.

Note: These questions were only asked to participants who were married, engaged, cohabiting, or in a committed (serious) relationship.

Appendix F: Depressive Symptoms

Concerns and Worries

Below is a list of some of the ways you may have felt or acted. Please choose how often you felt this way **during the past week**. Please respond to all items.

During the past week...	None of the time	Some of the time	Most of the time
I felt that I could not shake off the blues even with help from my family or friends.	1	2	3
I had trouble keeping my mind on what I was doing.	1	2	3
I felt depressed.	1	2	3
I felt everything I did was an effort.	1	2	3
My sleep was restless.	1	2	3
I enjoyed life. *RS	1	2	3
I felt sad.	1	2	3

Note: Original scale is a 4-point scale (rarely/none, some or a little of the time, occasionally, and most or all of the time)

Appendix G: Personal Wellbeing

Well-Being

These statements are about your personal well-being. Please answer based on how you felt over the past week.

	Strongly Disagree	Disagree	Agree	Strongly Agree
I was satisfied with my life as a whole.	1	2	3	4
I was satisfied with my standard of living.	1	2	3	4
I was satisfied with my health.	1	2	3	4
I was satisfied with what I was currently achieving in life.	1	2	3	4
I was satisfied with my personal relationships.	1	2	3	4
I was satisfied with how safe I felt.	1	2	3	4
I was satisfied with feeling part of my community.	1	2	3	4
I was satisfied with my future security.	1	2	3	4

Note. Original scale was 0 (no satisfaction at all) to 10 (completely satisfied)

Appendix H: Rank

Military Life

Please tell us about your military experiences and answer the following question about your military rank.

Your Military Rank:

Enlisted

1) PV1 (E1) to CPL (E4)

2) SGT (E5) to SGM/CSM (E9)

Commissioned/Warrant Officer

3) 2LT (O1) to MAJ (O4); or WO1 to CW5

4) LTC (O5) to LTG (O9)

Appendix I: Years Married

Years Married

What is your current legal marital status?

- 1) Married
- 2) Separated
- 3) Widowed
- 4) Divorced
- 5) Single (Never Married)

How long have you been in your current relationship?

_____ Yrs.

_____ Mths.