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GENDER, ADVERSE FAMILY-OF-ORIGIN EXPERIENCES, AND CURRENT ROMANTIC RELATIONSHIP FUNCTIONING IN MILITARY COUPLES

PROFESSIONAL DISSERTATION

SUBMITTED TO THE FACULTY

OF

THE SCHOOL OF PROFESSIONAL PSYCHOLOGY
WRIGHT STATE UNIVERSITY

BY

NICHOLE KUCK, Psy.M.

IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
OF
DOCTOR OF PSYCHOLOGY

Dayton, Ohio **July, 2019**

COMMITTEE CHAIR: Jeffrey Cigrang, Ph.D., ABPP

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WRIGHT STATE UNIVERSITY
SCHOOL OF PROFESSIONAL PSYCHOLOGY

June 15, 2018

I HEREBY RECOMMEND THAT THE DISSERTATION PREPARED UNDER MY SUPERVISION BY **NICHOLE KUCK** ENTITLED **GENDER, ADVERSE FAMILY-OF-ORIGIN EXPERIENCES, AND CURRENT ROMANTIC RELATIONSHIP FUNCTIONING IN MILITARY COUPLES** BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PSYCHOLOGY.

_____
Jeffrey Cigrang, Ph.D. ABPP
Dissertation Director

_____
Cheryl Meyer, J.D., Ph.D.
Associate Dean

Abstract

Prior research has determined that there is a trend within the military that military women experience more relationship disruption than military men and no conclusive findings as to why this may occur. There has been preliminary research indicating that military women experience more Adverse Childhood Experiences (ACE)s than military men. Civilian research has shown definitive findings that there are long-term physical, emotional, and relational consequences of ACEs. This purpose of this study was to determine if an adverse family-of-origin environment characterized by traumatic events and a conflictual and less cohesive family-of-origin environment impacted current relationship functioning as a possible explanation for why military women experience more relationship disruption than military men. There were 220 active duty Air Force participants who identified as being in a committed romantic relationship lasting at least six months. The findings of this study concluded that women reported less cohesive and more conflictual family-of-origin-environments, experienced more ACEs and current relationship discord than military men. For women, there was a significant association between an adverse family-of-origin environment and perpetuating and being a victim of domestic violence. For men, there were significant associations between an adverse family-of-origin environment and relationship discord and problematic communication patterns. The findings of this study indicate that in this population the relationship functioning for men was more influenced by childhood adversity than for women. Further research is needed to confirm these findings and to generalize these findings to the larger military population.

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Chapter I

Statement of the Problem

Within the United States military, women divorce at higher rates than men. Upon examination, it appears that this difference is largely accounted for by enlisted women. Enlisted women divorce at significantly higher rates than enlisted men, female officers, and male officers (Karney & Crowne, 2007). Relationship problems are a concerning trend within the military as they have been linked to reduced job performance (Karney & Crown, 2007), reduced retention of female personnel (Klimas, 2015), and have been implicated as a risk factor for suicide (Heyman, Ireland, Frost & Cottrell, 2012).

There has been a limited amount of speculative research examining why enlisted women experience more relationship disruption than other military members, but no firm conclusions have been reached. Adler-Baeder, Pittman, and Taylor (2005) examined over 48,000 military personnel records and compared marital trends from 1992 and 1999 for military members and the general U.S. population. The researchers determined that military personnel regardless of gender were more likely to marry, divorce, and remarry at a younger age than civilians. They also found that military women were more likely to be divorced and less likely to remarry than military men. As a result of their findings, Adler et al. (2005) suggested military women may divorce at higher rates due to unidentified factors related to making the military a career. Karney and Crown (2007) conducted a comprehensive analysis of military personnel records from 1995 through 2005 for the purpose of identifying marital trends and to determine if deployments

adversely impacted marriages. Karney and Crown (2007) found military women are more likely to experience relationship disruption post-deployment than military men. They also suggested both a stress hypothesis and a selection hypothesis to help explain why military marriages end. The stress hypothesis stated that stress unique to a military lifestyle may cause relationship problems. The selection hypothesis stated that the military attracts individuals who are at a higher risk for divorce and then provides these individuals financial incentives to get married young. Kanzler, McCorkindale, and Kanzler (2011) analyzed published research about military marriages to identify possible reasons why military women divorce at higher rates. They built on Karney and Crown's (2007) identified hypotheses and suggested additional relationship stressors including a mismatch of gender roles between partners and a lack of institutional support for male civilian partners.

Another factor that may contribute to higher divorce rates for women in the military is adverse family-of-origin experiences which would encompass Adverse Childhood Experiences (ACEs) and a conflictual and less cohesive family-of-origin environment measured by the Family Environment Scale (Moos & Moos, 1974). Such experiences include physical, emotional, and sexual maltreatment, neglect, witnessing domestic violence, parental divorce, familial substance use, mental illness, and incarceration (Felitti et al., 1998a) and frequent conflict and criticism (Moos & Moos, 1974). The limited research that has been conducted exploring adverse family-of-origin experiences in a military population found that women were more likely than men to report experiencing childhood maltreatment (Stander, Olson & Merrill, 2002; Kanton et al., 2015). Military members and veterans reported a higher prevalence of experiencing

ACEs then general civilian population (Blosnich, Dichter, Cerulli, Batten & Bossarte, 2014). This higher prevalence of ACEs may be more common in the enlisted ranks due to family-of-origin socioeconomic factors related to parental education and family income. ACEs are more likely to occur in families with low socioeconomic status (Halfon, Larson, Son, Lu & Bethell, 2017). When compared to those who chose not to join the military, enlisted military members are more likely to come from lower-income (Lutz, 2008), single-parent or blended-families (Spence, Henderson & Elder, 2012), with non-college educated parents (Bachman, Segal, Freedman-Doan & O'Malley, 2000), and identify financial need as a reason for enlistment (Woodruff, Kelty & Segal, 2006).

A significant amount of research has been conducted with civilian couples exploring the impact of adverse family-of-origin experiences on emotional functioning in adult relationships. The findings have shown that adverse family-of-origin experiences increase the risk in adulthood for domestic violence, communication problems, decreased emotional intimacy, insecure attachment, and less effort toward one's relationship (DiLillo, Lewis, & Di Loreto-Colgan, 2007; Knapp, Norton, & Sandberg, 2015; Pournaghash-Tehrani & Feizabadi, 2009)**.** However, there has been limited research analyzing the impact of ACEs and conflictual and less cohesive family-of-origin environments on military members and even less on military women and their relationship functioning.

The purpose of this study was to examine the relationship between gender, adverse family-of-origin experiences, and current relationship functioning in a sample of young partnered, enlisted, active duty military members. It was hypothesized that (1) partnered women entering the military will report a higher prevalence of ACEs than

partnered men entering the military; (2) a higher proportion of partnered women entering the military will report higher conflict and lower cohesion family-of-origin environments than partnered men entering the military; (3) a history of ACEs will be associated with lower current relationship functioning for partnered women but not for partnered men; and (4) higher conflict and lower cohesion family-of-origin environments will be associated with lower current relationship functioning for partnered women but not for partnered men. The findings of this exploratory can support differences in family origin experiences as a potential contributing factor to observed gender differences in divorce rates among military members. Such findings may also help inform the content of future targeted interventions to help prevent relationship dysfunction and dissolution among all service members.

Chapter II

Literature Review

Military Marital Trends

Marriage and divorce are common occurrences for many young adults. However, military members may experience marriage and divorce differently than the general civilian population. For example, military members tend to marry younger than civilians (Adler-Baeder et al., 2005; Hogan & Seifert, 2010). Adler-Baeder et al. (2005) found that in the 20 to 24-year age group, 47% of military women and 41% of military men were married compared to 33% of female and 18% of male same-age civilians. Similarly, Hogan and Seifert (2010) compared data from 2,487 veterans and 76,456 civilians to determine if military service increased the likelihood of marriage at a younger age. The researchers found that for those aged 23 to 25, 60% of high school educated military members were married compared to 37% of their civilian peers. The rates decreased slightly with higher levels of education: 40% of military members with a college education were married compared to 25% of civilians.

In addition to marrying younger, military members are much more likely to remarry younger and more frequently than civilians (Adler-Baeder et al., 2005). While 1.4% of military men and 2.3% military women aged 20 to 24 were in their second marriage, the incidence of second marriages for civilian men were .4% and for civilian women 1.1%. Similarly, for individuals aged 25 to 29, 7.5% of military men and 10.6% of military women were in their second marriage compared to 2% of civilian men and

4.6% of civilian women. For individuals aged 30 to 34, 14.4% of military men and 12.9% of military women were in their second marriage compared to 7.1% of civilian men and 9.6% of civilian women. Military members are also more likely to remarry for a third time than civilians; in 25 to 29-year-olds, .8% of military men and 1.1% of military women were in their third marriage compared to .2% of civilian men and .3% of civilian women. In 30 to 34-year-olds, 1.9% of military men and 2.9% of military women compared to .5% of civilian men and 1.1% of civilian women were in their third marriage (Adler-Baeder et al., 2005).

Karney and Crown (2007) conducted a large review of military marital trends by analyzing military personnel records from 1995 to 2005. They found significant differences in marital trends across gender and rank. Military women were less likely to be married than military men; 42.8% of enlisted women and 51.0% of female officers were married compared to 51% of enlisted men and 72.5% of male officers. Dual military marriages make up 11.3% of military marriages (Department of Defense (DOD), 2015). Within that percentage, 52.3% of enlisted women and 43.6% of female officers compared to 8.2% of enlisted men and 6.1% of male officers were in dual-military marriages. Military members in general divorce slightly less often than civilians. In 2005, 3.1% of military members divorced (Karney & Crown, 2007) compared to 3.6% of civilians (Centers for Disease Control (CDC), 2015). Thus, serving in the military may hold some protective factors for marriages.

The association of gender with divorce rates is even greater than with marriage rates. Karney and Crown's (2007) analysis revealed that female military members were about three times more likely to divorce than military men. Specifically, 7.3% of enlisted

women, 3.6% of female officers, 2.8% of enlisted men, and 1.5% of male officers were divorced. The risk for divorce increased in dual-military marriages for men but decreased for women; 6.2% of enlisted women and 3.3% of officer women versus 5.1% of enlisted men and 2.5% of officer men in dual-military marriages divorced. When married to a civilian, 8.4% of enlisted women and 3.9% of officer women versus 2.7% of enlisted men and 1.5% of officer men divorced (Karney & Crown, 2007).

It is noteworthy that officer women are at a lower risk of divorce than enlisted women. A potential reason for this may be found in a separate study that examined the impact of education on women's attitudes towards divorce. Women with a high school education or less have more accepting attitudes toward divorce than women with a four-year college degree. Additionally, high school educated women are more likely to be divorced or never married with children than women with a four-year college degree (Martin & Parashar, 2006).

Theories for Why Enlisted Women Divorce More Frequently

As reviewed above, enlisted women divorce at a higher rate than officer women and military men. Karney and Crown (2007) explain why military marriages end with their stress and selection hypotheses. The stress hypothesis identifies stressors unique to the military lifestyle, such as deployments and frequent moves, which place additional strain on military marriages. The selection hypothesis takes the position that the military services recruit personnel who are a higher risk for divorce in terms of age, race, socioeconomic status, and educational attainment and then provides financial incentives to marry young. Kanzler et al. (2011) identified additional theories that are a blend of the selection and stress hypotheses as well as unique relationship stressors related to the

demands of the military lifestyle, job, and institutional factors. Civilian researchers have suggested various adverse family-of-origin environmental factors that contribute to decreased communication, inadequate self-regulation relationship skills, and disrupted relationship attachments (DiLillo et al., 2007; Rhoades, Stanley, Markman & Ragan, 2012; Story, Karney, Lawrence & Bradbury, 2004).

Military Specific Stressors. Karney and Crown (2007) reported military relationships are more likely impacted by factors related to the selection hypothesis than the stress hypothesis. They suggest marriage is incentivized for young, vulnerable individuals who may put less consideration into finding a compatible partner. Part of the discrepancy in divorce rates may be contributed to that these incentives may enhance the marriages of military men married to civilian women but may have limited utility for dual-military couples and military women with employed civilian male partners.

Married military members receive financial incentives such as increased housing and cost of living allowances as well as family separation pay. Additionally, independence and housing quality may influence the decision to marry as service members are allowed to move off base and out of the dormitories if they are married. Civilian partners receive extensive benefits to include free healthcare and access to multiple free or low-cost support services such as daycare, classes, spouses clubs, and social events. Considering that 93% of military spouses are female (DoD, 2014) these services have been offered to appeal to stay-at-home mothers and occur during the duty day making it difficult for military members and employed partners to attend. Another factor that may contribute to the divorce rate being higher among military women is that they have access to healthcare, pay and various benefits without being married. Civilian

women may not have the same access and financial freedom to leave an unhappy relationship as military women do (Kanzler et al., 2011).

A study by Anderson et al. (2011) evaluated 697 soldiers to determine differences in relationship distress between dual military couples and couples with an active duty member and a civilian spouse. The researchers found no significant difference in the level of relationship distress between dual-military and military-civilian couples. However, rank, marital status, geographic separation, and length of the relationship impacted the level of relationship distress. Lower ranking individuals reported more relationship distress, 29.2% of E-1-E4 and 24.7% of E5-E6 endorsed relationship distress compared to less than 15% of senior enlisted and officers. Of the soldiers identifying as dating or engaged, 41.2% endorsed relationship distress compared to 16% of married soldiers. Geographical separation increased relationship distress: 43.5% of geographically-separated soldiers reported relationship distress compared to 18.2% of those living with or near their partner. Finally, Anderson et al. (2011) found that 26.1% of individuals who were married less than four years and 21.1% of those married five to ten years reported relationship distress. Less than 15% of those married longer than 11 years reported relationship distress. The researchers also found that gender, race, deployments, living on base, and the presence of children appeared to have no significant impact on the level of relationship distress.

Karney and Crown's (2007) stress hypotheses stated that stressors unique to the military might cause relationship distress. Some well-known stressors include unpredictable and long work hours, shift work, deployments, and frequent moves away from family and support networks. If a service member with a significant other receives

an assignment, generally the couple can move together only if they are married. The fear of relationship consequences related to geographical separation may incentivize some military members to marry prematurely. This fear of geographical separation may start in entry-level training and continue throughout the military member's career. Academy cadets must marry within 60 days of graduation and enlisted members attending a six to 52-week technical school must marry their partner by the end of their training, or they will not be assigned to the same base (Kanzler et al., 2011; United States Air Force (USAF), 2015). However, some couples will be geographically separated even if they are married as military members in different service branches may not have the option to be stationed together (Karney & Crown, 2007).

Kilmas (2015) discussed the strain military women and their families experience and indicated that this strain might contribute to decreased retention of women and fewer women achieving high ranks. Civilian partners must accommodate their partner's military obligations, frequent moves or a partner that works shift work which may result in difficulty maintaining a career or finding childcare. This may be less of an issue in a relationship where traditional gender roles and a spouse who chooses to stay home with children. But the military life is likely to adversely impact military women and their partners who may want careers.

A small study by Southwell and Wadsworth (2016) of 20 male civilian partners was conducted to gain more insight into the marriages of military women. They found that a majority of the male spouses were supportive of their partner's military service and felt it was financially beneficial to the family. However, the male spouses also reported having difficulty with the military coming first, long work hours, separations, taking on

their wives' domestic duties during deployments, and fear of infidelity during separation. All the participants described feeling isolated and unsupported by the military because most military family services were designed for female spouses. Additionally, many of the spouses reported struggling with having non-traditional gender roles and felt it was emasculating to have their wives financially support the family.

A large study by Cooney, Segal, and Angelis (2011) evaluated 9,789 civilian spouses to determine their level of satisfaction with job opportunities. The researchers found that gender, race, and rank affected satisfaction levels, likelihood to be employed, and wages. Female civilian spouses reported 35.3% less dissatisfaction with employment opportunities than male civilian spouses. Female spouses were 42.7% less likely to be employed than male spouses. Female African American spouses were 42.2% more likely to be dissatisfied than female Asian or Caucasian spouses with job opportunities. Spouses of enlisted members reported significantly more dissatisfaction about job opportunities than spouses of officers. However, there were higher rates of employment among female spouses of enlisted members than among female spouses of officers. Rank did not affect male spouse employment. Caucasian and African American spouses with higher education levels reported higher levels of dissatisfaction with job opportunities than those with high school education.

For male spouses, their wages were affected by the presence of a child under six, weeks worked, and if their education level was below high school. Female spouses' wages were impacted by the time between moves, being African American, presence of children, their age, weeks worked, and having advanced education such as a college degree, graduate degree, or by being a veteran. African American female spouses earned

28.4% more than Caucasian female spouses, and Caucasian women earned 23% less than Caucasian men. There was not a significant wage difference between races for men. Female spouses earned 19.6% less than male spouses, and spouses of enlisted personnel earned between 15.5% to 28.8% less than spouses of officers (Cooney, Segal & Angelis, 2011).

Deployments are a unique hardship that requires the member to leave their family for six to 12 months at a time with anywhere from a few days to a few months' notice. The financial benefits of deployments improve most military relationships (Karney & Crown, 2007). In a sample of 472 active duty Air Force members, three percent of individuals reported deployment as a significant work stressor (Pflanz & Sonnek, 2002). Men and women deploy at similar rates; Karney and Crown (2007) found that women who had deployed appeared to experience more relationship disruption than men who had deployed and women who had not deployed. For some women, a deployment experience can negatively affect relationships after the deployment has ended. A small study of 134 female veterans of the OIF/OEF wars found the presence of post-deployment PTSD symptoms increased alcohol use and negatively impacted family communication and closeness as well as relationship satisfaction (Creech et al., 2016).

Stressors such as geographic separation, frequent moves, erratic work schedules, and deployments likely cause relationship strain for some military couples as they require significant partner support and accommodation. These stressors are likely to adversely impact the relationships of female enlisted military members if their partner is military or a civilian who desires a career or steady employment. Additionally, the military support

network was designed to best serve unemployed female partners (Southwell & Wadsworth, 2016).

Gender Roles and Role Strain. Military women are likely to identify with the least traditional gender roles while military men identify with the most traditional gender roles (Karney & Crown, 2007). Traditional gender roles may be difficult for military women to balance with their military requirements; military women likely benefit from having an egalitarian partner (Kanzler et al., 2011). When considering the prevalence rates of dual military marriages and marriages to male civilian spouses, a gender role mismatch and lack of support may lead to role strain and relationship distress for military women.

While gender roles may cause relationship disruption, they are a protective factor for the emotional well-being of military women. A study by Weatherill et al. (2011) evaluated gender roles for 658 female marine recruits and found that holding egalitarian gender roles increased their resiliency. Egalitarian gender roles were significantly correlated with reduced performance-related training stress, depression, anxiety, and PTSD symptoms and a stronger sense of unit cohesion. The researchers stated that succeeding in male-dominated fields may increase egalitarian attitudes and self-efficacy for women.

A large study by Mickelson, Claffey, and Williams (2006) of 3500 participants evaluated the impact of gender and gender roles on relationship quality and spousal support. The researchers found women who identify with egalitarian gender roles and men who identify with traditional gender roles require emotional and instrumental support from their partner to experience marital satisfaction. This is in contrast with

women who identify with traditional gender roles; they experience marital satisfaction with just emotional support from their partner. Role strain may result as a consequence of a gender role mismatch. Role strain has been linked to several risk factors for relationship difficulties including excessive drinking, depression, and psychological distress. Dilworth (2004) surveyed 453 participants about their experience of spillover from work to home. The researchers found that working longer work hours and having younger children predicted spillover from home to work for women. For both men and women, having reduced family satisfaction increased spillover from home to work.

A study by Vinokur, Pierce, and Buck (1999) examined the impact of role strain on 525 Air Force women. They found that women whose job was central to their identity experienced more family distress but decreased job distress. Job stressors such as being overworked, having little autonomy, or limited responsibility had a significant relationship with work to family spillover and family to work spillover. Additionally, job stress had a significant relationship increases in job distress and depression (Vinokur, Pierce & Buck, 1999).

A small study by Hopkins-Chadwick and Ryan-Wenger (2008) evaluated 50 Air Force women with preschool-aged children and 50 Air Force women without children to determine if having children impacted the women's stress level. The researchers did not find any difference between women with and without children. Both groups reported similar socioeconomic backgrounds, perceived availability of military resources, levels of role strain, stress-related symptoms, physical and mental health, and career aspirations. They found that physical health was impacted by stress-related symptoms and frequency and severity of role strain. Mental health was impacted by stress-related symptoms,

minority status, and severity of role strain. Additionally, these women's career aspirations depended on their perceived availability of military resources, low family-of-origin socioeconomic status, frequency of role strain, and less mental health difficulties.

Military women are more likely to have the least traditional gender roles, and military men are most likely to have the most traditional gender roles (Karney & Crowne, 2007). However, military women are most likely to benefit from egalitarian gender roles to succeed in the military (Weatherill et al., 2011) and require egalitarian support from their partners (Mickelson et al. 2006). Military women may hold a different gender role than their partner and as a result feel less supported by their partner causing role strain.

Adverse Family-of-Origin Experiences

An Adverse Childhood Experience (ACE) includes childhood maltreatment, neglect, witnessing domestic violence, parental divorce, and familial substance abuse, mental illness, and incarceration (Felitti et al., 1998a). In civilian populations, exposure to ACEs has been linked to poor health outcomes, increased the risk for suicide, depression, and alcoholism in adulthood (Felitti et al., 1998b). There has been some research conducted on military populations identifying the prevalence rates of ACE and examining the impact of ACEs on emotional and physical health. There has been limited research to date on the impact of ACEs or conflictual and less cohesive family-of-origin environments on adult relationship functioning in a military population. There is a large body of research exploring the impact on adult relationship functioning with childhood maltreatment, family conflict, domestic violence, parental divorce, and negative family-of-origin environments with civilian populations.

ACEs are more likely to occur in families with low socioeconomic status (Halfon et al., 2017). Karney and Crown (2007) stated that "military service tends to attract the most vulnerable (for relationship disruption) among those that meet minimum requirements" (p.20) in terms of being younger, more likely to be racial minorities, less likely to economically advantaged, or on a college trajectory. The number of vulnerable individuals entering the military and severity of their socioeconomic and emotional vulnerabilities is expected to increase as the requirements for recruiting decrease to meet the demands of current and ongoing military operations. While there is no research on marital outcomes and recruitment strategies, there has been a substantial amount of research evaluating the reasons individuals join the military which may provide insight into pre-military factors such as adverse family-of-origin environments that may contribute to relationship disruption.

Military recruitment efforts have themes of financial stability, independence, and cohesion that likely appeal to individuals from lower-socioeconomic backgrounds that were raised by a single parent or with a stepparent (Spence et al., 2012). This finding is supported by another study that examined reasons why individuals from single-parent homes join the military and found they often joined due to a lack of structure in the home, isolation, conflict, parental substance abuse, and financial needs (Philips, 2016). Enlisted members are more likely to come from non-college-educated parents (Woodruff, Kelty & Segal, 2006), and individuals who choose to enlist likely had lower GPAs in high school than their peers who went to college (Spence et al., 2012). Women have similar reasons for enlisting as do men, including a need for vocational opportunity, financial need, patriotism, and a desire to leave their homes. Some women reported enlisting because

they viewed military service as a way to obtain necessary skills, training or financial support to accomplish another career goal (Mankowski, Tower, Brandt & Mattocks, 2015).

Prevalence of ACEs Within the Military. There has been a limited amount of research establishing prevalence rates for ACEs within the military and is a mixture of studies analyzing data from active duty military members, veterans, and Canadian military members. Blosnich et al. (2014) compared the prevalence of ACEs between men and women who served in the Vietnam era and post-draft era using data collected through the Behavioral Risk Factor Surveillance System (BRFSS). BRFSS data is collected via telephone interviews with U.S. residents inquiring about behavioral health risks, use of preventative services, and chronic health conditions. This data was not corroborated against any official records (CDC, 2014). This sample included "Draft Era" and "All-Volunteer Era" veterans, and the "All-Volunteer Era" veterans would be representative of the individuals currently serving in the military. There were 2,012 "All-Volunteer Era" participants aged 18 to 55 and were compared to 25,065 same-aged civilians. Military women aged 18 to 55 reported significantly more ACEs than same-aged civilian women for: physical abuse (29.1% compared to 18.7%), household alcohol abuse (33.9% compared to 26.8%), emotional abuse (43.3% compared to 31.6%), and sexual abuse (25.9% compared to 16%). Military men aged 18 to 55 reported significantly more ACEs than same-aged civilian men for: household mental illness (23.3% compared to 15.2%), parental separation or divorce (38.5% compared to 25.9%), household drug use (34.3% compared to 19.4%), household incarceration (12.3% compared to 8%), exposure to domestic violence (27.3% compared to 13.8%), physical abuse (29.1% compared to

15.7%), emotional abuse (43% compared to 30.3%), and sexual abuse (11% compared to 4.8%).

Katon et al. (2015) examined the health outcomes of veterans and civilians who endorsed experiencing ACEs using a BRFSS dataset of 1,077 veteran women and 12,244 veteran men over the age of 18. This sample was a newer dataset and included all veterans over the age of 18 while Blosnich et al. (2014) separated out veterans by age 18 to 55 and those 56 and older. The reported ACE prevalence rates in Katon et al. (2015) were slightly slower than Blosnich et al. (2014) which may be due to the inclusion of older veterans. In the Blosnich et al. (2014) sample, the older veterans reported lower rates of ACEs than, the younger veterans. Katon et al. (2015) reported average ACE scores found that veteran women (2.2) reported experiencing more ACEs than veteran men (1.7), civilian women (1.6), and civilian men (1.3).

Schultz, Bell, Naugle, and Polusny (2006) evaluated a small sample of 142 female veterans and 81 civilian women. The researchers found similar prevalence rates of child sexual abuse; 48.6% of female veterans compared to 43.2% of civilian women. A study by Stander, Olson, and Merrill (2002) examined the prevalence rates of childhood sexual abuse among Navy recruits at basic training. This sample was large and included 5,226 women and 5,969 men. The study found that 37% of women and about 12% of men reported experiencing child sexual abuse. Of those who reported experiencing abuse, 1,395 women and 615 men endorsed being sexually abused by anyone five years or older than them, and 562 women and 101 men endorsed being sexually abused by a family member at least five years older than them.

A study by Wolfe et al. (2005) evaluated the impact of childhood physical and sexual abuse on training attrition for the United States Marine Corps recruits. In this sample, there were 832 men and 698 women, 47.5% of men and 68.1% of women reported at least one type of interpersonal trauma prior to enlisting. Out of the sample: 38.3% of women and 26.7% of men reported childhood physical abuse, 51% of women and 14.7% of men reported childhood sexual abuse,15.4% of women and 4.1% of men reported experiencing attempted rape, and 23.9% of women and 3.5% of men reported experiencing rape. Women who experienced childhood physical or sexual abuse were 1.6 times more likely to be discharged from training than women without a history of trauma.

Impact of ACEs on Adult Relationship and Emotional Functioning. ACEs impact adult relationship functioning and emotional wellbeing. This manifests as the development of psychological distress, maladaptive relationship behaviors such as perpetrating domestic violence, decreased relationship intimacy, and negative communication patterns.

Sareen et al. (2013) surveyed Canadian active duty military members to determine the impact of ACEs and anxiety and mood disorders. The sample included 5,780 men and 2,560 women. In this sample, 57.7% of women and 54.5% of men endorsed experiencing at least one ACE. Of those who experienced an ACE: 26.1% of women and 25.5% of men endorsed parental separation, 26% of women and 20% of men endorsed parental substance abuse problems, 6.2% of women and 6.4% of men endorsed physical abuse, 14.5% of women and 11.9% of men endorsed witnessing domestic violence, and 8.9% of women and 1.3% of men endorsed sexual abuse. The researchers found about 20% of mood disorders in this sample could be attributed to experiencing an ACE. Men and

women developed different anxiety or mood disorders based on the ACE they experienced. For example, experiencing parental substance abuse, physical abuse, and witnessing domestic violence had significant associations with panic attacks for women. For men, parental substance abuse problems had a significant association with generalized anxiety disorder. For men, experiencing childhood physical abuse had a significant association with the development of major depression, panic attacks, and social phobia. Additionally, for men witnessing domestic violence had a significant association with major depression and panic attacks.

Physical child abuse has been linked to adult relationship disruption and an increased likelihood of engaging in physical intimate partner violence. A study by Clarke-Walper, Riviere, Wilk, and Quartana (2017) evaluated 691 married soldiers to determine the impact of witnessing domestic violence and experiencing childhood physical or sexual abuse on the prevalence of domestic violence. The researchers found that 9.8% endorsed abusing their partners within the past year. 29% of the total sample and 46.3% of those who abused their partners endorsed experiencing one or more ACEs related to physical or sexual abuse. Poor relationship quality and PTSD were most strongly associated with domestic violence. There was also a significant relationship between childhood sexual abuse and physical abuse with perpetrating domestic violence.

A study by Pournaghash-Tehrani and Feizabadi (2009) examined 50 Iranian couples to determine if witnessing domestic violence as a child predicted perpetrating domestic violence as an adult. The researchers found witnessing domestic violence can predict physical and psychological abuse toward one's partner. In a study by Franklin, Menaker, and Kercher (2012) to determine if there is a relationship between experiencing

childhood physical punishment and witnessing domestic violence and later perpetrating domestic violence as an adult. In a sample of 439 men and women, 77% of participants who were physically punished by their parents or witnessed domestic violence became victims of domestic violence, and 79% abused their partners. In individuals who only experienced either physical punishment as a child or witnessed domestic violence, 64% were victims, and 64% abused their partners. Victims and perpetrators were more likely to disagree with their partners on important relationship-related decision-making issues such as money management, household duties, social activities, and sexual relations. Women were more likely to be victimized, but there was no relationship found with gender and perpetrating domestic violence.

Parental divorce and negative family-of-origin environments have been found to impact relationship satisfaction, relationship intimacy, communication skills, and likelihood to use strategies to maintain or improve one's relationship. Rhoades, Stanley, Markman, and Ragan (2012) surveyed 1153 individuals in relationships to examine the impact of parental marital status on current adult romantic relationship quality. Overall, adults whose parents stayed married had the highest relationship quality. Adults whose parents were divorced engaged in more negative communication, had less relationship adjustment, and were less likely to report viewing their parents as positive relationship role models. Individuals whose parents never married had the lowest relationship quality and were at an increased risk for experiencing domestic violence.

A study by Story, Karney, Lawrence, and Bradbury (2004) evaluated the impact of family-of-origin negativity and divorce on marital functioning and outcomes in 60 newlywed couples. The researchers found 82% of women with divorced parents

compared to 53% of women from intact families reported being divorced, separated or having marital dissatisfaction within the first four years of their marriage. For men, parental divorce did not impact their risk of becoming divorced, separated or having martial dissatisfaction. Those from divorced families had higher family negativity scores. Additionally, women whose parents were divorced were more likely to cohabitate, be physically and emotionally aggressive to their partners and choose an emotionally aggressive partner than women whose parents never divorced. The researchers did not find any connection to marital outcomes with men whose parents have been divorced. Men who reported more family-of-origin negativity selected riskier partners and were more likely to have higher levels of anger and contempt in their marriages which resulted in adverse marital outcomes.

Larson, Peterson, Heath, and Birch (2000) conducted a study with 754 participants aged 17 to 25 and examined the relationship between dysfunctional family-of-origin rules and intimacy in current relationships. There was a significant negative relationship between dysfunctional family-of-origin rules and reduced emotional, sexual, and intellectual intimacy. Restricted communication demonstrated by not sharing one's thoughts, feelings and problems with their family-of-origin had a significant impact on emotional, sexual, and intellectual intimacy. A lack of genuineness demonstrated by a belief that one needs to be "perfect" also negatively impacted emotional and intellectual intimacy.

Hardy, Soloski, Ratcliffe, Anderson, and Willoughby (2015) examined how family-of-origin environments impacted current relationship self-regulation strategies, marital satisfaction, and marital stability in 961 married couples. Relationship self-

regulation strategies included problem-solving, goal setting, ability to implement change, and putting forth effort in one's relationship. The researchers found the use of relationship self-regulation strategies was associated with increased marital satisfaction. When a family-of-origin environment was negative, individuals were less likely to develop or utilize relationship strategies or put forth an effort to improve their relationships. Relationship self-regulation strategies partially mediated the impact of one's family-of-origin climate and contributed to relationship success.

Martinson, Holman, Larson, and Jackson (2010) examined whether coming to terms with a difficult family-of-origin experience enhanced one's adult relationship functioning. In a large sample of 6,423 couples, they found that 24% of men and 13% of women reported having come to terms with their family-of-origin experiences. Those who reported having healthier family-of-origin environments also reported more satisfying relationships. There was no difference in relationship satisfaction between women who reported having come to terms with their family-of-origin and those who reported no difficulties with their family-of-origin. Women who came to terms with their family-of-origins had healthier interpersonal skills and partners compared to men who reported coming to terms with their families.

DiLillo et al. (2007) assessed the impact of childhood physical, emotional, and sexual abuse and physical and emotional neglect on adult relationships in 174 college students. DiLillo et al. found 44% of women and 38% of men indicated some history of childhood maltreatment. Women who had experienced maltreatment had more psychological distress than women without a history of maltreatment. Women who had experienced maltreatment also reported their adult relationships were lacking closeness

and self-disclosure and they were at an increased risk of being physically aggressive to their partner compared to women without a history of maltreatment. There was no difference in relationship functioning or psychological distress between men who had experienced maltreatment and men without a history of maltreatment.

A study by Knapp, Norton, and Sandberg (2015) evaluated the impact of family-of-origin experiences on attachment and relationship-self regulation in 261 married couples. The researchers found for men and women, having negative family-of-origin experiences resulted in reduced likelihood to use self-regulating relationship behavior such as putting forth effort into their relationship, willingness to change, having goals, and communication. Negative family-of-origin experiences affected relationships through attachment behaviors such as attentiveness, listening, and feeling connection and togetherness with their partner. However, despite having a negative family-of-origin experience, participants who endorsed secure attachments behaviors in their relationships were more likely to engage in relationship self-regulating behaviors.

In summary, adverse family-of-origin experiences can have a lasting impact on adult relationship functioning for men and women. There were mixed findings about the long-term functional implications of adverse family-of-origin experiences for men with no clear consensus about whether men experience long-term impairment related to their family-of-origin. There was a consensus that women experience long-term psychological and relational difficulties related to childhood maltreatment and a negative family-of-origin environment (Story et al., 2004; DiLillo et al., 2007; Martinson et al., 2010). In general military members reported experiencing high prevalence rates of ACEs (Olson and Merrill, 2002, Katon et al., 2015, Blosnich et al., 2014) and military women were

more likely to report more childhood maltreatment than military men (Stander et al., 2002; Wolfe et al., 2005).

The purpose of this study was to examine the relationship between gender, adverse family-of-origin experiences, and current relationship functioning in a sample of young partnered, enlisted, active duty military members. Specific hypotheses to be tested are (1) partnered women entering the military will report a higher prevalence rate of ACEs than partnered men entering the military; (2) a higher proportion of partnered women entering the military will report higher conflict and lower cohesion family-of-origin environments than partnered men entering the military; (3) a history of ACEs will be associated with lower current relationship functioning for partnered women but not for partnered men, and (4) higher conflict and lower cohesion family-of-origin environments will be associated with lower current relationship functioning for partnered women but not for partnered men. The findings of this exploratory can support differences in family origin experiences as a potential contributing factor to observed gender differences in divorce rates among military members. Such findings may also help inform the content of future targeted interventions to help prevent relationship dysfunction and dissolution among all service members.

Chapter III

Method

Participants

The data presented in this dissertation was derived from a larger longitudinal study of couples entering the Air Force. The study inclusion criteria were (1) be on active duty in the Air Force and (2) report being currently involved in a romantic partnership, either married or not, of at least six months duration. The study was limited to active duty members because the purpose of the larger longitudinal study is to follow couples through their first active-duty duty station. The study was approved by the Institutional Review Board of the 7711th Human Performance Wing, Wright-Patterson Air Force Base.

This study enrolled 220 participants out of 250 eligible participants from the USAF School of Aerospace Medicine at Wright Patterson Air Force Base from August 2015 through April 2018. A demographic description of the participants by gender is presented in Table 1. The participants were entry-level Airmen attending technical training to become Public Health technicians, Bioenvironmental technicians, and Aerospace and Operational Physiology technicians. In total there were 220 participants, 110 women and 110 men. The participants had an average age of 22.42 years old. Their ages ranged from 18 to 39; however, 85.8% of the participants were 18 to 26. This sample was racially diverse and made up of 62.2% Caucasian, 22.6% African American, 23.5% Hispanic, 6.9% Native American, and 8.8% Native Hawaiian/Asian participants.

All the participants identified as being in a committed relationship, 43.9% were engaged, 40.3% were married, 10.4% were living together, and 5% stated they were not living with their partner. The mean length of the relationships was 2.96 years; their relationships ranged from six months to 17 years with 85% of the participants identifying their relationships as lasting between six months and five years. Of the 220 participants, eight identified as being divorced, and 33 indicated they had children. The participants ranged in educational attainment: 73.3% completed high school, 13,1% completed an associates degree, 11.3% completed a bachelors degree and 1.8% completed a masters degree.

Measures

The participants were administered a comprehensive survey that is part of a larger longitudinal study. The survey took about 30 minutes to complete. The participants were assigned a random identification number and their survey responses were linked to their contact information through the identification number that is only accessible to the longitudinal study staff. On the survey some demographic data was collected to include age, ethnicity, education level, relationship status, and presence of children in the home.

Family-of-origin environment. The Family Environment Scale (FES) (Moos & Moos, 1974) and Adverse Childhood Experiences Questionnaire (ACE) (Felitti et al., 1998a) were used to assess the participant's family-of-origin environment.

Family Environment Scale (FES). The FES is widely used to understand an individual's perception of his or her childhood home (Moos & Moos, 1974). The original FES has 90 items and 10 subscales. Two items from the Conflict subscale and three items from the Cohesion subscale were chosen for use in the current study. The Conflict items included "We fought a lot in our family" and "Family members often criticized each

other". The Cohesion items included "Family members really helped and supported each other", "There was a feeling of togetherness in our family", and "We really got along well with each other". The questions were in a true-or-false format. There are no published psychometrics results for this adapted version of the FES. The normative samples for the full FES included "normal" and "distressed" families. Internal consistency on the Cohesion subscale for distressed and control families was a .79 and .78 on the Conflict subscale. The test-retest reliability at four months was .73 to .86 and at 12 months was .59 for the Cohesion subscale and .67 for the Conflict subscale (Moos, 1990). Cronbach's Alphas were calculated from the data collected in the current study. The three items that made up the Cohesion scale items used in the current study had a Cronbach's Alphas of .822, indicating good internal consistency. The Cronbach's Alpha for the Conflict items used in the current study was .697 indicating moderate internal consistency.

Adverse Childhood Experiences Questionnaire (ACE). The ACE questionnaire is a widely-used measure for determining negative events experienced during childhood (Felitti et al., 1998a). All ten items from the ACE questionnaire were included to assess for a history of child abuse, trauma, domestic violence and family dysfunction such as mental illness, substance abuse, incarceration, and parental divorce. The original ACE study had a "yes or no" format and measured the exposure of adverse events by asking "while you were growing up during your first 18 years of life…" and asking if each category occurred "often or very often" (Felitti et al., 1998a). This survey used the same question makeup and modified the domestic violence from gendered language of "mother (or stepmother) to more inclusive language "parent or guardian." A large study by Dube

et al. (2004) evaluated the test-retest reliability for the ACE for the Wave I and Wave II data from the original ACE study by Felitti et al. (1998b). Dube et al. (2004) used a kappa coefficient and found the ACE in total had good test-retest reliability at .64. There were varying levels of reliability for the specific questions: emotional abuse .66, physical abuse .55, sexual abuse .69, household substance use .75, household member with mental illness .51, domestic violence .77, parental incarceration .46, and parental divorce .86. In the current sample, the Cronbach's Alpha was .707 indicating acceptable internal consistency.

Relationship functioning. Relationship functioning was defined by four measures assessing three domains of relationship functioning: relationship discord, problematic communication patterns, and domestic violence.

Marital Satisfaction Inventory-Brief (MSI-B). Five true or false format questions from the ten-item MSI-B were selected. The MSI-B is an adaptation of the Marital Satisfaction Inventory-Revised (MSI-R) and is used to measure the level of relationship discord. The test-retest reliability was .80 for women and 0.78 for men. A cut-off score of four was used in the ten-item MSI-B, and scores above four were considered "discordant." The sensitivity for women was .88 and .87 for men, and the specificity was .84 for women and .85 for men. (Whisman, Snyder & Beach, 2009). There are no published psychometrics for this adapted version of the MSI-B; however, the Cronbach's Alpha for the MSI-B items was .747 indicating acceptable internal consistency.

The Communication Danger Signs Scale. The Communication Danger Signs Scale (Markman, Stanley & Blumberg, 2010) was created for the book *Fighting For Your Marriage* to identify problematic communication patterns and determine divorce risk.

Markman et al. (2010) reported the scale has an 82-93% accuracy of predicting which couples will divorce based on their communication patterns. The scale has seven true or false questions, and all seven were included in this survey. The internal consistency for The Communication Danger Signs Scale negative arguments was .80 and had a .25 correlation for divorce for women and a .41 correlation for divorce for men (Stanley, Markman & Whitton, 2002). On this sample, the Cronbach's Alpha was .869 indicating good internal consistency.

The Communication Patterns Questionnaire–Constructive Communication Subscale (CPQ-CC). All seven items of the CPQ-CC were included; the responses were modified from a nine-point Likert scale to a true or false format. CPQ-CC defines conflict communication as the presence and frequency of criticism between partners, blaming and accusations, mutual verbal threats, and verbal aggression to include name-calling and yelling. The inter-rater reliability for the CPQ-CC was .82 and participant agreement with observer was a .72. There was an internal consistency of 0.84 for men and 0.81 for women and 0.67 agreement between spouses. The reliability was moderate, the husband's CPQ-CC correlated to .75 for the husband's marital adjustment and .68 for wife's marital adjustment. The wife's CPQ-CC scores correlated as .75 for the wife's marital adjustment and .51 for the husband's marital adjustment (Heavey, Larson, Zumtobel & Christensen, 1996). On this sample, the Cronbach's Alpha was .824 indicating good internal consistency.

Revised Conflict Tactics Scale-Physical Assault Subscale (CTS2). The full CTS2 is 78 items. Ten items from the Physical Assault subscale were used to measure the frequency of physical aggression between partners over the past six months (Straus,

Hamby, Boney-McCoy & Sugarman, 1996). The CTS2 can be modified to include time periods of since the relationship started, a stage in treatment, over the previous month and past six months. This survey modified the time measured to the past six months and included an optional selection of "yes, but it was more than six months ago." The CTS2 physical assault subscale internal consistency reliability was .86. In the standardization sample, 47% of men and 35% of women reported physically assaulting their partner at least once in the past year, and 49% of men and 31% of women were victims of assault by their partner at least once in the past year. The CTS2- Physical Assault subscale had a high construct validity and a .90 correlation with sexual coercion, .91 with physical injury and .71 with psychological aggression (Straus et al., 1996). On a shortened version of the CTS2 which included some of the items on this survey, the concurrent validity between the full CTS2 and a CTS2 Short Form for the physical assault subscale was .72 for assaulting one's partner and .69 for being assaulted by one's partner. The short form was found to have similar construct validity as the long-form. An important finding was that the short-form was less sensitive than the full CTS2. The prevalence rates for physical assault behavior on the short-form was 13.4% lower than the long-form for assaulting one's partner and 12.9% lower for being assaulted by one's partner (Straus & Douglas, 2004). On this sample, the Cronbach's Alpha was .863 indicating good internal consistency.

Procedure

Participants were recruited as part of an ongoing, Institutional Review Board (IRB)-approved longitudinal study entitled "Up-Armoring: At-Risk Military Couples: A Prospective Study of Committed Romantic Relationships in Transition to Their First

Permanent Duty Station." The volunteers had recently completed basic military training and were recruited during in-processing for their technical training at Wright Patterson Air Force Base. Upon arrival, the researchers were introduced to the group and explained the details of the study in accordance with an IRB-approved script. Potential participants were separated from their technical school class by asking for those on active duty and in a committed romantic relationship for the past six months or longer to raise their hands. The others are invited to take a break from their in-processing and allowed to leave and go to their dayroom. The volunteer nature of the study was emphasized. Those who choose to participate were given a standard script and a manila envelope containing a pen, informed consent form, contact form, a handout to take home explaining the study, and the actual survey. The envelope has a randomly assigned participant ID code that was located on the survey, consent form, and contact form. The researchers were present for the completion of the survey to answer questions as they arose. When the participants completed the survey, they returned their survey in an unmarked manila envelope to the researcher. At any point during the recruitment period the participants had the opportunity to decline participation in the study and give their manila envelope to the researchers.

Data Analyses

Hypothesis 1. *Partnered women entering the military will report a higher prevalence of Adverse Childhood Experiences than partnered men entering the military.*

One logistic regression was conducted to determine the odds of men and women experiencing ACEs. The results will be reported as an odds ratio with a 95 percent confidence interval between men and women. In this analysis gender was the dependent

variable (men and women) and the ACE total score was the independent variable. A level of significance of alpha=0.05 will be used throughout.

Hypothesis 2. *A higher proportion of partnered women entering the military will report higher conflict and lower cohesion family-of-origin environments than partnered men entering the military.*

Two logistic regressions were conducted to determine the odds of men and women experiencing high conflict and low cohesion family-of-origin environments. The results will be reported as an odds ratio with a 95 percent confidence interval between men and women. In this analysis gender was the dependent variable (men and women) and the FES Conflict and Cohesion subscales scores were the independent variables.

Hypothesis 3. *A history of ACEs will be associated with lower current relationship functioning for partnered women but not for partnered men*.

Two spearman correlational analyses were conducted separately for men and women to examine the relationship between current relationship functioning and the number of reported ACEs.

Hypothesis 4. *Higher conflict and lower cohesion family-of-origin environments will be associated with lower current relationship functioning for partnered women but not for partnered men*.

Two spearman correlational analyses were conducted separately for men and women to examine the relationship between current relationship functioning and ratings of family-of-origin conflict and cohesion.

Chapter IV

Results

Demographics

When comparing demographic data by gender, the participants were similar age and educational attainment (p values >.05). Using a Chi Square test of independence, the only significant difference between the participant's demographics was that men were more likely to be Hispanic than women. The demographic data is reported in Table 1.

Table 1
Participant Demographics

	Men (n=110)		Women (n=110)	
Age	22.16		22.69	
Race				
Caucasian	62	56.9%	73	67.6%
African American	24	22.0%	25	23.1%
Hispanic	31	28.7%	20	18.3%
Other	20	18.3%	14	13.0%
Relationship Status				
Length of relationship	2.73 years		3.18 years	
Married	41	37.3%	48	43.6%
Engaged	50	45.5%	47	42.7%
Living together	13	11.8%	10	9.1%
Not living together	6	5.5%	5	4.5%
Prior marriage	1	.9%	6	6.5%
Children	15	13.6%	18	16.4%
Educational Attainment				
High School Diploma	82	74.5%	80	72.7%
Associates	14	12.7%	15	13.6%
Bachelors	14	12.7%	11	10.0%
Masters	0	-	4	3.6%
Years spent in school	13.5 years		13.4 years	
12	51	46.4%	59	53.6%
13-15	38	34.6%	33	30%
16-19	21	19%	18	16.4%

Adverse Family-of-origin Experiences

Table 2 provides frequency information about the participants' family structure. Men and women reported similar family structures.

Table 2

Family Structure

Primary caregiver:	Men (n=110)		Women (n=110)	
Both biological parents	60	55%	50	45.5%
Adoptive parents	2	1.8%	1	.9%
Biological mother & stepfather	16	14.7%	17	15.5%
Biological father & stepmother	3	2.8%	4	3.6%
Single mother	16	14.7%	25	22.7%
Single father	4	3.7%	3	2.7%
Other	8	7.3%	10	9.1%
Parents ever married	81	79.4%	78	75%
Parents currently married	47	43.1%	36	33%

Adverse Childhood Experiences Questionnaire

Table 3 details the findings of a logistic regression that was conducted to determine the odds of men and women experiencing ACEs. Women were 25% more likely to report experiencing an ACE than men (p=.003, 95% CI=1.08).

Table 3

The Odds Ratio of Gender as a Predictor for ACEs

	Significance	Odds Ratio/ Exp(B)	95% Confidence Interval	
ACE Total	.003*	1.25	1.08	1.45

Note: p<.05*, p<.001**

Each participant answered ten ACE questions, and a positive response indicated that the participant "often or very often" experienced an item. Table 4 and Table 5 provide raw data indicating how many participants endorsed each ACE score and the range of ACE scores endorsed. Over one third of men and 15.6% of women endorsed experiencing zero ACEs.

A Chi Square test of independence was performed to measure the relationships between each ACE item and gender. The relationship between emotional neglect (ACE 4) and gender was significant, X^2 (1, N=218)=9.56, p<.002. Women were more likely to report emotional neglect than were men. The relationship between parental divorce or separation (ACE 6) and gender was significant, X^2 (1, N=218)=3.60, p<.039. Women were more likely to report experiencing parental divorce or separation than men. The relationship between living with someone who abused substances (ACE 8) and gender was significant, X^2 (1, N=218)=4.02, p<.032. Women were more likely to report living with someone who abused substances than men. The relationship between living with

someone with a mental illness (ACE 10) and gender was significant, X^2 (1, N=218)=15.43, p<.000. Women were more likely to report living with someone who was mentally ill than men.

Table 4

ACE Prevalence Rates

	Men (n=107)		Women (n=109)		Sig
Emotional Abuse (ACE 1)	26	23.9%	36	33%	.088
Physical Abuse (ACE 2)	19	17.4%	21	19.3%	.431
Sexual Abuse (ACE 3)	4	3.7%	10	9.2%	.253
Emotional Neglect (ACE 4)	12	11%	30	27.5%	.002*
Physical Neglect (ACE 5)	5	4.6%	8	7.3%	.285
Parental Separation (ACE 6)	50	45.9%	64	58.7%	.039*
Parental Domestic Violence (ACE 7)	12	11.2%	19	17.6%	.128
Substance Use (ACE 8)	22	20.2%	35	32.1%	.032*
Mental Illness (ACE 9)	8	7.3%	30	27.5%	.000**
Incarceration (ACE 10)	17	15.6%	14	12.8%	.349

Note: All responses reported are were reported as "true". There were two missing responses lowering the sample to 218.
p<.05*, p<.001** using Fisher's exact test.
*Sexual abuse is reported with a Pearson Chi-Square due to the small sample size

Table 5

Frequencies of ACEs

	Men (n=107)		Women (n=108)	
Number of ACEs:	1.62		2.47	
0	33	33.6%	15	13.9%
1	26	24.3%	29	26.9%
2	15	14%	26	24.1%
3	15	14%	10	9.3%
4	9	8.4%	11	10.2%
5	2	1.9%	7	6.5%
6	2	1.9%	1	.9%
7	1	.9%	3	2.8%
8	1	.9%	4	3.7%
9	0	-	2	1.9%

Family Environment Scale

Table 6 details the findings of logistic regressions that were conducted to determine the odds of men and women experiencing cohesion and conflict in their family-of-origin environment. The odds of women reporting a cohesive family-of-origin environment was 65% less likely than men (p=.001, 95%CI=.51, .85). The odds of women reporting conflictual family-of-origin environments was 58% higher than men (p=.004, 95%CI=1.15, 2.15).

Table 6

The Odds Ratio of Gender and the FES

	Significance	Odds Ratio/ Exp(B)	95% Confidence Interval	
High Cohesion	.001**	.654	.51	.85
High Conflict	.004*	1.58	1.15	2.15

Note: p<.05*, p<.001**

Relationship Functioning

Table 7 reports the findings of five logistic regressions that were conducted to determine the odds of men and women experiencing relationship dysfunction as measured by the MSI-B, Communication Danger Signs Scale, CPQ-CC, and CTS2 Physical Assault subscale.

The odds of a woman reporting relationship discord on the MSI-B was 20% higher than men reporting discord (p=.050, 95%CI=1.00, 1.45). The odds of a woman reporting assaulting their partner were 22% higher than men (p=.015, 95%CI=1.04, 1.43). There were no significant differences between men and women on the CPQ-CC or the Communication Danger Signs Scale.

Table 7

The Odds Ratio of Gender and the MSI-B, Communication Danger Signs Scale, CPQ-CC, and CTS2

	Significance	Odds Ratio/ Exp(B)	95% Confidence Interval	
MSI-B Total	.050*	1.20	1.00	1.46
Comm Danger	.566	1.03	.94	1.12
CPQ-CC	.347	.900	.723	1.12
CTS (Assault)	.015*	1.22	1.04	1.43
CTS (Injury)	.939	.996	.901	1.10

Note: p<.05*, p<.001**

Marital Satisfaction Inventory-Brief (MSI-B*)*

Each participant answered five "true" or "false" format questions from the MSI-B to measure the level of relationship discord. In this sample, 40.8% of women and 20.5% of men endorsed more than two items.

A Spearman correlation was conducted to determine if there was a relationship between the FES subscales, ACE total score, and total score for MSI-B. Results are reported on Table 8. For women the MSI-B did not have any significant positive relationships with the ACE, FES Conflict subscale or FES Cohesion Subscale. For men, the MSI-B had a significant positive relationship with the ACE ($r_s(109) = .253$, $p < .009$) and the FES Conflict subscale ($r_s(109) = .375$, $p < .000$). There was a significant negative relationship between the MSI-B and the FES Cohesion ($r_s(109)=-.352$, $p<.000$). Men who had conflictual family-of-origin environments and experienced ACEs were more likely to experience relationship discord than women with similar backgrounds.

Table 8

Correlation between MSI-B, ACE, and FES

		MSI-B	ACE	FES Conflict	FES Cohesion
Women	MSI-B	-			
	ACE	.011	-		
	FES Conflict	.148	.523**	-	
	FES Cohesion	-.102	-.525**	-.553**	-
Men	MSI-B	-			
	FES Conflict	.253**	-		
	FES Cohesion	.375**	.425**	-	
	ACE	-.352**	-.419**	-.493**	-

Note: p<.01** with a 2-tailed Spearman correlation.

The Communication Danger Signs Scale

The Communication Danger Signs Scale indicated the frequency of problematic communication patterns. A Spearman correlation was conducted to determine if there was a relationship between the FES subscales, ACE total score, and total score for Communication Danger Signs Scale. Results are reported in Table 9. For women, the Communication Danger Signs Scale did not have any significant positive relationships with the ACE total score, FES Conflict subscale or FES Cohesion Subscale. For men, the Communication Danger Signs Scale had a significant positive relationship with the ACE ($rs(107) = 324$, $p < .001$) and the FES Conflict subscale ($rs(107) = .384$, $p < .000$). There was a significant negative relationship between the Communication Danger Signs Scale and the FES Cohesion ($rs(109)=-.301$, $p<.001$).

Table 9

Correlation between Communication Danger Signs Scale, ACE, and FES

		Comm	ACE	FES Conflict	FES Cohesion
Women	Comm	-			
	ACE	-.015	-		
	FES Conflict	.118	.523**	-	
	FES Cohesion	-.005	-.525**	-.553**	-
Men	Comm	-			
	ACE	.324**	-		
	FES Conflict	.384**	.425**	-	
	FES Cohesion	-.301**	-.419**	-.493**	-

Note: $p<.01$** with a 2-tailed Spearman correlation.

The Communication Patterns Questionnaire–Constructive Communication Subscale (CPQ-CC)

The CPQ-CC measured positive and negative communication strategies. A Spearman correlation was conducted to determine if there was a relationship between the FES subscales, ACE total score, and total score for CPQ-CC. Results are reported in Table 10. For women, the CPQ-CC did not have any significant positive relationships with the ACE total score, FES Conflict subscale or FES Cohesion Subscale. For men, the CPQ-CC had a significant positive relationship with the ACE ($rs(105) = .294$, $p < .002$) and the FES Conflict subscale ($rs(107) = .349$, $p < .000$). There was a significant negative relationship between the CPQ-CC Questionnaire and the FES Cohesion ($rs(107)=-.263$, $p<.006$).

Table 10

Correlation between the CPQ-CC, ACE, and FES

		CPQ-CC	ACE	FES Conflict	FES Cohesion
Women	CPQ-CC	-			
	ACE	.007	-		
	FES Conflict	.107	.523**	-	
	FES Cohesion	-.080	-.525**	-.553**	-
Men	CPQ-CC	-			
	ACE	.294**	-		
	FES Conflict	.349**	.425**	-	
	FES Cohesion	-.263**	-.419**	-.493**	-

Note: p<.01** with a 2-tailed Spearman correlation.

Conflict Tactics Scale-Physical Assault Subscale (CTS2)

Less than 20% of women and 10% of men endorsed assaulting their partner or being assaulted by their partners. About 20% of women endorsed pushing or shoving their partners and throwing something at their partners. About 20% of women endorsed being grabbed by their partner, and 10% endorsed being pushed or shoved by their partner. About seven percent of men endorsed grabbing their partner, and 10% of men reported that they were pushed or shoved, had something thrown at them, and were scratched, bitten, or slapped by their partners. For the sake of clarity, scores measuring the frequency of assaulting their partners will be reported as "assault" and scores measuring being the frequency of assaulted by their partners will be reported as "injured" on the tables.

A Spearman correlation was conducted to determine if there was a relationship between the FES subscales, ACE total scores, and the CTS-2 scores for assaulting one's partner and being assaulted by one's partner. Results are reported in Table 11. For women, there were significant relationships between both the items related to assaulting one's partner and being assaulted by one's partner. The relationship between the CTS items related to assaulting one's partner and the ACE ($r_s(109) = .307$, $p < .001$) and the FES Conflict subscale ($r_s(108) = .194$, $p < .044$) were significant. The relationship between the CTS items related to being assaulted with the ACE ($r_s(109) = .278^{**}$, $p < .004$) and the FES Conflict subscale ($r_s(108) = .223$, $p < .020$) were significant.

Additionally, for women, there was a significant relationship between the CTS items related to assaulting one's partner and being assaulted by one's partner ($r_s(108) = .797$, $p < .000$). For men, there were no significant relationships with the ACE or FES

and any CTS items. For men, there was a significant relationship between the CTS items related to assaulting one's partner and being assaulted by one's partner ($rs(109) = .540$, $p < .000$).

Table 11

Correlation between CTS2, ACE, and FES

		CTS Assault	CTS Injury	ACE Total	FES Conflict	FES Cohesion
Women	CTS Assault	-				
	CTS Injury	.767**	-			
	ACE Total	.307**	.278**	-		
	FES Conflict	.194*	.223*	.523*	-	
	FES Cohesion	-.124	-.123	-.525**	-.553**	-
Men	CTS Assault	-				
	CTS Injury	.540**	-			
	ACE Total	.039	.177	-		
	FES Conflict	.052	.314**	.425**	-	
	FES Cohesion	.015	-.186	-.419**	-.493**	-

Note: p<.01** with a 2-tailed Spearman correlation.

Chapter V

Discussion

There has been a well-documented trend in past research that military women experience more relationship disruption than military men, but there is no known definitive cause of this disparity (Karney & Crown, 2007). The purpose of this study was to examine the relationship between gender, adverse family-of-origin experiences, and current relationship functioning in a sample of enlisted, active duty military members attending entry-level technical training. The study hypotheses were that (1) partnered women entering the military will report a higher prevalence of ACEs than partnered men entering the military; (2) a higher proportion of partnered women will report higher conflict and lower cohesion family-of-origin environments than partnered men; (3) a history of ACEs will be associated with lower current relationship functioning for partnered women but not for partnered men; and (4) higher conflict and lower cohesion family-of-origin environments will be associated with lower current relationship functioning for partnered women but not for partnered men.

This study consisted of 220 participants with an average age of 22.43 years-old who identified as being in a committed romantic relationship for at least six months. The participants reported an average relationship length around 2.96 years with 85% of the sample reporting their relationships length was between six months and five years. It was expected that the population would have limited relationship dysfunction and be emotionally and physically healthy as they had just completed basic military training.

However, some relationship dysfunction was expected as Karney and Crown (2007) suggested that the population enlisting were individuals who were at a higher risk for divorce in terms of age, race, socioeconomic status, and educational attainment and the military structure provided these higher-risk individuals financial incentives to marry young.

This sample was made up of more women and was more racially diverse than the population found within the active duty military and may not be generalizable to the wider military population. The 2015 Department of Defense (DoD) demographic report identified that 15.5% of active duty military members were women and 50% of the participants in this study were women. Additionally, in 2015 around 69% of active duty members identified as Caucasian and 62.2% of the participants in this sample identified as Caucasian (DoD, 2015). Past research found that young military members were more likely to be married than their similar aged and educated civilian peers. This study had consistent findings and found 43.6% of women and 37.3% of men were married compared to Alder-Baeder et al.'s (2005) findings that in similar-aged civilians, 33% of women and 18% of men were married.

This study sample supported a shifting trend in military enlistment demographics. A large study conducted by Rostker, Klerman, and Zander-Cutugno (2014) looked into a shift in the age of enlistment and reported data collected in 2009 from 5,588 participants. The researchers noted that in 1992 just 35% of individuals enlisting in the military were older than 20 and in 2009 fifty percent of those enlisting were older than 20. In this study, 85% of participants were under 26: 30.6% were aged 18 or 19 and 55.2% were between ages 20 and 26. Rostker et al. (2014) reported that 19% of individuals aged 20 to 27 had

achieved an associated degree or higher. This study sample was more educated and found that 13.2% of participants completed an associates degree, 11.4% completed a bachelors degree, and 1.8% completed a masters degree. An older and more educated workforce likely benefits the military as enlisted personnel aged 22 to 27 had improved retention and promotion than those who enlisted younger than 21-years-old. When asked reasons for enlisting, older enlistees cited primarily financial reasons to include a lack of job opportunities (36%), lack of career progression (49%), military pay (72%), sign-on-bonus (79%), money for education (87%), and benefits (89%) (Rostker, Klerman & Zander-Cotugno, 2014).

Prior research has found that military recruitment efforts have themes of financial stability, independence, and cohesion and likely appeal to individuals from backgrounds with lower SES and were raised by a single parent or with a stepparent (Spence et al., 2012). Those raised in single-parent homes reported enlisting due to a lack of structure in the home, isolation, conflict, parental substance abuse, and financial needs (Philips, 2016). About half of the sample in this study were raised by a single parent or in a blended family with a stepparent. It is also well-established in prior research that ACEs are more likely to occur in families with low socioeconomic status (Halfon et al., 2017).

Partnered women entering the military reported significantly more ACEs than men and reported less cohesive and more conflictual family-of-origin environments than men supporting Hypothesis 1 and Hypothesis 2. This finding was consistent with past research on civilians and veterans (Felitti et al., 1998b, Katon et al., 2015). Female veterans reported an average of 2.2 ACEs and men reported 1.7 ACEs (Katon et al., 2015) which was comparable to this study as the average ACE score for women was 2.47

and 1.62 for men. Additionally, women were more likely than men to report experiencing emotional neglect, parental divorce, living with someone who abused substances, and living with someone with a mental illness.

Felitti et al. (1998b) found that for respondents aged 19 to 34, 35.4% reported never experiencing an ACE, 25.4% endorsed one, 17.2% endorsed two, 11% endorsed three and 10.9% endorsed four. Consistently, in this study male participants reported similar rates of ACEs up to three ACEs as the participants in Felitti et al. (1998b). For women when compared to the original ACE study, half as many women endorsed zero ACEs and slightly higher percentages endorsed one and two ACEs and a similar rate endorsed three and four ACEs. When compared to Felitti et al. (1998b), this study found higher rates of reported emotional abuse, parental separation, and having a family member be incarcerated for both men and women. For women specifically, this study found higher rates of emotional neglect and witnessing parental domestic violence than found in the original ACE study (Felitti et al., 1998b).

It was expected that because women likely experienced more ACEs than men, they would experience more relationship dysfunction than men. Civilian research evaluating the long-term relationship impact from childhood maltreatment on men had mixed findings ranging from slightly less relationship dysfunction than women to no reported relationship dysfunction (DiLillo et al., 2007; Martinson et al., 2010; Story et al., 2004). This study partially confirmed Hypothesis 3 and Hypothesis 4. The odds of women reporting relationship discord was 20% higher than men. Additionally, the odds of women reporting physically assaulting their partners were 22% higher than men. When considering the increased odds of women experiencing childhood adversity and

relationship dysfunction, it was an unexpected finding that there were significant positive relationships between childhood adversity and relationship discord and problematic communication patterns for men but not for women.

Witnessing domestic violence as a child has been linked to perpetuating domestic violence as an adult (Pournaghash-Tehrani & Feizabadi, 2009; Franklin, Menaker & Kercher, 2012). For women, there were significant relationships for the childhood adversity and conflictual family-of-origin environments with assaulting their partners and being assaulted by their partners. While significant, this relationship should be taken with caution as only around 20% of the women and less than seven percent of men reported assaulting their partners. About 20% of women and around 10% of men reported being assaulted by their partners. These findings are consistent with the psychometrics findings that a shortened version of the CTS2 scale resulted in half as many admissions of engaging in domestic violence behavior than the full CTS2 (Straus & Douglas, 2004). For men, there was a relationship between family conflict and being a victim of domestic violence. For women there were significant relationships with physically assaulting their partner and witnessing parental domestic violence, living with someone who abused substances, and living with someone mentally ill. For men, there was no significant relationship between any measure of adverse family-of-origin environments and assaulting their partner.

Women were more likely to report being assaulted by their partners, and there was a significant relationship between experiencing an ACE and being injured by their partners. Experiencing emotional abuse, witnessing parental domestic violence, and living with someone mentally ill had a significant relationship with being assaulted by

their partner. For men, emotional neglect and parental divorce had significant relationships with being assaulted by their partner.

Relationship discord for men was significantly associated with emotional, physical, and sexual abuse. The sexual abuse finding should be considered with caution as only four men reported sexual abuse. Additionally, there were significant relationships with physical and emotional neglect and maladaptive communication patterns. For women, there were no relationships between childhood adversity and relationship discord or maladaptive communication patterns.

The odds of a military woman reporting more conflict in their family-of-origin environment was 58% higher than men. Despite women experiencing significantly more family conflict, the only significant relationships found were between family conflict and physically assaulting or being assaulted by their partner. For men for there was a significant relationship between family conflict and relationship discord and maladaptive communication patterns.

For men, family cohesion appeared to be a protective factor against experiencing childhood adversity, relationship discord, or engaging in problematic communication patterns. For women, a higher cohesion score appeared to be a protective factor against childhood adversity.

There is a large body of civilian research on the impact of parental divorce on adult relationship functioning. Civilian research indicated that adults whose parents were divorced engaged in more negative communication and had less relationship adjustment than those whose parents had not divorced. Individuals whose parents never married had the lowest relationship quality and were at an increased risk for experiencing domestic

violence (Rhoades et al., 2012). Another study found that women whose parents were divorced were more likely than women from intact families to cohabitate, be physically and emotionally aggressive to their partners, and choose an emotionally aggressive partner. For men, the researchers did not find any connection to marital outcomes and parental divorce (Story et al., 2004). Given this research, it was expected that parental separation and divorce would negatively impact the participant's relationship functioning. One fifth of all participants reported that their parents had never married and almost half reported their parents had separated or divorced. Women in this study endorsed significantly more occurrences of parental separation or divorce than men. However, the only finding related to parental divorce was that men whose parents have been divorced were more likely to report more conflict and less cohesion in their family-of-origin environments.

In summary, this study found that partnered women entering the military are more likely to report a history of ACEs and greater conflict and less cohesion in their family-of-origin than partnered men entering the military. Despite having more adversity in their family-of-origin, these negative childhood experiences appeared to impact the men's relationship functioning significantly more than they impacted the women's relationship functioning.

It should be noted that this sample was relatively young and more than half of the sample was not married. This may not have been the best population to explore relationship disruption related to adverse family-of-origin environments as many of these Airmen likely recently left their family-of-origin environments to enter the military. The impact of an adverse family-of-origin environment may not be evident three months into

the participant's military career or if they are unmarried. The findings of this study inform the need for more research to explore the impact of adverse family-of-origin environments on relationship dysfunction and dissolution among military members who are more established in their relationships and careers than the participants represented in this study.

Chapter VI

Future Directions and Limitation of the Study

This data was derived from a larger DoD funded longitudinal study. Due to the small sample size of this study, the results should not be perceived as conclusive but considered preliminary findings for the larger study and future directions of research to explore.

1. This study may not be representative of the greater military population as 50% of the participants were women and the participants were recruited from technical training for airmen training for three military healthcare occupations. However, this data is representative of the individuals within those occupations as 88% of the Airmen attending those technical training courses from August 2015 through April 2018 were included in this study.

2. This data was derived from a larger longitudinal study that measured broad aspects of social, emotional, physical, and relational functioning. Three of the measures used in this study were shortened for the participants comfort and to capture the key constructs being measured. Due to the shortening of these measures, the psychometric qualities may not be as robust as they were in the original, longer measures. Despite being shortened versions, all modified measures used in this study still had acceptable to good reliability. The two item FES conflict scale had moderate reliability. It would be best to use the full FES Conflict and Cohesion scales on future research.

3. The CTS2 was one of the measures that were shortened. In a study comparing the CTS2 Short Form and the full CTS2, it was noted that the short form was less sensitive to capturing domestic violence behaviors and the prevalence rate was about half of those found with the full CTS2. This version of the CTS2 was longer than the short form and a few questions shorter than the full CTS2 Physical Assault subscale. The prevalence rates of this study may underestimate the actual prevalence rate of domestic violence in this population. To fully capture the prevalence rates of domestic violence behaviors and their relationship to childhood adversity, it would be best to use the full CTS2 measure in a future study.

4. There has been limited research evaluating the prevalence rate of ACEs on active duty military members. The findings of this study indicated that a majority of enlisted women and about half of enlisted men in the Air Force had experienced at least two ACEs before entering the military. Childhood trauma is known to impact physical and emotional functioning in adults and should be evaluated further to determine if there are long-term impacts to military readiness.

5. Further research is needed to evaluate the relationship for military women between being raised in a home with substance abuse, child abuse, witnessing domestic violence and later as adult perpetuating domestic violence and being a victim of domestic violence.

6. It is still not known why military women experience more relationship disruption than military men. Efforts to replicate or refute these findings in other samples of military members should be examined.

7. Further research is needed to understand the long-term impact of adverse family-of-origin environments and experiences on military men and their adult relationship functioning.

8. In this population, 26% of women and 14% of men reported experiencing four or more ACEs. Those with significant childhood trauma may need additional mental health support. Military clinicians would benefit from being prepared to provide trauma-informed care for those with pre-existing trauma related to childhood adversity. It is important for military clinicians to understand the long-term relational and emotional consequences of childhood trauma and be prepared to address these needs.

9. The military would benefit from normalizing childhood trauma within the military population and implement a front-line supervisor intervention that teaches healthy relationship skills regularly starting in technical training and reinforce those skills throughout their military career. Early intervention and modeling likely will mitigate long-term relationship and emotional consequences.

Chapter VII

The findings of this study supported existing research that women experience more childhood adversity than men in the civilian sector and within the military. In this sample of young, entry-level, partnered, military women, adverse family-of-origin experiences had a limited connection with perpetuating and being a victim of domestic violence and no association with problematic communication patterns. Military men experienced less childhood adversity and less relationship disruption as evidenced by military marital trends, yet there were significant relationships between their relationship functioning and childhood adversity. Domestic violence may be attributable to some relationship disruption for women, but it still does not fully answer why military women experience more relationship disruption than military men.

It is still not known why military women experience more relationship disruption than military men. However, this sample may not have been the best population to explore the impact of adverse-family-of-origin environments on adult relationship functioning for military women as the participants were young, three months into their military careers, a majority were not married, and many likely recently left their family-of-origin. The impact of their family-of-origin environments may not be evident at this moment in their lives but may become more evident once the participants are more established in their relationships and careers. Further research is needed to explore the effect of adverse family-of-origin environments on military women and men who are more established in their careers and relationships. This research could help determine

how the impact of childhood trauma intersects with a stressful military career and affects romantic relationship functioning in both men and women.

Appendix A

A1

Correlation between ACE items and MSI-B for Men

	MSI-B	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	.**253****	-										
3	**.215***	.553**	-									
4	**.262****	.541**	.424**	-								
5	**.227***	.187	-.021	.128	-							
6	.133	.398**	.216*	.225*	-.077	-						
7	-.078	.297**	.083	.246**	-.048	.063	-					
8	.020	.586**	.90	.159	-.023	.264**	.062	-				
9	.105	.432**	.213*	.236*	-.079	.061	.202*	.089	-			
10	.040	.642**	.201*	.191*	-.002	.188*	.218*	.271**	.322**	-		
11	.081	.358**	.090	.149	.105	.013	.275**	.023	.124	.472**	-	
12	.073	.454**	.038	.054	.018	.000	.390**	.082	.166	.588**	.344**	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A2

Correlation between ACE items and MSI-B for Women

	MSI-B	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	.011	-										
3	.133	.634**	-									
4	.054	.524**	.597**	-								
5	-.027	.271**	.028	-.003	-							
6	.118	.490**	.397*	.324**	.131	-						
7	-.050	.394**	.251**	.130	.265**	.142	-					
8	-.046	.406**	-.045	.032	-.026	.016	.093	-				
9	.031	.507**	.344**	.387**	.171	.148	.426**	.193*	-			
10	.083	.660**	.253*	.162	.164	.148	.334**	.217**	.420**	-		
11	-.081	.538**	.222	.116	.273**	.172	.378**	.016	.256**	.368**	-	
12	-.053	.392**	.197*	.160	-.038	.193*	.207*	.155	.401**	.323**	.193*	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A3

Correlation between ACE items and Communication Danger Signs Scale for Men

	Comm	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	**.324****	-										
3	**.218***	.553**	-									
4	**.309****	.541**	.424**	-								
5	.153	.187	-.021	.128	-							
6	**.257****	.398**	.216*	.225*	-.077	-						
7	.053	.297**	.083	.246**	-.048	.063	-					
8	.002	.586**	.90	.159	-.023	.264**	.062	-				
9	.157	.432**	.213*	.236*	-.079	.061	.202*	.089	-			
10	.095	.642**	.201*	.191*	-.002	.188*	.218*	.271**	.322**	-		
11	.124	.358**	.090	.149	.105	.013	.275**	.023	.124	.472**	-	
12	.112	.454**	.038	.054	.018	.000	.390**	.082	.166	.588**	.344**	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A4

Correlation between ACE items and Communication Danger Signs Scale for Women

	Comm	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	-.015	-										
3	.021	.634**	-									
4	-.086	.524**	.597**	-								
5	.034	.271**	.028	-.003	-							
6	.082	.490**	.397*	.324**	.131	-						
7	-.110	.394**	.251**	.130	.265**	.142	-					
8	-.106	.406**	-.045	.032	-.026	.016	.093	-				
9	.055	.507**	.344**	.387**	.171	.148	.426**	.193*	-			
10	.095	.660**	.253*	.162	.164	.148	.334**	.217**	.420**	-		
11	-.043	.538**	.222	.116	.273**	.172	.378**	.016	.256**	.368**	-	
12	-.121	.392**	.197*	.160	-.038	.193*	.207*	.155	.401**	.323**	.193*	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A5

Correlation between ACE items and CPQ-CC for Men

	CPQ	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	**.294****	-										
3	**.247****	.553**	-									
4	**.337****	.541**	.424**	-								
5	.107	.187	-.021	.128	-							
6	**.253****	.398**	.216*	.225*	-.077	-						
7	.028	.297**	.083	.246**	-.048	.063	-					
8	-.036	.586**	.90	.159	-.023	.264**	.062	-				
9	.162	.432**	.213*	.236*	-.079	.061	.202*	.089	-			
10	.159	.642**	.201*	.191*	-.002	.188*	.218*	.271**	.322**	-		
11	-.022	.358**	.090	.149	.105	.013	.275**	.023	.124	.472**	-	
12	.165	.454**	.038	.054	.018	.000	.390**	.082	.166	.588**	.344**	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A6

Correlation between ACE items and CPQ-CC for Women

	CPQ	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	.007	-										
3	-.004	.634**	-									
4	-.165	.524**	.597**	-								
5	.063	.271**	.028	-.003	-							
6	.056	.490**	.397*	.324**	.131	-						
7	-.013	.394**	.251**	.130	.265**	.142	-					
8	-.005	.406**	-.045	.032	-.026	.016	.093	-				
9	-.117	.507**	.344**	.387**	.171	.148	.426**	.193*	-			
10	.165	.660**	.253*	.162	.164	.148	.334**	.217**	.420**	-		
11	-.040	.538**	.222	.116	.273**	.172	.378**	.016	.256**	.368**	-	
12	-.104	.392**	.197*	.160	-.038	.193*	.207*	.155	.401**	.323**	.193*	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A7

Correlation between ACE items and CTS2 Assault Score for Men

	Assault	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	.039	-										
3	-.170	.553**	-									
4	.037	.541**	.424**	-								
5	.086	.187	-.021	.128	-							
6	.103	.398**	.216*	.225*	-.077	-						
7	-.066	.297**	.083	.246**	-.048	.063	-					
8	.062	.586**	.90	.159	-.023	.264**	.062	-				
9	.097	.432**	.213*	.236*	-.079	.061	.202*	.089	-			
10	.008	.642**	.201*	.191*	-.002	.188*	.218*	.271**	.322**	-		
11	-.085	.358**	.090	.149	.105	.013	.275**	.023	.124	.472**	-	
12	.042	.454**	.038	.054	.018	.000	.390**	.082	.166	.588**	.344**	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A8

Correlation between ACE items and CTS2 Assault Score for Women

	Assault	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	**.307****	-										
3	.184	.634**	-									
4	.110	.524**	.597**	-								
5	.110	.271**	.028	-.003	-							
6	.144	.490**	.397*	.324**	.131	-						
7	.154	.394**	.251**	.130	.265**	.142	-					
8	-.166	.406**	-.045	.032	-.026	.016	.093	-				
9	**.237***	.507**	.344**	.387**	.171	.148	.426**	.193*	-			
10	**.333***	.660**	.253*	.162	.164	.148	.334**	.217**	.420**	-		
11	**.233***	.538**	.222	.116	.273**	.172	.378**	.016	.256**	.368**	-	
12	.066	.392**	.197*	.160	-.038	.193*	.207*	.155	.401**	.323**	.193*	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A9

Correlation between ACE items and CTS2 Injury Score for Men

	Injury	ACE total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	.177	-										
3	-.048	.553**	-									
4	-.012	.541**	.424**	-								
5	.005	.187	-.021	.128	-							
6	.**320****	.398**	.216*	.225*	-.077	-						
7	-.103	.297**	.083	.246**	-.048	.063	-					
8	.205*	.586**	.90	.159	-.023	.264**	.062	-				
9	.052	.432**	.213*	.236*	-.079	.061	.202*	.089	-			
10	.053	.642**	.201*	.191*	-.002	.188*	.218*	.271**	.322**	-		
11	-.054	.358**	.090	.149	.105	.013	.275**	.023	.124	.472**	-	
12	.068	.454**	.038	.054	.018	.000	.390**	.082	.166	.588**	.344**	-

Note: p<.05* and p<.01** with a 2-tailed Spearman correlation.

A10

Correlation between ACE items and CTS2 Injury Score for Women

	Injury	ACE Total	ACE 1	ACE 2	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10
1	-											
2	**.278***	-										
3	**.206***	.634**	-									
4	.101	.524**	.597**	-								
5	.073	.271**	.028	-.003	-							
6	.189	.490**	.397*	.324**	.131	-						
7	.077	.394**	.251**	.130	.265**	.142	-					
8	-.064	.406**	-.045	.032	-.026	.016	.093	-				
9	**.236***	.507**	.344**	.387**	.171	.148	.426**	.193*	-			
10	**.313****	.660**	.253*	.162	.164	.148	.334**	.217**	.420**	-		
11	.074	.538**	.222	.116	.273**	.172	.378**	.016	.256**	.368**	-	
12	.065	.392**	.197*	.160	-.038	.193*	.207*	.155	.401**	.323**	.193*	-

Note: p<.05*and p<.01** with a 2-tailed Spearman correlation.

Appendix B

Background information about YOU:

Place Participant Identification Code Here:

Your age: _____. Your gender: _____ Male; _____ Female.

Ethnicity (*choose one*):

1. Are you of Hispanic, Latino/a, or Spanish origin ☐ Yes ☐ No
2. What is your racial background? (check all that apply)
   - American Indian/Alaska Native ☐
   - Asian ☐
   - Native Hawaiian or Other Pacific Islander ☐
   - Black or African American ☐
   - White ☐

Are you currently married or in a committed romantic relationship lasting six months or longer?

If "yes" – which of the following applies to you (select one):

_____ Married _____ Engaged

_____ Living together, not married _____ In a committed relationship, but not living together

If married now, did you live together for any period of time ***before*** marriage?
____ Yes; ____ No

If NOT married, did you live together for any period of time before the Air Force?
____ Yes; ____ No

Length of this marriage (or committed relationship, if not married) in years:
_____

If any children live with you:

Number of children in household: _____

Age of oldest (or only) child: _____. Age of youngest child: _____.

Your total years of education: _____ Highest educational degree: _____

Currently employed outside the home? _____ Yes; _____ No.
If yes, # hrs/week: _____

If currently in the military service, list your rank: _____

If currently employed outside the home, what sort of work do you do? (please be specific): _____

_____

Information about your OWN well-being:

Rate how often you have been bothered by each of the following problems <u>in the past month</u>:	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	O	O	O	O
Feeling down, depressed, or hopeless	O	O	O	O
Trouble falling or staying asleep, or sleeping too much	O	O	O	O
Feeling tired or having little energy	O	O	O	O
Feeling bad about yourself – or that you are a failure or have let yourself or your family down	O	O	O	O
Thoughts that you would be better off dead, or of hurting yourself in some way	O	O	O	O
Feeling nervous, anxious, or on edge	O	O	O	O
Not being able to stop or control worrying	O	O	O	O
Worrying too much about different things	O	O	O	O
Trouble relaxing	O	O	O	O
Being so restless that it's hard to sit still	O	O	O	O
Becoming easily annoyed or irritable	O	O	O	O
Feeling afraid as if something awful might happen	O	O	O	O

Have you ever had any experience that was so frightening, horrible, or upsetting that, <u>in the past month</u>, you:	
Have had nightmares about it or thought about it when you did not want to?	Yes_____; No_____.
Tried hard not to think about it or went out of your way to avoid situations that remind you of it?	Yes_____; No_____.
Were constantly on guard, watchful, or easily startled?	Yes_____; No_____.
Felt numb or detached from others, activities, or your surroundings?	Yes_____; No_____.
For each of the following statements, indicate whether that statement is generally true of you <u>over the past month</u> or not:	
I feel irritated much of the time.	Yes_____; No_____.
I am becoming more hostile about things than I used to be.	Yes_____; No_____.
I am becoming so angry that I don't want to be around others.	Yes_____; No_____.
My anger is so intense that I sometimes feel like hurting others.	Yes_____; No_____.

Please circle the word below that best describes your overall physical health over the past month:

Excellent Very good Good Fair Poor

How many sick call (primary care) visits have you had ***in the past month***?__ _____
If working outside the home, how many missed workdays have you had ***in the past month***?

_____
(Indicate N/A = not applicable, if not working outside the home.)

During the past month, how much have you been bothered by any of the following problems?	Not bothered at all	Bothered a little	Bothered a lot
Aches and pains (e.g., headaches, stomach pain, back pain, joint pain, cramps)	O	O	O
Digestive problems (e.g., constipation, loose bowels, diarrhea, nausea, gas, indigestion)	O	O	O
Circulatory problems (e.g., chest pain, dizziness, fainting spells, heart palpitations)	O	O	O
Sexual problems (e.g., pain, dysfunction)	O	O	O

Over the past month, have you experienced any problems or difficulties in the following areas:

At work?	Yes_____;	No_____
Taking care of things at home?	Yes_____;	No_____
Legal or financial issues?	Yes_____;	No_____
Getting along with other people?	Yes_____;	No_____
Getting along with your partner?	Yes_____;	No_____

For each item below, please check the circle beneath the answer that best describes your use of alcohol over the past month:

How often do you have a drink containing alcohol?	Never O	Monthly or less O	2 to 4 times a month O	2 to 4 times a week O	4 or more times a week O
How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2 O	3 or 4 O	5 or 6 O	7 to 9 O	10 or more O
How often do you have six or more drinks on one occasion?	Never O	Less than monthly O	Monthly O	Weekly O	Daily or almost daily O

Indicate "yes" or "no" to each of the following statements as it applies to you <u>over the past month</u>:

Have you used drugs other than those required for medical reasons?	Yes___; No____
Can you get through the week without using drugs?	Yes___; No____
Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes___; No____

Have you ever previously received counseling for any of the following difficulties? If so, indicate by an "X" and, to the best of your memory, the month/year counseling started and ended.

If counseling was recommended but *not* received, indicate by an "R".

	Start mo/yr	Stop mo/yr
_____ Individual counseling for depression/anxiety	_____	_____
_____ Anger management counseling	_____	_____
_____ Alcohol or other substance use counseling	_____	_____
_____ Individual counseling for other issue	_____	_____
_____ Marital/couple counseling with current spouse/partner	_____	_____
_____ Psychiatric hospitalization	_____	_____

Reason for hospitalization:
_____

Have you been diagnosed with a mental illness? Yes_____; No_____

If Yes, please explain:
_____

Are you currently taking any prescription or over-the-counter medications? Yes_____; No_____.
If "Yes," please list: _____

Have you experienced any of the following events in the <u>past six months (half-year)</u>?

You/your partner became pregnant	Yes_____;	No_____
You/your partner gave birth to/adopted a child	Yes_____;	No_____
You were geographically separated from your partner	Yes_____;	No_____
A close friend or family member died	Yes_____;	No_____
You suffered a serious injury, illness, or assault	Yes_____;	No_____
Your partner or child suffered a serious injury, illness, or assault	Yes_____;	No_____
You experienced a financial crisis	Yes_____;	No_____
You had legal troubles	Yes_____;	No_____

Indicate "yes" or "no" to each of the following statements as they apply <u>over the past month</u>:

I feel carefully listened to and understood by family members or friends.	Yes_____;	No_____
My friends or relatives help me if I need it.	Yes_____;	No_____
I feel supported by the military.	Yes_____;	No_____
I feel a sense of camaraderie between myself and other Airmen in my unit.	Yes_____;	No_____

How important is religion / spirituality / your faith life to you? (check one circle)

O	O	O	O	O	O	O
Not at all			Somewhat important			Very important

Aside from weddings and funerals, how often do you attend religious services? (check one circle):

O	O	O	O	O	O
Never	A few times a year	Once every couple of months	Once or twice a month	Once a week	More than once a week

Are your biological (birth) parents currently married? Yes_____; No_____

Were they ever married? Yes_____; No_____

Which of the following describes the type of parenting situation you spent <u>the most time</u> in while growing up (select only one)**:**

_____ Both biological parents	_____ Adoptive parents
_____ Biological mother and stepfather	_____ Biological father and stepmother
_____ Single mother	_____ Single father
_____ Other (describe):_____	

Indicate "true" or "false" to each of the following statements as they apply to the family that you *<u>grew up in</u>*:		
Family members really helped and supported one another.	True_____;	False_____
We fought a lot in our family.	True_____;	False_____
There was a feeling of togetherness in our family.	True_____;	False_____
Family members often criticized each other.	True_____;	False_____
We really got along well with each other.	True_____;	False_____

While you were growing up, during your first 18 years of life:	Yes	No
Did a parent or other adult in the household often or very often… Swear at you, insult you, put you down, or humiliate you? OR Act in a way that made you afraid that you might be physically hurt?	☐	☐
Did a parent or other adult in the household often or very often… Push, grab, slap, or throw something at you? OR Ever hit you so hard that you had marks or were injured?	☐	☐
Did an adult or person at least 5 years older than you ever… Touch or fondle you or have you touch their body in a sexual way? OR Attempt or actually have oral, anal, or vaginal intercourse with you?	☐	☐
Did you often or very often feel that … No one in your family loved you or thought you were important or special? OR Your family didn't look out for each other, feel close to each other, or support each other?	☐	☐
Did you often or very often feel that … You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? OR Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?	☐	☐
Were your parents ever separated or divorced?	☐	☐
Was your mother or stepmother … Often or very often pushed, grabbed, slapped, or had something thrown at her? OR Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit at least a few minutes or threatened with a gun or knife?	☐	☐
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?	☐	☐
Was a household member depressed or mentally ill, or did a household member attempt suicide?	☐	☐
Did a household member go to prison?	☐	☐

How often <u>in the past month</u> have problems at home (involving your spouse or partner) :	Never	Rarely	Sometimes	Often	Very Often
Kept you from getting work done on time	O	O	O	O	O
Kept you from taking on extra work	O	O	O	O	O
Kept you from doing a good job at work	O	O	O	O	O
Kept you from concentrating on work	O	O	O	O	O
Caused you to feel drained of energy needed for work	O	O	O	O	O

Rate each of the following two statements as they apply to you over <u>the past month:</u>

At home, I am so tired or preoccupied with my work that I don't have much time left for my marriage (relationship) or family.

O	O	O	O	O	O	O
Almost Never			Sometimes			Almost Always

Stress at work sometimes makes it harder to get along with my spouse/partner.

O	O	O	O	O	O	O
Almost Never			Sometimes			Almost Always

Please read each statement <u>carefully</u> and decide if it is TRUE for you or FALSE for you. Answer every item by circling either T or F.

I get pretty discouraged about our relationship sometimes.	T	F
My partner often fails to understand my point of view on things.	T	F
My partner has too little regard sometimes for my sexual satisfaction.	T	F
There are some serious difficulties in our relationship.	T	F
Minor disagreements with my partner often end up in big arguments.	T	F
I have thought specifically about divorce or separation – for example, who would get the kids or how things would be divided.	T	F

Rate each of the following statements in terms of how often this applies to you and your partner.	Never or almost never	Sometimes	Frequently
Little arguments escalate into ugly fights with accusations, criticisms, name-calling, or bringing up past hurts.	O	O	O
My partner criticizes or belittles my opinions, feelings, or desires.	O	O	O
My partner seems to view my words or actions more negatively than I mean them to be.	O	O	O
When we have a problem to solve, it is as though we are on opposite teams.	O	O	O
I hold back from telling my partner what I really think and feel.	O	O	O
I feel lonely in this relationship.	O	O	O
When we argue, one of us withdraws – that is, doesn't want to talk about it anymore or leaves the scene.	O	O	O

Please read each statement <u>carefully</u> and decide if it is TRUE or FALSE in describing how you and your partner deal with problems in your relationship.

When a problem in the relationship arises:

Both you and your partner avoid discussing the problem.	T	F
Both you and your partner try to discuss the problem.	T	F
One partner tries to start a discussion while the other partner tries to avoid a discussion.	T	F

During a discussion of a relationship problem:

Both you and your partner express your feelings to each other.	T	F
Both you and your partner blame, accuse, and criticize each other.	T	F
Both you and your partner suggest possible solutions and compromises.	T	F
One partner pressures, nags, or demands while the other partner withdraws, becomes silent, or refuses to discuss the matter further.	T	F
One partner criticizes while the other partner defends him/herself.	T	F

"The Investigators of this project have received a **Certificate of Confidentiality** from the National Institute of Mental Health. This means that NO information obtained in this survey will be disclosed to any individual or authority – including DoD, federal, state, or other entities - that could expose any research participant to adverse consequences. In other words, the confidentiality of your responses is absolute and protected by federal regulations."

Conflicts between partners are very common, and sometimes include physical behaviors such as pushing, shoving or grabbing. **How many times, <u>in the past six months</u>:**	1 time	2 times	3-5 times	6-10 times	More than 10 times	Never	Not in past 6 months, but has happened in the past
Have you pushed or shoved your partner?	O	O	O	O	O	O	O
Have you grabbed your partner?	O	O	O	O	O	O	O
Have you thrown something at your partner?	O	O	O	O	O	O	O
Have you scratched, bitten, or slapped your partner?	O	O	O	O	O	O	O
Have you punched your partner?	O	O	O	O	O	O	O
Has your partner pushed or shoved you?	O	O	O	O	O	O	O
Has your partner grabbed you?	O	O	O	O	O	O	O
Has your partner thrown something at you?	O	O	O	O	O	O	O
Has your partner scratched, bitten, or slapped you?	O	O	O	O	O	O	O
Has your partner punched you?	O	O	O	O	O	O	O

In <u>the past 6 months</u>, have you or your partner been emotionally or physically intimate with anyone other than your current spouse/partner while in this marriage/relationship?
_____Yes; _____No; _____Unsure about spouse/partner.

If yes or "unsure about spouse/partner", please answer each of the following questions:
Which of the following did the ***outside*** relationship include (check **<u>all</u>** that apply to you and your spouse):

You	***Your Spouse (Known)***	***Your Spouse (Suspected)***	
_____	_____	_____	Feelings of emotional closeness or "special friendship"
_____	_____	_____	Physical closeness of any kind (for example, touching, hugging, kissing)
_____	_____	_____	Sexual contact ***other than*** intercourse (for example, genital touching or oral sex)
_____	_____	_____	Sexual intercourse

Please read the following definition of commitment and rate yourself on a scale from 0 (low) to 100 (high) in terms of your level of current commitment to this marriage/relationship.

"Commitment is the degree to which an individual is willing to stand by another even though that may mean putting aside one's own needs and desires for the sake of the other; it can mean a time of accepting the other person in spite of his or her faults or problems that make one's own life difficult; it can mean thinking less about the immediate advantages and disadvantages of the relationship and working to make the relationship last in the long run."

Your commitment rating: _____

Couples vary in how much both partners share a commitment to the military lifestyle. **Consider each of the following statements**, and then indicate the extent to which that statement accurately describes your ***spouse or partner*** by filling in the circle O in the column to the right that best applies to your ***partner***.

Rate how well each of the following statements applies to your spouse/partner:	Rarely or not at all	Some or a little bit	Occasionally or moderate amount	Frequently or a lot
My partner supports the time and effort I give to the military.	O	O	O	O
My partner is proud of my military service.	O	O	O	O
My partner shares my views and feelings about serving my country through military service.	O	O	O	O
My partner feels he/she has an important role in supporting my military service.	O	O	O	O

Please indicate how much you agree with the following statements:	Strongly Disagree	Disagree	Agree	Strongly Agree
Some equality in marriage is okay, but by and large, the man should have the main say-so.	O	O	O	O
It isn't always possible, but ideally the wife should do the cooking and the housekeeping and the husband should provide the family with money.	O	O	O	O

Appendix C

Subject Informed Consent Document

"Up-Armoring" At-Risk Military Couples: A Prospective Study of Committed Romantic Relationships in Transition to Their First Permanent Duty Station

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Site(s) where study is to be conducted:

- Wright-Patterson AFB (USAF School of Aerospace Medicine; USAFSAM)
- Phone number for subjects to call for questions:
    - Dr. Jeffrey A Cigrang, (937) 775-4300

Introduction and Background Information

You are invited to participate in a research study. The study is being conducted by Dr. Jeffrey A. Cigrang, Lt Col Elizabeth Najera (USAF), Drs. Amy M. Smith Slep, Richard E. Heyman (NYU), and Douglas K. Snyder (TAMU) and Christina Balderrama-Durbin (BU). The study is sponsored by the United States Air Force. Approximately 300 couples will be invited to participate.

Purpose

Couples new to military life experience challenges typically not faced by civilian couples. Although most cope very well, some military couples experience difficulty adjusting, have high levels of relationship conflict, and eventually separate or divorce. Not much is known about why some young couples do well adjusting to the military and others do not. The purpose of this study is to follow a group of military couples (those in romantic relationships) from technical training through their first duty station to gain a better understanding of what helps couples adjust successfully to the military lifestyle.

Procedures

In this study, you will be asked to complete confidential questionnaires including questions about yourself and your relationship. You may decline to answer any questions that may make you uncomfortable. You will be asked to complete similar confidential questionnaires at six-month intervals (6, 12, 18, and 24 months) after your first questionnaire.

You will participate via hard copy (pencil/pen and paper) or electronically (web-based). All questionnaires will be kept strictly anonymous, and we estimate that it will take no longer than 30 minutes to complete each assessment.

We will ask your partner to voluntarily participate in the study. If he or she participates, you will not see or have access to your partner's questionnaire responses nor will he or she get to see yours.

Potential Risks

There is no known risk associated with this study except for the potential loss of confidentiality. We have protocols in place to protect your confidentiality. The study staff advises that you protect your copy of this informed consent document because it identifies you as a participant. If you inadvertently lose this document or allow others to view the document, others could know that you are participating.

Likewise, you should be aware of the risks of storing or viewing the informed consent document on a personal electronic device (PED), such as a computer or smartphone, especially if that PED is shared with other users or is lost, hacked, or subject to a search warrant or subpoena. Unlike paper copies, which you may destroy, e-copies delivered directly to your PED may not be able to be permanently removed.

Although thinking and talking about your relationship may make you slightly uncomfortable, from our past experiences with similar projects we believe the probability of this happening is low. In fact, research on answering questions such as those in this questionnaire suggests that most people find answering questions like these to be helpful.

Benefits

Although the information collected may not benefit you directly, the possible benefits of this study include helping the investigators and the Air Force understand how to better support Active Duty members and their partners. Also, thinking about some of the issues we ask about may help you to understand you and your partner better.

Confidentiality

All assessments will be confidential and used only for research purposes.

To help you understand how we are going to do this, we are taking the following steps:

1. Your name and any identifiable information will not be on any of your questionnaires or your partner's questionnaires.
2. Any information that can identify you, such as this Informed Consent document, your partner's name or other contact information, will be stored separately from your questionnaire responses.
3. You will be assigned a random participation identification number such as 423, 045, or 127. That number will be placed on your questionnaire, consent and contact form. All documents related to your participation will be kept separately and in a locked cabinet in the Principal Investigator's office (Dr. Jeffrey Cigrang) at Wright State University. Only Dr. Cigrang and his research assistants will have access to your name and participation identification number.
4. We'll need your name and contact information to reach you with the follow-up questionnaires. The follow-up questionnaires will only have the participation identification number on them and not your name. The graduate research assistants will remind you what your participation identification number is for each follow-up survey.
5. The Wright State University graduate research assistants will enter your questionnaire responses into a secure computer database along with all the other participants' responses. Your name or other personally identifiable information will NOT be entered into the database with your responses. Only the random participation identification number you were assigned will be entered. Thus, the database will not include anything that could identify you. Further, the data will

only be accessible to project staff at Texas A&M, New York University, Bingham University and Wright State University and will be kept in secure locations and secure digital files.

Your responses may be shared ONLY with the following:

- Those sponsoring (funding) this study and their designees can access study materials to ensure that all regulations are being followed.
- The Air Force Research Laboratory IRB to ensure compliance with regulations.
- People who are responsible for research and HIPAA oversight at the institutions where the study is conducted to ensure compliance with regulation.
- Office for Human Research Protections (OHRP) to ensure compliance with regulations.

Remember – even in these circumstances – only your questionnaire responses and NOT your name or other personally identifiable information will be shared.

To further help us protect your privacy, we have obtained a Certificate of Confidentiality from the National Institutes of Health. The researchers can use this Certificate to legally refuse to disclose information that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings, for example, if there is a court subpoena. The researchers will use the Certificate to resist any demands for information that would identify you.

You should understand that a Certificate of Confidentiality does not prevent you or a member of your family from voluntarily releasing information about yourself or your involvement in this research. If an insurer, medical care provider, or other person obtains your written consent to receive research information, then the researchers will not use the Certificate to withhold that information.

Voluntary Participation

Participating in this study is voluntary. You may choose not to participate at all. If you decide to be in this study you may stop taking part at any time. If you decide not to be in this study or if you stop participating at any time, you will not lose any benefits for which you may qualify.

Research Subject's Rights, Questions, Concerns, and Complaints

You may contact the Principal Investigator at 937-775-4300 or jeffrey.cigrang@wright.edu

If you have any questions about your rights as a research participant or other questions, concerns or complaints, you may call the Air Force Research Laboratory IRB Office (937) 656-5449. You may discuss any questions about your rights as a subject with a member of the IRB or staff. The IRB is an independent committee composed of members of the University community, staff of the institutions, as well as lay members of the community not connected with these institutions. The IRB has reviewed and approved this study.

This Informed Consent Document tells you what will happen during the study if you choose to take part. Your signature means that this study has been discussed with you, that your questions have been answered, and that you will take part in the study. This informed consent document is not a contract. You are not giving up any legal rights by signing this informed consent document. You will be given a signed copy of this consent to keep for your records.

Volunteer Signature_____**Date**_____

Volunteer Name (printed)_____

Advising Investigator Signature _____ **Date** _____

Investigator Name (printed)_____

Witness Signature _____**Date** _____

Witness Name (printed)_____

Privacy Act Statement (if applicable)
Authority: We are requesting disclosure of personal information. Researchers are authorized to collect personal information on research subjects under the Privacy Act-5 USC 552a, 10 USC 55, 10 USC 8013, 32 CFR 219, 45 CFR Part 45 and EO 9397, November 1943.

Purpose: It is possible that latent risks or injuries inherent in this experiment will not be discovered until some time in the future. The purpose of collecting this information is to aid researchers in locating you at a future date if disclosures are appropriate.

Routine Uses: Information may be furnished to Federal, State and local agencies for any uses published by the Air Force in the Federal Register, 52 FR 16431, to include, furtherance of the research with this study and to provide medical care.
Disclosure: Disclosure of the requested information is voluntary. No adverse action whatsoever will be taken against you, and no privilege will be denied based on the fact you do not disclosure information. However, your participation in this study may be impacted by a refusal to provide information.

Appendix D

"Up-Armoring" At Risk Military Couples: A Prospective Study of Committed Romantic Relationships in Transition To Their First Duty Station

Primary Investigator
Dr. Jeffrey Cigrang (Lt Col, USAF ret)
Wright State University

USAF AD Primary Investigator
Lt Col Elizabeth Najera
59th MDOS, Lackland AFB

Co-Investigators
Dr. Amy Smith Slep
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Binghamton University (SUNY)

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Nichole Kuck
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AFcouplestudy@gmail.com

Military couples face unique challenges that civilian couples may never experience. The military is a rewarding career and lifestyle that provides you and your family with great benefits. However, sometimes the military may ask more of you and your family than is easy to give. Frequent moves, deployments, job stress and long hours can increase the risk for relationship problems and break-ups. It is important that we understand the reasons that many military couples cope successfully with these challenges while others develop serious relationship problems leading to reduced job performance, lowered deployment readiness and even domestic violence and suicide.

This is the first study to recruit young Air Force couples in training and follow them through their first duty station. We will be asking you to complete a survey every 6 months for the next 2 years to see how your relationship is doing. Our long-term goal is to use the information you provide us to create better resources for helping future generations of Airmen and their romantic partners.

It is important we have surveys from BOTH the active duty member that has been recruited in tech school and their partner – whether their partner is civilian or another active duty member. We need survey responses from both individuals to get the most comprehensive data about any factors that may be negatively impacting your relationship over the next two years.

We have gone to great lengths to protect your confidentiality. Your survey responses will be kept confidential. You will not have access to your partner's responses and your partner and the Air Force will not have access to your responses.

Please speak with your partner about the study. Ask them to contact us at AFcouplestudy@gmail.com. We hope to hear from them soon.

Thank you for your participation!

Appendix E

Thank you for volunteering for this study! The Air Force may take you all over the world and it's important for us to be able to contact you. In order for us to maximize the most out of the valuable information you provide us in your survey today we need to be able to contact you for follow up surveys over the next 2 years. All of your survey responses and contact information will remain confidential. The contact information you provide us today will serve as a means for us to get the next survey to you. On this form please provide information that will allow us to contact you for at least the next six months. When we do contact you the message will be from AFcouplestudy@gmail.com.

Thank you for your participation,

Your Contact Info

Please complete the contact form below:

Name: _____

Cell Phone: _____

Home Phone: _____

Work Email Address: _____

Personal Email Address: _____

Can you receive texts at your cell number?

Yes No

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