

Military Couples' Communication during Deployment: A Proposed Expansion of
Affection Exchange Theory

by

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ABSTRACT

Affectionate communication is one way individuals express love and appreciation (Floyd, 2006). Recently, communication scholars have recommended individuals increase their expressions of affection for health benefits (Brezsnyak & Whisman, 2004; Floyd et al., 2009; Floyd & Riforgiate, 2008). However, because communication is limited during military deployment, increasing affectionate communication is difficult for military families to implement. One form of affectionate communication that shows the promise of health benefits for military couples during deployment is affectionate writing. Working from Pennebaker's written disclosure paradigm and Floyd's affectionate exchange theory, the purpose of the current study is to identify whether at-home romantic partners of deployed U.S. Navy personnel can reap the benefits of affectionate communication during military deployment. To test a causal relationship between affectionate writing and communication outcomes, specifically relational satisfaction and stress, a four-week experiment was conducted. Eighty female at-home romantic partners of currently deployed U.S. Navy personnel were recruited for the study and randomly assigned to one of three conditions: (a) an experimental condition in which individuals were instructed to write affectionate letters to their deployed partners for 20 minutes once a week for three weeks, (b) a control condition in which individuals were instructed to write about innocuous or non-emotional topics for 20 minutes once a week for three weeks, or (c) a control condition in which individuals were not given instructions to write for the duration of the study. Individuals who engaged in affectionate writing reported higher levels of relational satisfaction than both the control groups, however, there were no differences in reported stress for the three groups. In fact, stress decreased throughout the duration of the study regardless of the condition in which participants had been

placed. Additionally, individuals with secure attachment styles were more satisfied and less stressed than individuals with preoccupied and fearful attachment styles. Finally, individuals who perceived their relationship to be equitable, and to a slightly lesser extent, overbenefitted, during deployment reported higher levels of relational satisfaction. Overall, the findings support and extend affectionate exchange theory. Specifically, the results suggest that individuals can experience distance from their partners and still benefit from affectionate communication via writing; additionally, expressions of affectionate communication need not be reciprocal. Theoretical, methodological, clinical, and pedagogical implications are discussed.

DEDICATION

To my boyfriend, Lieutenant Kevin Hansom, and all members of the U.S. military and their families. Thank you for your service and sacrifice.

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CHAPTER 1

INTRODUCTION

Researchers have long studied the basic human need to be loved and appreciated (Baumeister & Leary, 1995; Brown & Levinson, 1987; Maslow, 1970). More recently, researchers have taken an interest in affectionate communication, defined as expressions of fondness and positive regard for another (Floyd & Morman, 1998). Stated another way, affectionate communication is a specific way in which individuals can exchange expressions of love and appreciation (Floyd, 2006).

Affectionate communication has been linked to physical and mental health as well as relational benefits. Concerning physical health, the communication of affection results in lower stress, lower cholesterol, and higher positive mood levels (Floyd, 2006; Floyd, Hesse, & Haynes, 2007; Floyd, Mikkelson, Hesse, & Pauley, 2007). In terms of mental health, the communication of affection results in less loneliness, higher happiness, and more self-confidence (Floyd, 2006). Finally, relational benefits include increased relational satisfaction, more intimacy, and more self-disclosure (Floyd, 2006).

Rationale

Considering the numerous health and relational benefits of affectionate communication, scholars recommend increasing expressions of affection, such as saying “I love you” or kissing more often, to enhance relational satisfaction, as well as improve physical and mental health (Brezsnyak & Whisman, 2004; Floyd et al., 2009; Floyd & Riforgiate, 2008). However, this advice may be difficult for military couples to follow given their unique circumstances during deployment. During a military deployment, romantic couples experience long distances apart and experience limited communication. Thus, saying “I love you” or kissing more often are nearly impossible tasks.

According to the Department of Defense (2016), there were 1.3 million active duty military and more than 800,000 reserve forces in 2016. Of these, about 193,500 or 15% were deployed overseas that year (Pew Research Center, 2016). Although that is the smallest number of active-duty military members overseas since 1957 (Pew Research Center, 2016), deployments pose many problems for military members and their families. Specifically, during deployments, military members and their families experience marital problems (Department of Defense Mental Health Advisory Board, 2007), divorce (Department of Defense, 2015), distress (Baumeister & Leary, 1995; Floyd, 2006), decreased troop morale (Military Family Research Institute, 2009), communication issues (Merolla, 2010), and decreased relational satisfaction (Allen, Rhoades, Stanley, & Markman, 2010; Goff, Crow, Reisbig, & Hamilton, 2007). Thus, there is a need for a study on affectionate communication that considers the unique, yet routine, circumstances of military deployments.

The present study seeks to apply and extend the current understanding of affectionate communication to military families during deployment through an affectionate writing experiment. First, literature on the written disclosure paradigm, affectionate communication, and other forms of communication relevant to military families will be reviewed. Then a method will be proposed, detailing the participants, procedure, and measures of the affectionate writing experiment. Finally, implications of this study will be outlined.

CHAPTER 2

LITERATURE REVIEW

Affectionate Writing as a Way for Military Couples to Reap the Benefits of Affectionate Communication during Deployment

The main purpose of the present study is to identify the relational and health benefits of affectionate communication through an affectionate writing experiment and then show the ways military families can reap those benefits during deployment. As previously stated, advice for couples to increase affectionate communication may be misguided if offered to military couples who are not only geographically separated but also may have limited communication media during deployment. Applying concepts from Pennebaker's written disclosure paradigm to this experiment may show that military couples can obtain benefits from intrapersonal affectionate communication when direct interpersonal reaction is limited. Thus, the expressive writing procedure will now be explained.

Overview of expressive writing. Pennebaker's written disclosure paradigm consists of an expressive writing procedure where participants are instructed to write about traumatic events they have experienced in their lives, such as sexual abuse or loneliness, for 15-20 minutes per day for 3-5 consecutive days (Pennebaker, 1993; Pennebaker & Beall, 1986) with no immediate feedback from researchers (Pennebaker, 1997). Although 3-5 consecutive days is the standard laboratory procedure of the writing exercise, several of Pennebaker's studies have also tested the effects of writing once a week for 3-5 consecutive weeks (Francis & Pennebaker, 1992) as well as the effects of computer automated feedback concerning use of pronouns to typed responses (Bond &

Pennebaker, 2012). In fact, Smyth's (1998) meta-analysis suggests there are stronger effects for expressive writing the more days over which an experiment spans.

Regardless of writing on consecutive days or weeks, participants are asked to write continuously for 15-20 minutes per treatment, disregarding spelling, punctuation, and grammar. Compared to a control group who are instructed to write for comparable times about innocuous topics, such as their plans for the day or describing objects in non-emotional ways, participants who write about their most traumatic experiences are subsequently healthier (Bond & Pennebaker, 2012; Nicholls, 2009), both physically and mentally. This is attributed to the fact that bottling up emotions can lead to long-term stress and disease (Pennebaker, 1989, 1993; Pennebaker & Chung, 2011; Pennebaker & Susman, 1988). Studies in the written disclosure paradigm show promise that expressive writing could aid in significant life transitions or personal challenges (Pennebaker & Francis, 1996).

Uses of the written disclosure paradigm in psychology. Many psychologists have used the written disclosure paradigm as a method to help individuals cope with traumatic events. Until the late 1990s, much of the research using written emotional expression involved healthy volunteers (Smyth, 1998). For this group, Smyth's (1998) meta-analysis revealed the positive influence of emotional writing on outcomes such as heart rate, blood pressure, well-being, mood, visits to the health clinic, grade point average, and cognitive functioning. The overall average effect size for these studies was $d = .47$, a 23% improvement in the disclosure groups compared to the control groups (Smyth, 1998). Overall, it appears the written disclosure paradigm is effective in improving the health of already healthy individuals. However, since Smyth's (1998) was

published, the written disclosure paradigm has been expanded to include more diverse participants, methods, and outcome variables.

Participants. Research using the written disclosure paradigm has gone beyond the recruitment of purely healthy populations. For instance, researchers have used the written disclosure paradigm to help people cope with pre-existing physical conditions. Specifically, individuals with breast cancer report decreased physical symptoms (Stanton et al., 2002), and patients with rheumatoid arthritis report improved psychological functioning (Kelley, Lumley, & Leisen, 1997) after emotional writing. Individuals with fibromyalgia (Gillis, Lumley, Mosley-Williams, Leisen, & Roehrs, 2002) and terminal cancer (de Moor et al., 2002) report better sleep after emotional writing.

Researchers have also used the writing disclosure paradigm to help people cope with pre-existing psychological conditions. Specifically, compared to baseline scores, participants report lower levels of depression and anxiety following written disclosure sessions (Schoutrop, Lange, Hanewald, Duurland, & Bermond, 1997). Additionally, psychotherapy clients assigned to emotional disclosure showed significant reductions in anxiety and depressive symptoms compared to a control group (Graf, Gaudiano, & Geller, 2008). However, emotional writing does not appear to improve the physical symptoms of individuals with headaches and migraines (D'Souza, Lumley, Kraft, & Dooley, 2008), decrease suicidal thoughts for college students with suicidality (Kovac & Range, 2002), nor reductions in PTSD symptoms and depression severity for young adults with PTSD (Sloan, Marx, & Greenberg, 2011). Overall, it appears emotional writing is more effective for in improving physical illness than psychiatric illness

(Frisina, Borod, & Lepore, 2004) as studies examining psychological conditions have mixed results.

Methods. In its conception, the written disclosure paradigm involved a standard laboratory procedure where participants physically came into the lab for one to five consecutive days for 15-20 minutes per day (Pennebaker & Chung, 2011) with no feedback offered from the researchers. The original studies asked people to write about intense traumatic experiences, but subsequent studies have expanded the scope of writing to include more general emotional events, such as the diagnosis of cancer or coming to college (Pennebaker & Chung, 2011).

Further, the amount of time participants are asked to write has varied since the conception of the written disclosure paradigm. Now, participants might be asked to write for 10-30 minute increments ranging from three to five consecutive days, or even on the same day of the week for up to four weeks (Pennebaker & Chung, 2011). The effectiveness in the timing of writing as well as the timing between writing has been examined. Frattaroli's (2006) meta-analysis suggests writing for longer than 15 minutes is more effective than writing for fewer than 15 minutes. It appears giving participants fewer than 15 minutes to write does not give them enough time to process the event because they spend some of that time processing the writing prompt. Further, Smyth's (1998) meta-analysis suggests the more days over which the experiment spans, the stronger the effects of the writing intervention.

Other researchers have used the written disclosure paradigm in environments outside of the laboratory, such as online, and have offered instant feedback to participants. For instance, one published study directed participants to a web page; the

web page had a timer and participants were instructed to engage in the writing activity until the timer ran out (Owen, Hanson, Preddy, & Bantum, 2011). Once the participants finished writing, they were immediately presented feedback in text or video formats regarding the level of emotional expression in their writing. Owen et al.'s (2011) study revealed that offering instant feedback to participants increases positive emotional expression. This study is notable for two reasons: (a) it demonstrates that self-disclosure does not have to be handwritten for participants to reap the benefits of emotional writing, and (b) participants do not need to complete emotional writing tasks in a laboratory setting.

Moreover, researchers have used a method where participants engage in perspective switching. Perspective switching refers to changes in the use of personal pronouns (Campbell & Pennebaker, 2003). For instance, participants might be asked to write about their personal traumatic event using second-person (i.e., “talking to yourself in the mirror”) or third-person (i.e., “as though writing about yourself in a novel”; Seih, Chung, & Pennebaker, 2011, p. 927). Results revealed first-person pronouns is associated with more perceived benefits (Seih et al., 2011).

Less formally examining the written disclosure paradigm, there is a group of studies examining self-disclosure through blogging. Although this group of studies does not formally engage the written disclosure paradigm, the group of studies do appear to be influenced by the written disclosure paradigm, as evidenced in their literature reviews. It appears blogging is a less traditional way of engaging the written disclosure paradigm as blog posts are public and not timed, but do reach a level of emotional self-disclosure. Researchers have found that engaging in self-disclosure through blogging results in

increases in perceived social support (Baker & Moore, 2008), subjective well-being (Ko & Kuo, 2009), and success in weight loss (Pennebaker & Chung, 2011). This could be because self-disclosing online helps individuals feel like they belong to a group of people with similar situations and interests as them (Baker & Moore, 2008), offers a safe space for receiving and offering support (Baker & Moore, 2008), and helps build close relationships (Ko & Kuo, 2009). Although this group of studies examining blogging does not formally follow the structured method of the written disclosure paradigm, the studies do offer interesting implications for self-disclosing through writing.

Outcome variables. Researchers have utilized a variety of physical and mental health measures to examine the effects of expressive writing on different outcome variables (Pennebaker & Chung, 2011). Concerning physical health, across various laboratory studies, expressive writing is associated with drops in visits to the health center, increases in antibody response to Epstein-Barr virus, and increases in antibody response to hepatitis B vaccinations compared to control groups (Pennebaker & Chung, 2011). Expressive writing has been found to impact the autonomic nervous system. Specifically, compared to baseline reports, emotional disclosure is associated with drops in systolic blood pressure and heart rate (Pennebaker, Hughes, & O’Heeron, 1987). These effects are long-lasting as well. One month after writing, participants maintained lower systolic and diastolic blood pressure compared to their baseline reports prior to writing (McGuire, Greenberg, & Gevirtz, 2005). Overall, it appears individuals’ biological responses to emotional disclosure are similar to those who are attempting to relax (Pennebaker & Chung, 2011).

Concerning mental health, scholars have investigated how the written disclosure paradigm impacts certain mental health outcomes like depression and anxiety. Specifically, individuals report lower levels of depression and anxiety following written disclosure sessions (Graf et al., 2008; Schoutrop et al., 1997). However, written disclosure does not appear to improve outcomes for all mental health issues, such as suicidality (Kovac & Range, 2002) or PTSD (Sloan et al., 2011). It appears emotional writing, in conjunction with psychotherapy, can facilitate emotional processing and positive mental health outcomes for healthy individuals who have suffered traumatic or stressful life events, but not necessarily assist individuals with pre-existing mental health issues like suicidality or PTSD.

In addition to physical and mental health, researchers have also examined behavioral outcomes using the written disclosure paradigm. Specifically, they have determined that expressive writing is associated with improvements in college grades (Lumley & Provenzano, 2003), finding jobs more quickly after being laid off (Spera, Buhrfeind, & Pennebaker, 1994), and better attendance at work (Francis & Pennebaker, 1992).

Uses of the written disclosure paradigm in other fields. Although much of the work on the written disclosure paradigm has been conducted in the field of psychology and focused on traumatic events, a group of communication scholars have applied the written disclosure paradigm to affectionate communication. Specifically, Floyd, Mikkelsen, Hesse, et al. (2007) used Pennebaker's written disclosure paradigm as a framework for their affectionate writing intervention. Floyd, Mikkelsen, Hesse, et al. (2007) conducted a two-part initial study followed by a replication experiment

investigating the impact of affectionate writing on total serum cholesterol reduction over a 5-week period. However, instead of having the participants write about emotions concerning trauma, the researchers requested the participants write about their positive and affectionate feelings toward three close relational partners: a close friend, a close relative, and the person whom they consider to be the closest person in their lives. A control group wrote about innocuous topics. As predicted, individuals in the treatment group had a reduction in total cholesterol following the affectionate writing intervention (Floyd, Mikkelsen, Hesse, et al., 2007).

Other scholars have examined the health benefits of writing about positive experiences. Burton and King (2004) compared individuals who wrote about their most positive experiences to a control group who wrote about mundane topics. Participants in the positive disclosure writing group had significantly fewer visits to the health center than individuals in the mundane topics group. However, focusing on the positive aspects associated with deeply traumatic events has mixed results (King & Minor, 2000; Lyubomirsky, Sousa, & Dickerhoof, 2006). It appears mixing positive emotions with negative emotions associated with trauma is not as effective as keeping the two writing prompts separate.

Additionally, elements of the written disclosure paradigm, such as emotional self-disclosure, has recently been introduced to a wider audience (Nicholls, 2009). For instance, the National Association of Poetry Therapy in the USA offers training and accreditation for poetry therapists who learn a model that utilizes poems as starting points for emotional response, discussion, and writing (Nicholls, 2009). It appears poetry can serve as a catalyst for communicating personal experience and sharing peer support. As

outcomes of noticing the benefits of sharing poetry, there have been an increase of life-writing courses at universities in the USA and UK (Bolton, 2011; Hunt & Sampson, 2005) and the establishment of the Association for Literary Arts in Personal Development in the UK, an organization offering peer support for the sharing of experiences (Nicholls, 2009). Again, elements of the written disclosure paradigm have begun to touch broader audiences.

Benefits of expressive writing. The key aspect of Pennebaker's written disclosure paradigm is for participants to translate experiences into language (Pennebaker, 1997) because not confronting or disclosing important traumas is considered stressful and can later manifest in disease (Pennebaker, Kiecolt-Glaser, & Glaser, 1988). Specifically, Pennebaker et al. (1988) claim, "failure to confront a trauma forces the person to live with it in an unresolved manner" (p. 244).

Based on existing research related to the benefits of expressive writing, I have identified four key categories of benefits related to expressive writing: cognitive benefits, health benefits, relational benefits, and behavioral benefits.

Cognitive benefits. Engaging in expressive writing tasks aid cognitive adjustment after an event. Specifically, expressive writing helps people organize their thoughts and feelings following a traumatic event. Engaging in expressive writing helps create a story with an ordered sequence of events and offers meaning to the experience (Labov & Fanshel, 1977; Pennebaker & Seagal, 1999). Creating a story helps participants think differently about the traumatic event and better understand the problem (Graybeal, Sexton, & Pennebaker, 2002; Pennebaker, 1989; Pennebaker & Francis, 1996). However, it is important that the cognitive processing concerning the traumatic event involves both

emotions and objective features of the event. Specifically, participants in Pennebaker and Beall's (1986) study who wrote about their emotional responses and perceived facts of the traumatic event exhibited long-term benefits. By comparison, individuals who wrote solely about facts were not statistically different than the control group who wrote about superficial topics. Further, individuals who only wrote about their emotional responses perceived the study to be valuable, but did not exhibit any long-term benefits. Overall, expressive writing helps participants align events with corresponding emotions, helps orient individuals to the emotional reactions to the event, alters the way the event is cognitively represented, and impacts positive changes in social behavior (Pennebaker & Chung, 2011).

Health benefits. Numerous studies document the physical health benefits of Pennebaker's written disclosure paradigm. Expressive writing impacts immune function, as measured by the responses to latent Epstein-Barr virus reactivation (Esterling, Antoni, Fletcher, Margulies, & Schneiderman, 1994) and hepatitis-B vaccination (Petrie, Booth, Pennebaker, Davidson, & Thomas, 1995). It also impacts the disease status in patients with asthma or rheumatoid arthritis; specifically, in an experiment, compared to their respective control groups, asthma patients showed improvements in lung functioning and rheumatoid arthritis patients showed reductions in disease severity four months after a writing intervention (Smyth, Stone, Hurewitz, & Kaell, 1999).

Further, professionals who expressively write about being laid off from work report reductions in alcohol intake (Francis & Pennebaker, 1992). In studies concerning visits to the health center, scholars found that individuals instructed to write about their own traumatic experiences or the traumas of others significantly visited the health center

less after the study than both the control groups and groups instructed to write about mild traumas (Greenberg & Stone, 1992; Pennebaker & Beall, 1986; Pennebaker & Francis, 1996). Meta-analyses suggest the method of expressive writing has modest health effect sizes, especially for non-clinical populations (Frattaroli, 2006; Frisina et al., 2004).

Researchers also have examined the health benefits of writing about positive emotions instead of traumatic events. Specifically, Floyd, Mikkelson, Hesse, et al. (2007) tested total cholesterol reductions following expressive writing about close, personal relationships. As predicted by Floyd, Mikkelson, Hesse, et al. (2007), total cholesterol decreased after completion of the affectionate writing intervention. The effect size was moderate (partial $\eta^2 = .35$) for the study. Although the effect size in a nearly identical replication was smaller than the effect for the first study (partial $\eta^2 = .15$), the effect size was still considered moderate and was within the typical range of effect sizes for writing intervention studies (Pennebaker et al., 1988; Petrie et al., 1995).

The finding from Floyd, Mikkelson, Hesse, et al.'s (2007) study is noteworthy for the field of communication because the only instructions participants received were to write about their affection and positive feelings for their close relational partners. The reduction in total cholesterol was “entirely communicative in nature” (p. 130). Thus, Floyd, Mikkelson, Hesse, et al.'s (2007) affectionate writing intervention demonstrates the powerful impact communication has on one's health.

Relational benefits. Expressive writing about relationships is connected to longer-lived relationships (Slatcher & Pennebaker, 2006) and increased relational satisfaction (Baddeley & Pennebaker, 2011). Expressive writing also leads to decreases in depression, anger, and marital distress (Gordon, Baucom, & Snyder, 2006). Specifically, in a study

extending the written disclosure paradigm to relational trauma, Gordon et al. (2006) asked injured spouses who recently experienced infidelity to write emotional letters summarizing how their partner's affair impacted their view of their marriage, their partner, and themselves. Drafts of the letter were sent to the couple's therapist, who then provided feedback regarding the content and tone of the letter. Once the letter was edited, it was provided to the infidelitous partner to read 1-2 days prior to the couple's next therapy session, allowing for the processing of feelings without the issue of immediate response. Then, during the therapy session, the injured spouse read the letter aloud to the infidelitous partner. Following the therapy session, it is the infidelitous partner's turn to write an emotional letter expressing understanding of their partner's feelings. The steps follow a similar timeline to the first: Drafts of the letter are shared with the therapist, who provides feedback regarding the content and tone of the letter. Once the letter was edited, it is provided to the injured partner 1-2 days prior to the couple's next therapy session. Then, during the therapy session, the infidelitous spouse reads the letter aloud to the injured partner. "The experience of letter writing can thus bring into healthier proportion those emotions that otherwise may be inadequately expressed or ineffectively contained" (Gordon et al., 2006, p. 157). Engaging in the exchange of emotional letters allows for the organization of otherwise suppressed feelings, allowing couples to better reconnect.

Letter writing has also been examined in the military context. In a military study of soldiers who served in Iraq and Afghanistan, relational satisfaction increased when soldiers wrote emotionally to their spouses (Baddeley & Pennebaker, 2011). Communicating through written forms of email and letter writing throughout deployment leads to the highest levels of relational satisfaction post-deployment, higher than verbal

forms of webcam and phone calls (Ponder & Aguirre, 2012). Overall, it appears expressive writing provides opportunities for reflection on romantic relationships. The actions of writing and reflection lead to better relational outcomes (Slatcher & Pennebaker, 2006), such as relational satisfaction and stability, and decreases negative relational outcomes, such as marital distress.

Behavioral benefits. Expressive writing positively influences behaviors as well. Students who write about emotional topics show increases in their grade point averages following emotional writing (Francis & Pennebaker, 1992; Pennebaker & Francis, 1996). Professionals who write about emotional topics following being laid off from their jobs find jobs more quickly (Spera et al., 1994). Further, university staff members who write about emotional topics report fewer absentee days from work (Francis & Pennebaker, 1992).

Affection Exchange Theory

Affection exchange theory (AET) is a scientific communication theory that complements the written disclosure paradigm (Floyd, Hesse, & Generous, 2015). AET provides a comprehensive explanation for how and why individuals communicate affection to each other (Floyd, 2006; Floyd et al., 2015). AET is rooted in a Neo-Darwin evolutionary perspective (Floyd, 2006) and assumes the expression of *affectionate communication*, defined as the giving and receiving of verbal and nonverbal messages of fondness and positive regard (Floyd, 2006), evolved in humans for two superordinate reasons: viability and fertility. Regarding viability, affectionate communication increases individuals' chances of survival, evident through the development of pair bonds as well as the numerous health benefits of giving and receiving affection. Further, regarding

fertility, affectionate communication leads to procreation through access to mating partners and resources. Although humans may not be consciously aware their behaviors are helping them achieve the evolutionary goals of viability and fertility (Floyd et al., 2015), affectionate communication aids in achieving those goals (Floyd, 2006).

Propositions of AET. AET is grounded in five propositions (Floyd, 2006).

Proposition 1 is that “the need and capacity for affection are inborn” (Floyd, 2006, p. 161; Floyd et al., 2015). This proposition suggests humans are born with the ability and desire to feel affection. This means humans do not need to learn to experience affection, rather the ability and desire to feel affection are innate. For example, a group of orphans in Romania who did not receive affectionate touch and were touched only for feeding or being changed was severely delayed in their psychological, social, and psychosocial development (Kaler & Freeman, 1994; Rutter, 1998). Thus, an implication of the first proposition is that the need for affection is a fundamental human need. When the need for affection is met, individuals experience benefits and when the need for affection is not met, individuals experience negative consequences (Floyd et al., 2015).

Proposition 2 postulates “affectionate feelings and affectionate expressions are distinct experiences that often, but need not, covary” (Floyd, 2006, p. 163; Floyd et al., 2015). AET differentiates between affectionate feelings, or the emotional experience of affection, and affectionate expressions, or the behaviors through which affection is expressed. Although affectionate feelings and affectionate expressions often work together to form an especially affectionate interaction, they do not necessarily have to occur simultaneously. Affectionate feelings can be experienced without the expression of those feelings; for example, an individual may feel affection for another but may not

express or may downplay those feelings for fear of rejection (Floyd, 2006; Floyd et al., 2015). Further, affection can be expressed without genuinely feeling the expressed affection; for example, an individual may express affection strategically, such as to be polite (Floyd, 2006; Floyd et al., 2015).

Proposition 3 is considered the most important proposition as it is called “the heart of AET” (Floyd et al., 2015, p. 311). According to Proposition 3, “affectionate communication is adaptive with respect to human viability and fertility” (Floyd, 2006, p. 164; Floyd et al., 2015). As previously introduced, affectionate communication is an evolutionary adaptive behavior that aids in the superordinate goals of survival and procreation. Specifically, affectionate communication helps individuals establish and maintain relationships essential for survival and procreation. For example, affection promotes access to resources, such as shelter or social support, which are necessary for living. Affection also promotes pair bonding within significant and long-term relationships between humans. Specifically, affectionate communication helps show potential mating partners that a person would not only be a caring and committed partner, but also a nurturing parent (Floyd, 2006; Floyd et al., 2015; Floyd, Pauley, & Hesse, 2010).

Contrary to Proposition 3, the next two propositions begin to explain why not all affectionate communication aids in fulfilling the innate needs of survival and procreation (Floyd et al., 2015). Proposition 4 proposes “humans vary in their optimal tolerances for affection and affectionate communication” (Floyd, 2006, p. 171; Floyd et al., 2015). This proposition suggests individuals vary in their needs and ability to communicate affectionately. Specifically, every individual has a range of optimal tolerance for

affection; the lower level of tolerance is delineated by *need*, or how much affection is required, while the upper level of tolerance is delineated by *desire*, or how much affection is wanted. If the lower bound is not met, the amount of affection fails to meet the individual's minimum need. If the upper bound is exceeded, the amount of affection is beyond what the individual is comfortable with. Again, the optimal tolerance range will vary person to person (Floyd, 2006).

Further, the fourth proposition suggests individuals vary in their trait-like tendencies to give and receive affectionate communication. Two sources for individual variation that have been previously studied are attachment style and early family conditioning. Specifically, individuals with secure attachment styles report significantly higher levels of expressed and received trait affectionate communication than do individuals with dismissive, preoccupied, or fearful-avoidant attachment styles (Floyd, 2002). Further, the affectionate climate individuals experience from their family of origin during childhood affects their expressions of affection, both romantic and sexual, during adulthood (Wallace, 1981). It is evident, then, variation exists in the need and capacity for affectionate communication.

Finally, proposition 5 builds off proposition 4 by claiming "affectionate behaviors that violate the range of optimal tolerance are psychologically aversive" (Floyd, 2006; Floyd et al., 2015, p. 311). If an individual's minimum threshold within the range of optimal tolerance is not met, there is a potential a threat to viability (Floyd, 2006). Specifically, if individuals are deprived of affectionate interactions, their immune systems are compromised, they have a reduced ability to heal after a trauma, and if infants, have delayed development (Floyd, 2006). AET extends the application of the

minimal threshold to expressed affection as well. Individuals must receive and give a minimum amount of affection to others to survive (Floyd, 2006).

Further, if an individual's maximum threshold within the range of optimal tolerance is exceeded, there is a potential threat to procreation (Floyd, 2006). Humans have a superordinate goal to attract potential mates who have the potential to be a quality partner and parent. Receiving high levels of affection from another could threaten the goal of procreation if the source of affection is not deemed a high-quality partner. Such tolerance-exceeding interactions, then, result in high levels of *stress* (Floyd, 2006), defined as the body's reaction to real or perceived threats (Turner & West, 2013). Although affection is typically considered a positive experience, the fifth proposition advances the notion that there are circumstances where affectionate communication could result in negative or aversive outcomes.

Benefits of affectionate communication. Many published communication studies claim affectionate communication is beneficial to one's physical and mental health. Specific to physical health, highly affectionate individuals have lower cortisol or stress levels, higher oxytocin or positive mood levels, lower resting blood pressure, lower blood sugar, lower heart rate, and lower cholesterol levels than less-affectionate individuals (Floyd, 2006; Floyd, Hesse, et al., 2007; Floyd, Mikkelson, Hesse, et al., 2007; Floyd, Mikkelson, Tafoya, et al., 2007). Further, concerning mental health, highly affectionate individuals report being happier, more self-confident, feeling greater relational satisfaction, are more likely to engage in social activities, are less lonely, report being less stressed, and have less fear of intimacy than less-affectionate individuals

(Floyd, 2002; Floyd, 2006; Floyd, et al., 2009; Floyd, et al., 2005; Komisaruk & Whipple, 1989).

Beyond the physical and mental health benefits of affectionate communication, affectionate communication provides individuals with relational benefits. Specifically, affectionate individuals are more likely to be in an ongoing romantic relationship, such as an exclusive dating relationship, engaged, cohabitating, or married, than less-affectionate individuals (Floyd, 2002; Floyd et al., 2005). Affectionate individuals are more likely to have closer, more satisfying, and more engaging relationships than less-affectionate individuals (Floyd, 2002; Floyd, 2006; Floyd et al., 2005). Further, highly affectionate relationships include more intimacy and self-disclosure than less affectionate relationships (Floyd, 2006). Overall, individuals “feel more love, closeness, and satisfaction in their more affectionate relationships than in their less affectionate relationships” (Floyd, 2006, p. 95).

Many of the physical, mental, and relational benefits have been examined within close relationships, such as romantic couples, friendships, and family relationships. Consequently, scholars recommend individuals increase their affectionate communication to reap health and relational benefits. But as mentioned earlier, military couples experience unique circumstances during deployment due to long distances apart and limited communication. Thus, military couples may experience challenges with affectionate communication during deployment.

Military Families

U.S. service members and their families routinely experience displacement and overwhelming emotions through moves scheduled every 2-3 years (Drummet, Coleman,

& Cable, 2003; Finkel, Kelley, & Ashby, 2003) and deployments (Pincus, House, Christenson, & Alder, 2005). Thus, military couples anticipate spending significant time apart during their commitment to the military (Drummet et al., 2003) and experience stress (Knobloch & Wilson, 2015) due to the deprivation of interaction with significant others (Baumeister & Leary, 1995; Floyd, 2006). When apart due to deployments or trainings, couples miss out on opportunities to engage in shared activities that often result in increased *relational satisfaction*, defined as the pleasure or enjoyment derived from relationships (Vangelisti & Huston, 1994). Engaging in shared activities, such as hiking, dancing, or other activities couples deem “exciting” increases relational satisfaction (Aron & Aron, 1986; Aron, Norman, Aron, McKenna, & Heyman, 2000; Reissman, Aron, & Bergen, 1993). Similarly, showing affection nonverbally through behaviors such as kissing (Floyd et al., 2009), leads to more relational satisfaction. When partners are apart, sharing such behaviors is often impossible due to physical distance and lack of interaction (Baumeister & Leary, 1995; Floyd, 2006).

Marital problems during deployment. During deployments, more than a quarter of U.S. service members report marital difficulties (Department of Defense Mental Health Advisory Board, 2007). Such relational problems and distress are correlated with feelings of relational uncertainty and marital conflict (Knobloch, Basinger, Wehrman, Ebata, & McGlaughlin, 2016; Knobloch, McAninch, Abendschein, Ebata, & McGlaughlin, 2016). Further, many service members feel like they are “married” to the armed services while carrying on an “extramarital affair” with their families (Keith & Whitaker, 1984). As such, each fiscal year, it is estimated that 3.4% of enlisted active

duty personnel, 1.6% of active duty officers, 3.4% of enlisted reservist personnel, and 2.1% of reservist officers will get divorced (Department of Defense, 2015).

The effects of marital problems and divorce extend beyond the marital dyad. A study of U.S. service members in Afghanistan revealed marital problems and divorce contributed to decreases in troop morale (Military Family Research Institute, 2009). Military couples face communicative strains on the relationship during deployments (Maguire, Heinemann-LaFave, & Sahlstein, 2013; Merolla, 2010), such as the lack of accessibility of communication media, and these strains directly impact morale (Military Family Research Institute, 2009).

In the midst of communicative strains, affectionate communication positively impacts relational quality and satisfaction in marriages (Schultz & Schultz, 1987; Waring, McElrath, Lefcoe, & Weisz, 1981). Although marital quality is a variable that has been consistently studied within the military context, very few studies have tracked marital satisfaction during deployment (Parcell & Maguire, 2014b); rather, most studies investigate how marital quality changes across the deployment cycle, from before, during, and post-deployment (Maguire, 2015). Further, studies concerning communication across the deployment phases utilize primarily qualitative methods, and very few studies focus on communication between a couple during deployment (Ponder & Aguirre, 2012).

United States Navy families. In particular, U.S. Navy families experience high levels of stress (Archer & Cauthorne, 1986; MacIntosh, 1968; Stumpf, 1978). This stress is highest during deployment, compared to the stress experienced during non-deployed shore tours (Eastman, Archer, & Ball, 1990). This could be because U.S. Navy

deployments differ from deployments associated with other branches of the military. Specifically, deployment on a ship differs from deployments on shore. U.S. Navy ships, such as aircraft carriers and submarines (Navy Recruiting Command, 2018), do not have wireless internet or phone service, thus deployments on a ship severely limit communication between service members and their families. Other branches of the military, such as the Air Force or Army, are more likely to have access to communication media during deployment, although access is still sometimes limited.

Further, the U.S. Navy has regularly scheduled deployments (Commander, Naval Surface Force, United States Pacific Fleet, 2018) regardless of current conflict. In fact, on any given day, 50,000 U.S. Navy service members are deployed aboard one of the 100 U.S. Navy ships (Navy Recruiting Command, 2018). This is unique to the U.S. Navy as other branches of the military, such as the Army, deploy based on current conflicts (Powers, 2018). Thus, couples associated with the U.S. Navy regularly and continuously experience deployments. Overall, high stress levels among U.S. Navy couples are related to more negative deployment attitudes (Archer & Cauthorne, 1986).

When not deployed, U.S. Navy service members work relatively normal work weeks, allowing time to fulfill family roles and expectations. However, during deployments, the deployed service member is on the clock for full 24-hour days (Jones & Butler, 1980) away from the family. The full work commitment corresponds with a decrease in time for family or other non-work activities (Jones & Butler, 1980). The incompatibility between family and work has serious consequences for the U.S. Navy as an organization. Jones and Bulter (1980) found the incompatibility between family and work to be the single best predictor of stated intent to leave the service. Thus, it appears

members of the U.S. Navy consider their roles as service member and family member as incompatible, which affects retention rates.

Overall, members of the U.S. Navy and their families are faced with unique circumstances during their commitment to the armed services. Specifically, U.S. Navy families experience high levels of stress, have extremely limited communication during deployments on ships, experience regular deployments, and consider work and family life to be incompatible. Because of these unique characteristics of the U.S. Navy, data collection for this current study will be conducted with female spouses or significant others of deployed service members in the Navy.

H₁: Individuals who write affectionately to their partners during deployment will report higher levels of relational satisfaction than (a) individuals who write about innocuous topics during deployment and (b) individuals who do not write during deployment.

H₂: Individuals who write affectionately to their partners during deployment will report lower levels of stress than (a) individuals who write about innocuous topics during deployment and (b) individuals who do not write during deployment.

H₃: Individuals who write affectionately to their partners during deployment will report higher levels of affectionate communication given than (a) individuals who write about innocuous topics during deployment and (b) individuals who do not write during deployment.

Expectations

Military families experience distress due to deprivation of contact during deployment. Some of this stress might be attributed to unmet *expectations*, defined as enduring patterns of anticipated communication behavior (Burgoon, 1993). Expectations can be influenced by experiences (Burgoon, 1993), so, the higher the number of deployments military couples endure, the better the couples can adjust their expectations to match the reality of communication during deployments. This is not to say couples experiences less distress, however. Specifically, individuals might experience negative outcomes because their expectations concerning communication during deployment are not being met. The National Military Family Association (2005) claims military members and their partners set unrealistic expectations for communication during deployment. Essentially, military members hold high expectations concerning the frequency of communication with their partners during deployment (Carter & Renshaw, 2015) and the efficiency of the communication media available (Greene, Buckman, Dandeker, & Greenberg, 2010). Many individuals expect they will communicate daily during deployments (Carter & Renshaw, 2015). However, there are several reasons why these high expectations are not met, including the safety needs of the military and the reality of intermittent internet access (Schuum, Bell, Ender, & Rice, 2004).

A mismatch of expectations concerning anticipated communication and the reality of communication during deployments (National Military Family Association, 2005) can negatively affect families. This mismatch is a stressor that negatively impacts troop morale (Greene et al., 2010; Pincus et al., 2005). Additionally, when expectations are not met, couples experience distress (Schuum et al., 2004), become angry or dissatisfied with

their relationship (Burgoon, 1993), and experience worry or concern (Wilson & Knobloch, 2016).

Furthermore, during deployments, especially those associated with the U.S. Navy, synchronous, or real-time, communication is not guaranteed or even likely. If synchronous communication is available, such as a phone call, it is often infrequent and expensive (Pincus et al., 2005). Therefore, increasing verbal exchanges of affectionate communication, such as saying “I love you” aloud to one’s partner (Floyd & Riforgiate, 2008), might not be an option for couples when apart. Additionally, asynchronous, or delayed, communication is not regular or routine during deployments either. For example, it may take months to receive a letter because ships typically receive mail when they go to port, unless they are underway and require replenishment of food and supplies. Thus, increasing written exchanges of affectionate communication, such as writing “I love you” in email or letter form, might be infrequent and sporadic.

Some at-home partners engage in intrapersonal strategies, such as journaling or looking at photographs, to engage in relational maintenance (Merolla, 2010). However, these introspective strategies have yet to be empirically tested concerning military deployments (Carter & Renshaw, 2015). So then, it might be beneficial to take an approach similar to Floyd, Mikkelsen, Hesse, et al. (2007) by having individuals engage in an affectionate writing intervention instead of face-to-face verbal and nonverbal affectionate communication. Writing about affectionate feelings has been linked to health benefits (Floyd, Mikkelsen, Hesse, et al., 2007) and does not require the physical presence of the romantic partner to engage in the giving of affection. Therefore, to test the effects of affectionate writing on health and relational outcomes, a three-week

experiment will be conducted. Such an approach could empirically test the more intrapersonal strategies at-home partners engage in during deployments.

H4: The extent that at-home partners expectations for communication during deployment is positively violated is directly associated with relational satisfaction.

Attachment

Another area of research of interest to communication scholars studying military families is attachment. According to adult attachment literature, there are four attachment styles (Bartholomew & Horowitz, 1991; Guerrero, 2014; Hazan & Shaver, 1987, 1994). The four styles are based on models of the self and others. The *model of self* encompasses the degree to which people have a positive or negative image of self as being worthwhile and loveable. The *model of others* encompasses the expectations people have of others as being responsive and caring.

Based on the dimensions of the models of self and others, Bartholomew and Horowitz (1991) chart four adult attachment styles: *secure* (positive model of self, positive model of others), *dismissive* (positive model of self, negative model of others), *preoccupied* (negative model of self, positive model of others), and *fearful* (negative models of self, negative model of others). Each of the four attachment styles have distinct characteristics. Specifically, individuals with a secure attachment style are comfortable with both autonomy and closeness; this means they value relationships but also value their independence. Individuals with a dismissive attachment style are self-confident and extremely self-sufficient; they do not fear or desire closeness and are so self-sufficient that they shun closeness. Individuals with a preoccupied attachment style are overly

dependent on relationships; they need to have a relationship to feel worthwhile and worry their partners will abandon them. Finally, individuals with a fearful attachment style have usually been hurt or rejected in prior relationships, so they fear closeness; they want to depend on a partner, but have difficulty opening up because they are afraid of rejection.

Research indicates adult attachment styles tend to be relatively stable across relationships and time (Baldwin & Fehr, 1995; Bowlby, 1977; Fraley, 2002; Scharfe & Bartholomew, 1994). This means individuals' expectations of others' responsiveness and dependability tend to be internalized and stable over time (Bowlby, 1977). However, approximately 25-30% of adults think their attachment styles have changed (Davila, Burge, & Hammen, 1997; Feeney & Noller, 1996). Scholars have identified several reasons why adult attachment styles may be modified: critical events, relational partner's style, and relationship type (Feeney, Noller, & Roberts, 2000). Specifically, divorce, death, or developing a healthy relationship, are considered critical events that may influence the changing of attachment styles. For example, an individual with an otherwise secure attachment style may find out her husband cheated over deployment; they subsequently get divorced, and the individual may develop a more insecure attachment style. Additionally, partner's style influences modifications in attachment. For example, a secure individual may have a very demanding partner, and thus become more avoidant in response to the demands. Finally, relationship type is another area where attachment styles may fluctuate. For example, an individual may feel secure with her husband, but may feel insecure with her own parent or best friend. With a basic understanding of the four stable adult attachment styles, attachment literature specific to this study, explicitly related to military deployment, will now be examined.

Attachment and deployment. Fundamentally, attachment is related to separations and reunions. According to Bowlby (1982), threats to attachment, such as the unavailability of an attachment figure during deployment (Vormbrock, 1993), motivate individuals to maintain or restore proximity to their attachment figures. As the duration of a military relationship is steadfast with separations and reunions, due to deployments, it is no wonder scholars have taken an interest in researching the connection between attachment styles and military deployments.

Studies that have examined the role attachment plays between the parent-child dyad during deployment (Lowe, Adams, Browne, & Hinkle, 2012; Palmer, 2008; Riggs & Cusimano, 2014; Riggs & Riggs, 2011) suggest that deployments pose threats to children's attachment styles, especially if their key attachment figure is the individual being deployed. Further, long deployments can cause the at-home spouse to detach from the relationship with their child, leaving the child feeling insecure and distrusting. These findings could be connected to the experience of anxiety and tension during military deployment (Pincas et al., 2001), so even individuals, spouses and children alike, with secure attachment styles may initially feel a sense of abandonment, threatening attachment.

However, little research has been conducted on how attachment styles predict at-home partners' specific reactions to military deployment. Sherwood (2009) speculated that separation during military deployment may be more difficult for insecurely attached couples who have trust or rejection issues. Long separations and missed attempts to connect during deployment could worsen these issues (Sherwood, 2009) and reduce satisfaction (Borelli, Sbarra, Randall, Snavely, John, & Ruiz, 2013). Conversely, Borelli

et al. (2013) speculated that securely attached individuals may view deployment as a temporary time apart and, therefore, remain committed to the relationship.

Regarding the connection between attachment style and deployment, many of the published studies examine how attachment plays a role in the reunion after a military deployment. Research shows that both secure and insecure individuals may demonstrate some degree of ambivalence and anger post-deployment (Vormbrock, 1993). However, secure individuals tend to adjust to the post-deployment transition easily and positively. Cafferty, Davis, Medway, O’Hearn, and Chappell (1994), for example, found secure individuals, both men and their female spouses, reported lower levels of conflict and higher levels of relational satisfaction than preoccupied individuals. Cafferty et al. (1994) also discovered that men reported higher positive and lower negative affect post-deployment. Despite these findings, more work can be conducted to further strengthen the scholarly connection between attachment style and military deployment.

H₅: The extent that at-home partners of deployed service members have a secure attachment style positively is associated with relational satisfaction.

H₆: The extent that at-home partners of deployed service members have a preoccupied attachment style is negatively associated with relational satisfaction.

H₇: The extent that at-home partners of deployed service members have a dismissing attachment style is negatively associated with relational satisfaction.

- H₈: The extent that at-home partners of deployed service members have a fearful attachment style is negatively associated with relational satisfaction.
- H₉: The extent that at-home partners of deployed service members have a secure attachment style is negatively associated with stress.
- H₁₀: The extent that at-home partners of deployed service members have a preoccupied attachment style is positively associated with stress.
- H₁₁: The extent that at-home partners of deployed service members have a dismissing attachment style is positively associated with stress.
- H₁₂: The extent that at-home partners of deployed service members have a fearful attachment style is positively associated with stress.
- RQ₁: What are the associations between affectionate communication during military deployment and (a) secure, (b) dismissive, (c) preoccupied, and (d) fearful attachment styles?
- RQ₂: Do attachment styles stay consistent across the deployment cycle?

Equity

Equity includes perceptions of fairness concerning the distribution of relational costs and rewards. Individuals attempt to maximize the rewards, or what they are receiving from the relationship, compared to the costs, or what they are putting into the relationship (DeMaris, 2010). Relationally, individuals feel most comfortable with their relationships if their ratio of rewards and costs are comparable to their partner's ratio of rewards and costs (DeMaris, 2010). Thus, such perceptions of fairness lead to feeling benefitted or deprived in relationships (Walster, Walster, & Berscheid, 1978). Stated

another way, equity concerns perceptions of what relational partners' give and get from each other in the relationship and whether or not they are getting a fair deal in comparison to each other (DeMaris, 2010).

If individuals perceive that their contributions to the relationship are unequal, scholars claim they are in inequitable or imbalanced relationships (DeMaris, 2010; Hatfield, Rapson, & Aumer-Ryan, 2008). When the relationship is imbalanced, both partners feel discomfort. The partner getting the better deal might feel guilty whereas the partner getting the worse deal might feel resentment (DeMaris, 2010). Furthermore, perceptions of inequity lead to negative consequences, such as decreased relational satisfaction, perpetual feelings of psychological distress, weakening of the relationship, and possibly relational termination (Bartley, Blanton, & Gilliard, 2005).

For this study, it is important to situate perceptions of equity within the context of military deployment because deployments disrupt family life (Sheppard, Malatras, & Israel, 2010). During deployments, at-home partners are entirely in charge of all the parenting and household chores (Drummet et al., 2003; Gottman, Gottman, & Atkins, 2011) whereas military couples tend to split more of the responsibilities on the home front when the service member is not deployed. Thus, it is important to examine perceptions of equity during deployment as perceptions of equity impact relational satisfaction, stress, and other relational outcomes (Bartley et al., 2005).

It is currently unknown how military couples perceive equity during deployments. On the one hand, the at-home partner might perceive their relationship to be inequitable because they are in charge of all the household responsibilities (Drummet et al., 2003; Gottman et al., 2011) during deployment. This leads to occasional, but pervasive feelings

of resentment for being abandoned during the deployment (Pincus et al., 2005). Further, during times of high conflict or stress, perceptions of inequity in a relationship escalate distress (Grote & Clark, 2001). Thus, it is plausible military couples might perceive their relationships to be inequitable during deployments.

On the other hand, individuals do not need to contribute to the same domains of the relationship for the relationship to be considered equitable. For example, in a study on married couples' perceptions of equity, wives spent twice as many hours per week completing household chores compared to the hours their husbands completed in that domain (DeMaris & Longmore, 1996). They considered their relationships to be equitable because their husbands contributed to other life domains, such as providing income from their work and caring for the children. Thus, relationships can still be perceived as equitable even though the partners are contributing to different aspects of the relationship. Therefore, during deployments, although the at-home partners might take care of all the household responsibilities, the military couple might still perceive their relationship as equitable because they may consider the deployed spouse to be contributing to the income of the family or the safety of the country. Furthermore, when preparing for deployments, couples may be aware of the constraints to what they can contribute during deployments, so they can take that into consideration when making judgments about fairness.

H₁₃: The degree to which individuals perceive equity in their romantic relationships during deployment is positively associated with relational satisfaction.

H₁₄: The degree to which individuals perceive equity in their romantic relationships during deployment is negatively associated with stress.

CHAPTER 3

METHOD

Given this collection of literature, it is important to investigate ways couples can relieve distress and possibly increase affectionate communication and relational satisfaction during deployments. There is a need for a quantitative study of affectionate communication that considers the unique circumstances of military deployments. Such a study has the potential to show that affectionate writing can help counteract the negative relational impacts of deployments, such as marital dissatisfaction, while offering individuals an opportunity to experience the positive benefits of affectionate communication. Thus, this study will apply a specific component of affectionate communication, particularly affectionate writing, to military couples during deployment to determine if such writing increases relational satisfaction and perceptions of affection given, and also reduces deployment stress. This study will also examine how attachment and equity are associated with relational satisfaction and stress during deployment.

Participants

Participant recruitment. Participants included 80 women recruited through a snowball sampling technique of the researcher's social network. To increase reach, the researcher also contacted staff members who had access to the listservs of ROTC alumni of the researcher's prior academic institutions. To obtain at least moderate effect sizes, the researcher was aiming for a minimum of 25 participants per cell, resulting in a total of 75 participants. This sample size estimate was conducted using the software G*Power 3.1.

Originally, 213 women completed the pre-test, all of whom were eligible to participate in the full 3-week long study. However, 85 women dropped out of the study

after completing the pre-test as they did not complete the first writing prompt. Additionally, one woman typed in the wrong email address and could not be contacted, and one woman contacted the researcher after the pre-test stating she no longer wished to participate in the study. Although, 126 women completed the full 3-week study, upon inspection of the weekly responses, the researcher removed 26 participants from the dataset for not fully completing the weekly writing prompts and/or submitting the exact same written response as other participants. The researcher also removed 4 participants because of researcher error. After removing these 30 participants, the cell sizes for the conditions were uneven (i.e., 25 participants in the affectionate writing group, 27 participants in the control writing group, and 44 participants in the no writing group). To meet the assumptions of the statistical tests, it is imperative that the cell sizes are roughly equal. Therefore, the researcher randomly deleted 16 responses from the no writing condition to result in roughly equal cell sizes for the condition (i.e., 25 participants in the affectionate writing group, 27 participants in the control writing group, and 28 participants in the no writing group).

Participant demographics. The participants answered questions about themselves. The average age of participants was 30.01 years ($SD = 6.25$). The majority of participants identified ethnically as Caucasian/white ($n = 44, 55\%$). The rest of the participants identified ethnically as Latina/Hispanic ($n = 24, 30\%$), African American ($n = 9, 11.30\%$), and Native American ($n = 2, 2.5\%$). One participant did not disclose her ethnicity. The majority of participants had high school ($n = 36, 45\%$) and college ($n = 32, 40\%$) degrees. The rest of the participants had some college ($n = 7, 8.80\%$), professional ($n = 3, 3.8\%$), and masters ($n = 2, 2.5\%$) level education.

The participants also answered questions about their romantic relationship and family. The majority of participants were married ($n = 72, 90\%$). The remaining participants were dating ($n = 5, 6.30\%$) or engaged ($n = 3, 3.80\%$). The average length of their romantic relationship was 6.69 years ($SD = 4.48$). The majority of participants did not have children ($n = 45, 56.30\%$), but 22 (27.50%) participants had one child, 11 (13.80%) participants had two children, one (1.30%) participant had three children, and one (1.30%) participant had four children. The majority of participants lived on base ($n = 77, 87.50\%$) and the rest of the participants did not live on base ($n = 10, 12.50\%$).

The participants also answered questions about their romantic partner. Just over half of the participants' romantic partners were enlisted ($n = 47, 58.80\%$) and the rest were commissioned officers ($n = 33, 41.30\%$) in the U.S. Navy. The average years their romantic partner had been in the Navy is 4.35 years ($SD = 1.79$). The average number of previous deployments the couple had endured was 3.70 ($SD = 1.57$).

Finally, questions were asked about the current military deployment. The average length of the current military deployment was 14.49 weeks ($SD = 5.59$). By the end of the study, half of the participants said their partner had returned from deployment ($n = 40, 50\%$) and the other half of participants said their partner had not yet returned from deployment ($n = 40, 50\%$).

Procedure

Pre-screening procedure. Prospective participants completed the pre-screening procedures to determine their eligibility for the study. To be considered eligible for the study, the participants had to be 18 years of age or older and be able to speak, read, and

write English. However, more importantly, the participants identified as spouses or significant others of military personnel in the U.S. Navy who were currently deployed. It was the hope of the researcher that the military partners were deployed during the duration of the experiment, so the data were purely collected from the deployment stage rather than influenced by the post-deployment or reintegration stage. However, as noted above, by the end of the study, half of the participants claimed their partner returned from deployment.

Further, only women were considered eligible for the study. There are more than three times as many men than there are women active in the military (Department of Defense, 2016) and 95% of military spouses are female (Department of Defense, 2011). Thus, to reflect the demographics of current military families, only women were qualified to be eligible for the study.

Experimental procedures. After giving consent to participate in the study, qualified participants completed a pre-test questionnaire. The pre-test questionnaire collected baseline data, such as of the current state of their affectionate communication, stress, relational satisfaction, and their expectations about receiving responses from their partner during the deployment period, as well as demographics. After completing the pre-test questionnaire, the participants were randomly assigned to one of three conditions: the affectionate writing (experimental) condition, the innocuous topics writing (control) condition, or the no writing (control) condition.

Following the pre-test questionnaire, participants in both the writing conditions received instructions to engage in a 20-minute writing activity once a week on Sunday for three consecutive weeks. The participants were contacted via email at 10am (CDT). If

participants did not complete their writing prompts by 10am on Monday, they were sent an email reminder. During each writing activity, participants were assigned one of three topics associated with their condition to write about, with the order of the assigned topics randomly assigned. Participants were told not to focus on spelling, punctuation, or grammar, but to rather focus on the content in their answer to the writing prompt. Participants were specifically told to write *to* their romantic partner rather than *about* them (Floyd, Mikkelson, Hesse, et al., 2007). Participants were asked to write for the entire 20-minute duration; the online survey had a 20-minute countdown timer and participants could not click to the next page until the timer ran out.

Each week, all participants were asked a few questions concerning the amount of communication they may or may not have had with their romantic partner during the week. Collecting data on the amount of communication occurring per week assisted in understanding how expectations for communication may have changed throughout the duration of the experiment.

At the end of the study, all participants completed the post-test questionnaire to gather comparison data on their affectionate communication, stress, relational satisfaction, and their expectations about receiving a response from their partner during the deployment period. Demographic information was collected in the post-test questionnaire. Overall, data were collected for 6 weeks, from June 26 to August 2, 2018.

Affectionate Writing (Experimental Condition) Topics. In random order, each participant in the experimental group were instructed to respond to each of the following prompts:

1. Think about the little things you miss about your romantic partner. Write a letter to your romantic partner describing the little things you miss about him. You may also write about your partner's positive qualities (or the qualities that make you miss him).
2. Think about how much your romantic partner means to you. Write a letter to your romantic partner describing your loving and caring feelings for him. You may also write about the reasons you love your partner.
3. Think about how much you appreciate your romantic partner. Write a letter to your romantic partner describing your appreciative feelings for him or her. You may also write about the things your partner does that makes you appreciate him.

Innocuous Writing (Control Condition) Topics. In random order, each participant in the control group were instructed to respond to each of the following prompts:

1. Think about the television programs that you watched this past week. Give a detailed description of the television programs that you watched this past week.
2. Think about the home you currently live in. Give a detailed description of your current residence.
3. Think about your current job or the last job you held. Give a detailed description of how you spent your time at work and the overall work environment in which you worked.

Compensation procedure. Participants received compensation periodically throughout the study. Specifically, participants received \$5 for completing the pre-test questionnaire, \$10 per writing session (\$30 total for the three writing sessions), and \$5 for the post-test questionnaire. This encouraged participants to continue participating for the duration of the study, but did not force them to complete the study in full to receive partial compensation. In all, participants could receive up to \$40 for completing all portions of the three-week long experiment. This total amount of payment fell under the recommended maximum amount to pay participants according to Arizona State University Institutional Review Board (IRB; \$100) and was in line with IRB's recommendation of paying participants minimum wage for the amount of work they will be completing. Funding was secured through the Hugh Downs School of Human Communication Summer Research Grant, the Graduate and Professional Student Association's JumpStart Research Grant, and one of the researcher's committee member's personal research funds.

Measurement

Affectionate communication was measured using Floyd's (2002) 10-item Trait Affection Scale-Given (TAS-G) and Floyd's (2002) 6-item Trait Affection Scale-Received (TAS-R). The scales assess the amount of affectionate communication typically expressed to others and received by others. Using the TAS-G, participants assessed how much they generally demonstrate their affection for others by indicating their level of agreement on a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Sample items include "I am always telling my loved ones how much I care about them" and "Anyone who knows me well would say that I am a pretty affectionate person." Using the

TAS-R, participants assessed how much affection they typically receive from others by indicating their level of agreement of a 7-point Likert scale (1 = strongly disagree; 7 = strongly agree). Sample items include “People are always telling me how much they love or care about me” and “I get quite a bit of affection from others.” Scores from both measures have been largely validated (Floyd, 2006).

Although both measures were collected, of primary interest to the researcher was the TAS-G since it would be difficult to measure changes in affectionate received since the partners of the participants in this study were either currently or had recently been deployed. The TAS-G was reliable in this study (time 1 $\alpha = .86$, time 2 $\alpha = .83$).

Stress was measured using Cohen, Kamarck, and Mermelstein’s (1983) 10-item Perceived Stress Scale (PSS). Participants assessed their agreement with the items on a 5-point Likert scale (1 = never; 5 = very often). Sample items include “In the last month, how often have you been upset because of something that happened unexpectedly” and “In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?” Wording on the scale was altered to represent deployment as a time frame instead of the previous month. The scale was reliable at both time 1 ($\alpha = .81$) and time 2 ($\alpha = .83$).

Relationship satisfaction was measured using the five positively worded items from Hendrick’s (1988) 7-item Relationship Assessment Scale (RAS). Participants assessed their agreement with the items on 5-point Likert scale. Sample items include “How well does your partner meet your needs?” (1 = not very well; 5 = very well) and “How good is your relationship, compared to most?” (1 = not good at all; 5 = very good). This scale was reliable for this study (time 1 $\alpha = .85$, time 2 $\alpha = .88$).

Expectations for communication during deployment was measured using three items. The first asked, “Which statement best describes the amount of communication you engaged in with your partner during this deployment?” Participants assessed their agreement of a 7-point Likert-type scale (1 = We communicate a lot more than I thought we would; 7 = We communicate a lot less than I thought we would). The second asked, “You probably had expectations for how much you would communicate during your partner’s deployment. Which statement best describes how your communication compares to those expectations?” Participants assessed their agreement of a 7-point Likert-type scale (1 = Our communication is a lot less frequent than I expected it to be; 7 = Our communication is a lot more frequent than I expected it to be). Finally, the third asked, “Which of the following statements best describes the extent to which your communication with your partner during this deployment matches what you anticipated would happen?” Participants assessed their agreement on a 7-point Likert scale (1 = I anticipated that we would communicate a lot more; 7 = I anticipated that we would communicate a lot less).

Attachment was measured using an adaptation of Guerrero, Farinelli, and McEwan’s (2009) 25-item attachment style assessment. Participants assessed their agreement to the items on a 7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree) and were scored on the four adult attachment styles: secure (time 1 $\alpha = .77$, time 2 $\alpha = .78$), preoccupied (time 1 $\alpha = .73$, time 2 $\alpha = .76$), dismissive (time 1 $\alpha = .77$, time 2 $\alpha = .72$), and fearful (time 1 $\alpha = .75$, time 2 $\alpha = .82$). Sample items include, “I find it relatively easy to get close to people” for secure, “I wonder how I would cope without someone to love me” for preoccupied, “I feel smothered when a relationship takes too

much time away from my personal pursuits” for dismissive, and “I avoid getting close to others so I won’t get hurt” for fearful.

Equity was measured using three items (Sprecher, 1986). Two of the items are considered global items to measure the degree of equity or inequity in the relationship. The first global item reads, “Considering what you put into your relationship or marriage during military deployment, compared to what you get out of it...and what your partner puts in compared to what he or she gets out of it, how does your relationship ‘stack up’?” (Hatfield, Utne, & Traupmann, 1979). Participants indicated the degree to which they think their relationship is equitable or inequitable (7 = I am getting a much better deal than my partner; 4 = We are both getting an equally good or bad deal; 1 = My partner is getting a much better deal than I am). The second global item reads, “Sometimes things get out of balance in a relationship and one partner contributes more to the relationship than the other. Consider all the times when the exchange of your relationship has become unbalanced and one partner contributes more to your relationship or marriage during military deployment than the other for a times. When your relationship becomes unbalanced, which of you is more likely to be the one who contributes more?” (Sprecher, 1986). Similarly to the first global item, participants indicated the degree to which they think their relationship is equitable or inequitable (7 = My partner is much more likely to be the one to contribute more; 4 = We are equally likely to be the one to contribute more; 1 = I am much more likely to be the one to contribute more). Finally, a third item will focus on the benefits received (Guerrero, La Valley, & Farinelli, 2008): “Think about the rewards that you and your partner receive from having a relationship with one another. When comparing your rewards to your partner’s rewards during military deployment,

who is getting more from the relationship?” Participants indicated the option they most agree with (1 = My partner gets much more than me; 7 = I get much more than my partner).

An equity index was created by averaging the answers to the three equity items (Guerrero et al., 2008). For the equity index (time 1 $\alpha = .79$, time 2 $\alpha = .72$), a score of 4 indicates perfect equity; scores above 4 to 7 indicate degrees of feeling over benefitted (inequitable); scores under 4 to 1 indicate degrees of feeling under benefitted (also inequitable).

Amount of communication between romantic partners and military personnel was measured weekly. After completing the pre-test/post-test questionnaires and affectionate writing exercises during the duration of the experiment, participants were asked to answer questions regarding the communication they may have had with their military member during the week. Sample questions include “How many times this week did you communicate with your romantic partner via email?”, “How many times this week did you receive a response from your romantic partner?”, and “How many minutes this week did you communicate with your romantic partner over the phone?”

In addition to the above measures, the questionnaires asked general demographic information about the participant, such as age, length of romantic relationship, and number of children. The questionnaire also asked general demographic information about the military member, such as expected length of deployment, number of previous deployments, and military rank.

CHAPTER 4

RESULTS

Before analyzing the data, the researcher tested possible control variables thought to potentially influence the experimental results, including whether the romantic partner returned from deployment before the end of the study and the number of deployments the romantic couples had previously endured. The possible control variables did not emerge as significant; therefore, they were not controlled for and taken out of the analyses.

The first three hypotheses tests involved applying contrast codes to the three conditions: affectionate writing group (+ 2), innocuous writing group (-1), and no writing group (-1). Because specific predictions were made for these groups, the contrast tests provide the best test for these hypotheses. These contrast tests were conducted within larger analysis of variance models. Given the relatively low level of power, any omnibus (or overall) effects that emerged aside from the contrasts were also probed.

Satisfaction as a Function of Writing Condition

The first hypothesis predicted individuals who write affectionately to their partners during deployment will report higher levels of relational satisfaction than individuals who write about innocuous topics during deployment and individuals who do not write during deployment. H1 was tested by means of contrasts conducted within a 2 (time: post-test, pre-test) by 3 (condition: affectionate writing, innocuous writing, and no writing) analysis of variance with time as a within-subjects variable, condition as a between-subjects variable, and relational satisfaction as the dependent variable. After conducting contrasts within this 2 x 3 model, simple main effects were then used to provide further evidence to test H1. For H1 to be fully supported, the interaction between time and condition should show that the three groups were similar in relational

satisfaction as measured by the pre-test, but that those in the affectionate writing group were higher in relational satisfaction than the other two groups as measured by the post-test. Thus, in the overall 2 x 3 contrast analysis, there should be an interaction between condition and time. There should also be simple effects for both condition and time when the interaction is de-constructed. For condition, the mean should be significantly higher for the affectionate writing group than the other two groups across the post-test (but not the pre-test). For time, the difference between the pre- and post-test should be significant for the affectionate writing group (but not the other groups).

To test H1, contrast coefficients were set at 2 for affectionate writing and -1 for both innocuous writing and no writing. The planned contrasts within the 2 x 3 analysis showed that, as predicted, there was a significant interaction between time and condition, $t(77) = 2.11, p < .05, \eta^2 = .06$. (see Table 1 for interaction means). There was also a significant effect for time, with individuals reporting more satisfaction in the post-test ($M = 5.73, SD = .83$) than the pre-test ($M = 5.4, SD = .61$), $t(77) = 3.90, p < .001, \eta^2 = .17$. Finally, the planned contrast for condition, $t(77) = 1.78, p > .05, \eta^2 = .04$, was significant, with higher levels of satisfaction across time 1 and time 2 reported by those in the affectionate writing condition ($M = 5.76, SD = .64$), than those in the innocuous writing ($M = 5.43, SD = .61$) or no writing ($M = 5.56, SD = .78$) conditions. However, this main effect for condition is overridden by the interaction that is unpacked next.

Next, simple main effects were used to (a) deconstruct the main effect for time and (b) determine if there was a significant main effect for condition in for the post-test. First, the main effect for time was deconstructed. Specifically, paired *t*-tests examined differences between relational satisfaction for each of the groups. For the affectionate

writing group, there was significant increase in relational satisfaction from the pre-test to the post-test (difference = .56), $t(24) = 3.23, p < .01, \eta^2 = .30$. For both the innocuous writing group, $t(26) = 1.34, p > .05$, and the no writing group, $t(27) = -2.01, p < .05$, the difference in relational satisfaction from the pre-test to the post-test was nonsignificant. Second, the interaction was also probed by looking at the simple effects within time. For the pre-test, there were no significant differences among the three groups, groups $t(77) = .55, p > .05$. For the post-test, however, the planned contrast revealed a significant difference, with those in the affectionate writing group reporting higher levels of relational satisfaction than individuals in the other two groups $t(77) = 2.40, p < .05, \eta^2 = .04$.

Together, these results indicate that although the means show that individuals in all three groups showed a tendency to report more satisfaction at time 2 than time 1, the increase was only significant for those in the affectionate writing group. Similarly, as expected, there were no differences based on condition for relational satisfaction when measured with the pre-test; differences only emerged later after some individuals engaged in affectionate writing and others did not. These analyses show consistent support for H1.

Stress as a Function of Writing Condition

The second hypothesis predicted individuals who write affectionately to their partners during deployment will report lower levels of stress than individuals who write about innocuous topics during deployment and individuals who do not write during deployment. The same analysis plan used to test H1 was applied to evaluate H2, except that reported stress level served as the dependent variable. Contrast coefficients were

again set at 2 for affectionate writing and -1 for both innocuous and no writing. The interaction based on these planned contrasts was non-significant, $t(77) = 1.78, p > .05$ (see Table 2 for interaction means). There was a significant effect for time, with individuals reporting less stress in the post-test ($M = 2.53, SD = .43$) than the pre-test ($M = 2.83, SD = .42$), $t(77) = 7.79, p < .001, \eta^2 = .44$. The contrast for condition was nonsignificant, $t(77) = .68, p > .05$.

Although the hypothesized interaction was not significant, it is noteworthy that the omnibus interaction (without contrast coding) between condition and time revealed a significant effect, $F(2,74) = 3.91, p < .05, \eta^2 = .10$. To better understand the nature of this interaction, simple effects were tested. First, the main effect for time was deconstructed. Specifically, paired t -tests examined differences between reported stress for each of the groups. All three groups showed a significant decrease in stress from the pre-test to the post-test: affectionate writing group (difference = $-.38$), $t(24) = 5.85, p < .001, \eta^2 = .59$; innocuous writing group (difference = $-.14$), $t(26) = 2.10, p < .05, \eta^2 = .06$; and no writing group (difference = $-.38$), $t(27) = 6.33, p < .001, \eta^2 = .34$. Second, the interaction was probed by looking at the simple effects of condition within time. For the pre-test, there were no significant differences among the three groups, $t(77) = -.04, p > .05$. For the post-test, there were also no significant differences among the three groups, $t(77) = -.76, p > .05$.

Together, these tests suggest that those in the innocuous writing condition reported a smaller decrease in stress compared to individuals in the affectionate writing and no writing conditions. As expected, there were no differences based on condition for stress when measured with the pre-test; however, contrary to predictions, no differences

emerged later after some individuals engaged in affectionate writing and others did not. These analyses suggest that stress decreased across time regardless of condition. Therefore, H2 was not supported.

Affectionate Communication as a Function of Writing Condition

The third hypothesis postulated individuals who write affectionately to their partners during deployment would report giving higher levels of affectionate communication than individuals who write about innocuous topics during deployment as well as individuals who do not write during deployment. The same analysis plan used to test H1 and H2 was applied to evaluate H3, except that the degree to which affectionate communication was given served as the dependent variable. Contrast coefficients were again set at 2 for affectionate writing and -1 for both innocuous and no writing. The planned contrasts within the 2 x 3 analysis showed that, as predicted, there was a significant interaction between time and condition, $t(74) = 2.23, p < .05, \eta^2 = .06$ (see Table 3 for interaction means). The effect for time, $t(74) = 1.43, p > .05$, and the planned contrast for condition, $t(74) = .93, p > .05$, were non-significant.

Next, simple main effects were examined. First, the interaction was probed by looking at the simple effects for time within each condition. For the affectionate writing group, the difference in affectionate communication given from the pre-test to the post-test was significant (difference = .20), $t(21) = 2.39, p > .05, \eta^2 = .21$. For the innocuous writing group, there was a significant decrease in affectionate communication given from the pre-test to the post-test (difference = -.33), $t(26) = -2.94, p < .01, \eta^2 = .25$. For the no writing group, the difference in affectionate communication given from the pre-test to the post-test was nonsignificant, $t(26) = .64, p > .05$. Second, the interaction was probed by

looking at the simple effects for condition within time. For the pre-test, there were no significant differences among the three groups, $t(76) = .67, p > .05$. For the post-test, however, the planned contrast revealed a significant difference, with those in the affectionate writing group reporting higher levels of affectionate communication given than individuals in both groups, $t(74) = 1.71, p > .05, \eta^2 = .04$.

Together, these results indicate that although the means show that individuals in that affectionate writing and the no writing groups showed a tendency to report giving more affectionate communication at time 2 than time 1, the increase was only significant for those in the affectionate writing group, and, moreover, the innocuous writing group showed a decrease in affectionate communication over time. Similarly, as expected, there were no differences based on condition for the degree to which affectionate communication was given when measured with the pre-test; differences only emerged later after some individuals engaged in affectionate writing and others did not. These analyses show consistent support for H3.

Communication Expectations and Relational Satisfaction

The fourth hypothesis postulates that the extent to which individuals' expectations regarding communication with their partners are positively violated is directly associated with relational satisfaction. The correlation between expectations for communication and relational satisfaction (time 2) was positively and statistically significant, $r(76) = .62, p < .001$. Thus, the more expectations were positively violated, the higher the satisfaction level at time 2.

Associations Among Attachment and Relational Satisfaction

The next set of hypotheses examined how the attachment styles of the at-home partners of deployed service members are associated with their relational satisfaction. Specifically, hypotheses predicted that: secure attachment (H5) is positively associated with relational satisfaction, whereas, preoccupied (H6), dismissive (H7), and fearful (H8) attachment are negatively associated with relational satisfaction. As shown in Table 4, data are wholly consistent in support of H5, H6, and H8. For H7, only one significant correlation emerged: time 1 dismissiveness was associated with time 2 satisfaction.

Associations Among Attachment and Relational Deployment Stress

The next set of hypotheses examined associations among the attachment styles of the at-home partners of deployed service members and their reported levels of stress during deployment. These hypotheses predict that having a secure attachment (H9) would be negatively associated with stress, whereas having a preoccupied (H10), dismissive (H11), or fearful (H12) attachment style would be positively related to stress. Only one of the four correlations was testing H9 was significant: time 2 security was significantly and negatively associated with time 2 stress. In contrast, there was full support for H10 and H12, with all correlations between preoccupied attachment and deployment stress, as well as fearful attachment and deployment stress, positive and significant. H11 was not supported.

Associations Among Equity and Relational Satisfaction

The thirteenth hypothesis claimed the degree to which individuals perceive equity in their romantic relationships during deployment is positively associated with relational satisfaction. Data are consistent with this prediction. The equity measure assessed the degree to which women perceived themselves to be under- versus over-benefitted in their

relationship. This was measured during the pre-test to get an idea of how equitable their relationships were in general, and then again during the post-test to determine how equitable they believed their relationship was while their military partner was deployed. To test the hypotheses, two regression analyses were conducted. For both relationship satisfaction at time 2 was the dependent variable. For the first analysis, equity during time 1 was the independent variables, whereas for the second analysis, equity during time 2 was the independent variable. For both these analyses both a linear and a quadratic effect were computed and entered as predictor variables. A significant linear effect would demonstrate that the more overbenefitted women felt, the more satisfied they were. A significant quadratic effect would demonstrate that the more equitable a relationship was, the more satisfied they were (i.e., women scoring near the middle of the scale, which indicates equity, would be happier than those score low, which indicates underbenefittedness, or high, which indicates overbenefittedness).

The first regression model predicting post-deployment relationships satisfaction from time 1 equity scores produced significant results, $F(2, 77) = 5.38, p < .01, R = .35, R^2 = .12$. Both the linear effect, $t(78) = 3.16, p < .01, \beta = .15$, and the quadratic effect, $t(78) = 2.97, p < .01, \beta = .13$, were significant, with these results as well as the scatterplot suggesting that women who perceived themselves to be in relationships that were equitable, and to a slightly lesser extent, overbenefitted, as time 1 tended to report the high levels of relational satisfaction at time 2. The second regression model examined how perceptions of equity at time 2 (during deployment) were associated with relational satisfaction. This model was also significant, $F(2, 77) = 3.63, p < .05, R = .30, R^2 = .09$. However, only the linear effect emerged as significant, $t(78) = -2.56, p < .05, \beta = .27$,

suggesting that the more overbenefitted women perceived themselves to be during deployment, the more satisfaction they tended to report.

The fourteenth hypothesis claimed the degree to which individuals perceive equity in their romantic relationships during deployment is negatively associated with stress. Data are not consistent with this prediction. The same regression analyses that were conducted to test R13 were utilized to test R14, except that stress was the dependent measure in each of the models. The overall models were non-significant, as were the individual predictor variables (represented as linear and quadratic terms). Thus, equity and perceptions of over- and under-benefitted were not significantly associated with deployment stress.

Questions about Attachment

The first research question asked what the relationship is between affectionate communication and attachment style during military deployment. As shown in Table 6, data are wholly consistent in support of all attachment styles except for secure, with all correlations between all attachment styles (except for secure) and affectionate communication negative and significant. For security, only one significant correlation emerged: security at time 2 was positively associated with affectionate communication at time 2.

The second research question asked if attachment styles stay consistent across the deployment cycle. A series of contrasts were conducted within 2 (time; as a repeated factor) by 3 (condition; as a between factor) ANOVAS as described to test H1 through H3 above. Contrast codes for condition were set at 2 for the experimental condition of affectionate writing, and -1 for the two control conditions involving innocuous writing

and no writing. Significant effects were probed by looking at the simple effects across time and/or condition, as relevant.

For secure attachment, the contrasts showed no significant effects for time, $t(77) = .64, p > .05$; condition, $t(77) = .08, p > .05$; or the time by condition interaction, $t(77) = .71, p > .05$. Thus, there was no change in the level of secure attachment based on either time or condition.

For preoccupied attachment, there were significant effects for time, $t(77) = 3.98, p < .001, \eta^2 = .17$; and time by condition, $t(77) = 1.81, p < .05, \eta^2 = .04$. The contrast comparing preoccupied attachment across conditions was nonsignificant, $t(77) = 1.00, p > .05$. Paired samples *t*-tests were conducted to examine the simple effects for time across condition. Results indicated a significant decrease in the preoccupied attachment style from individuals in the affectionate writing condition from time one ($M = 4.77, SD = .99$) to time two ($M = 4.27, SD = 1.14$; difference = $-.50$), $t(24) = 4.01, p < .001, \eta^2 = .40$. Individuals in the two control conditions did not show a significant change from the pre-test to the post-test.

For fearful attachment, the contrasts conducted within the larger 2 x 3 mixed model ANOVA revealed a significant effect for time, $t(77) = 4.54, p < .001, \eta^2 = .22$; but not for condition, $t(77) = .73, p > .05$, or time by condition, $t(77) = .79, p > .05$. The simple effects for time showed that for those in the affectionate writing condition, there was a significant decrease in the fearful attachment style of individuals from the pre-test ($M = 4.67, SD = 1.21$) to the post-test ($M = 4.03, SD = 1.63$, difference = $-.24$), $t(22) = 2.63, p < .05, \eta^2 = .24$. There was also a significant decrease from the pre-test ($M = 4.90, SD = 1.47$) to the post-test ($M = 4.38, SD = 1.66$) in the fearful attachment style for those

in the innocuous writing condition (difference = -.52), $t(26) = 3.63, p < .01, \eta^2 = .34$, but not in the no writing control condition.

Finally, for dismissive attachment, the contrasts showed no significant effects for time, $t(77) = .17, p > .05$; condition, $t(77) = .157, p > .05$; or the time by condition interaction, $t(77) = .11, p > .05$. Thus, there was no change in the level of dismissive attachment based on either time or condition.

CHAPTER 5

DISCUSSION

The primary goal of this analysis was to investigate how engaging in affectionate communication during deployments might increase satisfaction and reduce stress for the at-home female partner. Participants were randomly assigned to one of three conditions: affectionate writing group, innocuous (control) writing group, or no writing (control) group. It was predicted that at-home romantic partners of deployed military personnel assigned to the affectionate writing condition would report higher levels of relational satisfaction, lower levels of stress, and higher levels of affectionate communication than at-home romantic partners assigned to the innocuous and no writing groups. Overall, data support at-home romantic partners did indeed report higher levels of relational satisfaction and affectionate communication during deployment if they wrote affectionate letters to their deployed romantic partner once a week for three weeks. However, data did not support the prediction about lower stress levels if they were writing affectionate words because results showed stress decreased for all participants regardless of which condition they were assigned.

Relational Satisfaction

Although it appears relational satisfaction increased across the deployment cycle for all participants in all three conditions, statistically supported differences only emerged after some individuals engaged in affectionate writing and the others did not. This expected outcome is well supported by literature. Overall, increasing the amount of affectionate communication given to others increases relational satisfaction (Brezsnyak & Whisman, 2004; Dainton, Stafford, & Canary, 1994; Floyd, Mikkelsen, Hesse, et al., 2007; Floyd et al., 2009; Horan & Booth-Butterfield, 2010), both in dating and married

relationships (Punyanunt-Carter, 2004). Additionally, writing about emotions experienced in relationships increases relational satisfaction, both in civilian populations (Schultz & Schultz, 1987) and military populations (Baddeley & Pennebaker, 2011). These two bodies of literature converge in this study, offering full support for affectionate writing increasing relational satisfaction during military deployment.

Although a key finding to this study, writing letters during military deployment is not a new concept. Ponder and Aguirre (2012), Rossetto (2012), and Maguire et al. (2013) found letter writing is important during military deployments to maintain satisfying relationships. Letters are intimate representations the relationship and are often kept as gifts as a commemorating relational bonds (Berck & Webb, 2015). However, prior to this study, the act and outcomes of letter writing during military deployment had not been empirically tested, like many programs specifically developed for the military and their families (Maguire, 2015). Therefore, this study provides empirical evidence supporting that writing about affectionate feelings increases relational satisfaction, even when that writing is private rather than in shared letters.

Stress

Regardless of condition, stress decreased across the deployment cycle for all participants. It was originally expected that only individuals in the affectionate writing group would report lower stress levels because affectionate communication decreases stress (Floyd & Riforgiate, 2008), military deployments are considered stressful events for military families (Baumeister & Leary, 1995; Eastman et al., 1990; Floyd, 2006; Knobloch & Wilson, 2015), and Navy families generally experience very high levels of stress (Archer & Cauthorne, 1986; MacIntosh, 1968; Stumpf, 1978). However, results

from this study are not congruent with those literatures. Although much literature suggests deployments pose a large amount of stress to romantic relationships, it appears deployments are less stressful than anticipated, at least in terms of relational satisfaction (Schumm, Bell, Knott, & Rice, 1996).

The body of literature on military resilience may help explain why stress decreased across the deployment cycle regardless of condition. Although military families experience high levels of stress during military deployments, they are surprisingly resilient (Knobloch & Wilson, 2015). Perhaps this is because regardless of the unique stressors experienced during military deployments, such as missing loved ones or worrying for the service member's safety (Lapp et al., 2010), the emotional distress experienced by at-home military families immediately following separation is short-lived and they adjust to their "new normal" fairly quickly (Maguire, 2015). As military families enact coping mechanisms to increase their resilience (Merolla, 2010), such as social support, they can emerge just as strong, if not stronger, than before the military deployment began (Weins & Boss, 2006).

Additionally, the body of literature on social support might also help explain why stress decreased across the deployment cycle regardless of condition. Social support is defined as "verbal and nonverbal behavior produced with the intention of providing assistance to others perceived as needing that aid" (MacGeorge, Feng, & Burleson, 2011, p. 317). Social support is known to buffer the negative effects of stress (Cohen & Wills, 1985) and creates psychological benefits, such as the reappraisal of stressors (Burleson, 2003; Lazarus & Folkman, 1984).

Social support aids in the productive coping strategy of reappraisal, defined as “modifying how a particular person-environment relationship is represented and evaluated” (Burleson & Goldsmith, 1998, p. 257). Overall, the reappraisal process is considered more stable and productive than other coping strategies such as distraction or denial (Lazarus & Lazarus, 1994). Social support facilitates the reappraisal process because supportive messages help the distressed individual explore his or her emotions (Burleson & Goldsmith, 1998). For example, an at-home significant other may have started resenting her deployed military partner for leaving her; however, after receiving social support messages from her neighbor on base, she may reappraise her once negative emotion of resentment and realize she misses her romantic partner and fears for his safety. She is now looking at the situation differently because of the social support messages that assisted in reappraisal.

In the military context, many individuals seek support from family, friends, and professionals both within and outside the military community (Lapp et al., 2010; Maguire & Sahlstein, 2011). For example, many military members seek support from friends and military support groups (Rossetto, 2015), both face-to-face and online (High, Jennings-Kelsall, Solomon, & Marshall, 2015). However, the most helpful support comes from individuals who understand military life well (High et al., 2015; Maguire & Sahlstein, 2011), with support from other military spouses as the most effective (Blank, Adams, Kittelson, Connors, & Padden, 2012; Lapp et al., 2010). As the majority of participants in this study lived on base, it is logical that the at-home partners had easy access to social support networks if they needed social support.

However, partners of deployed military may not need to seek support to reap the benefits of social support. Simply the perception that social support is an available resource (Cohen & Wills, 1985; Cutrona, Suhr, & MacFarlane, 1990) can create a belief that social support can be easily sought if needed (Bolger, Zuckerman, & Kessler, 2000). As such, individuals with large social networks have access to more support providers than those with few contacts (Fiori, Smith, & Antonucci, 2007). It could be that as the deployment went on, the individuals in this study tuned into how much social support they could receive if they needed it, thus impacting their stress levels.

Furthermore, stress may have decreased across the deployment cycle regardless of condition because of the effort the Department of Defense has put into family readiness, defined as the “state of being prepared to effectively navigate the challenges of daily living experienced in the unique context of military service” (Department of Defense, 2012, p. 30). “Ready” families (a) understand the difficulties they may face, (b) have the skills to effectively cope in those situations, (c) know about the interventions and resources available to help, and (d) implement those interventions and services when necessary (Department of Defense, 2012). So beyond knowing about the stressors faced during military deployments and engaging in effective coping strategies such as reappraisals, perhaps the participants in this study were “ready” for the deployment. Specifically, because they experienced an average of almost four deployments prior to the current deployment endured in the study, it is likely the participants were aware of or even participated in interventions, such as Families Overcoming Under Stress (FOCUS) and Gottman et al.’s (2011) Deployment Relationship Skills Training, as well as utilized the other resources available to them, such as Military and Family Support Centers, Joint

Family Assistance Programs, Military OneSource, Military Family Life Counselors, Medical Command, and military chaplains. Again, although the effectiveness of these interventions and resources have not been assessed (Maguire, 2015), these interventions and resources have the potential to greatly help military families be “ready” to face deployments.

Additional Outcomes

Other goals of this analysis were examining how relational satisfaction is impacted by expectations, attachment style, and equity during military deployments. First, it was expected that the more at-home significant others’ expectations for communication were positively violated, the more satisfied they would be. This prediction was supported. Research on expectations during military deployments claim that military families set high expectations for communication during deployment (Carter & Renshaw, 2015) and those high expectations are unrealistic (The National Military Family Association, 2005). However, in this study, many participants had their expectations exceeded, resulting in higher relational satisfaction, as would be predicted by expectancy violations theory (e.g., Burgoon, 1993). Perhaps at-home partners of deployed military personnel are better at setting realistic expectations than prior research has suggested.

Individuals might be better at setting realistic expectations during military deployment because of their prior experiences. Expectations are framing devices (Goffman, 1974), so individuals “plan and adapt their own communication according to the kind of encounter and communication style they anticipate from another actor” (Burgoon, 1993, p. 32). Stated simply, expectations are influenced by experiences

(Burgoon, 1993). So, any prior deployment experiences, whether positive or negative, are likely to shape the expectations of the current deployment (Paley, Lester, & Mogil, 2013). Perhaps, then, because the average number of previous deployments endured by the participants was almost four, that gave the participants almost four deployment experiences to draw from when adjusting their expectations to match the reality of the current military deployment.

Another explanation for why many participants in this study had their expectations positively exceeded could be because of the discourse that surrounds military deployments. “Historically, the deployment experience for soldiers and families has been defined and reacted to within a context of negative expectations” (Newby et al., 2005, p. 818). Specifically, many interventions created to help prepare military families for deployment focus on the worst possible scenarios and outcomes. For example, many family readiness groups (FRG) communicate the numerous negative experiences of deployments, such as unfulfilled expectations (Parcell & Maguire, 2014a). Additionally, some of the discourse surrounding military deployments are neutral. For example, Haigh and Pfau (2015) conducted a content analysis of milblogs (military web logs); milblogs are often used by young soldiers to keep in contact with family and friends, so they can be thought of as online diaries. Over half of the milblogs Haigh and Pfau (2015) examined were published in the news (e.g., *USA Today*, *The New York Times*, etc.). The researchers found that the overall tone of the milblogs was neutral. This states many milbloggers tell their stories of war much like reporters would. So perhaps the expectations of participants in this study are influenced by the negative or neutral discourse surrounding military deployments.

Second, it was expected that the attachment styles of the at-home partners of deployed service members would associate with their relational satisfaction and stress levels. Specifically, those with secure attachment styles were predicted to report high levels of relational satisfaction whereas those with preoccupied, dismissive, and fearful attachment styles would report low levels of relational satisfaction. All predictions were fully supported, except for the prediction about the dismissive attachment style, which was only partially supported. This finding supports Sherwood's (2009) speculation that military deployments are more difficult for insecurely attached individuals than securely attached individuals.

The results of the current study are primarily congruent with previous work on attachment style and military deployment. Individuals with insecure attachment styles, in this case preoccupied and fearful attachment styles, reported low levels of relational satisfaction during military deployment, similar to Borelli et al.'s (2013) and Cafferty et al.'s (1994) findings. It makes sense that individuals with abandonment (i.e., preoccupied) and rejection (i.e., fearful) issues would be less satisfied in their relationships during military deployments because their partner, or attachment figure (Vormbrock, 1993), is away from them. Further, individuals who are comfortable with both autonomy and closeness (i.e., secure) reported high levels of relational satisfaction during military deployment. Research repeatedly shows that being secure is associated with positive relational characteristics (Feeney, 2002; Levy & Davis, 1988; Meyers & Landsberger, 2002; Shaver & Hazan, 1988), including self-esteem (Feeny & Noller, 1990), sexual satisfaction (Mikulincer & Shaver, 2007), and lower levels of depression (Eng, Heimberg, Hart, Schneier, & Liebowitz, 2001; Murphy & Bates, 1997).

Although the predictions concerning attachment style and relational satisfaction were fully supported for secure, preoccupied, and fearful individuals, the predictions regarding dismissive individuals were only partially supported. Specifically, the extent to which participants reported having a dismissive attachment style in the pre-test were negatively associated with their relational satisfaction in the post-test. Individuals with dismissive attachment styles are extremely self-sufficient and often downplay the importance of social relationships (Bartholomew & Horowitz, 1991). So, dismissive individuals may value their independence while their partner is deployed, explaining why there were not many significant findings for the dismissive attachment style.

However, it appears being highly dismissive early in the deployment cycle does indeed impact how satisfied they are later in the deployment cycle. Findings in this study showed that after about a month, dismissive individuals reported lower levels of relational satisfaction. This could be because being highly dismissive may represent a defense mechanism (Bartholomew, 1990; Griffin & Bartholomew, 1994) in response to the perception of separation or rejection, whether real or imagined (Fraley & Shaver, 1998). Perhaps by the end of the study, the highly dismissive individuals were beginning to more deeply experience the separation of deployment, thus affecting their relational satisfaction. Further, other studies suggest dismissive individuals are not as comfortable without close relationships as they claim. Indeed, “despite their own claims to the contrary, dismissing avoidant individuals possess a strong desire to be accepted by others” (Carvallo & Gabriel, 2006, p. 705). Specifically, dismissive individuals report high levels of positive affect and self-esteem after being told that other people like and accept them (Carvallo & Gabriel, 2006). Perhaps by the end of the study, the once highly

dismissive participants were missing the acceptance of their relational partner. By not feeling the acceptance they feel when they are with their romantic partners, because their partner had been deployed for at least a month, they might report lower levels of relational satisfaction.

Furthermore, it was expected that the attachment styles of the at-home partners of deployed service members would associate with their stress levels. Specifically, the degree to which someone possesses a secure style was hypothesized to be inversely related to stress, whereas the degree to which someone has a preoccupied, dismissive, and fearful attachment style was predicted to be directly related to stress. The predictions for the preoccupied and fearful attachment styles were fully supported; the prediction for the secure attachment style was partially supported; the prediction for the dismissive attachment style was not supported. These findings make sense when considering prior studies examining attachment styles and stress. Specifically, individuals with insecure attachments are likely to report increased perceptions of stress (Ditzen et al., 2008). First, the degree to which people identified as preoccupied and fearful was positively associated with experiencing high levels of stress throughout the duration of the military deployment. Individuals with attachment anxiety (i.e., preoccupied and fearful) tend to react to threats to their attachment, report high levels of stress, and ruminate over the event (Shaver & Mikulincer, 2007). They also regularly report higher levels of stress than dismissing and secure individuals (Kidd, Hamer, & Steptoe, 2011; Maunder, Lancee, Nolan, Hunter, & Tannenbaum, 2006). Second, individuals with secure attachment styles reported lower levels of stress at time 2, toward the end of the deployment. Their reports of stress might have decreased at time 2 because the deployments were coming to an end

or had ended. The stage of deployment right before homecoming is marked by anticipation and excitement for the return of the deployment partner; sometimes, at-home partners get a burst of energy during that time as they are preparing the home for the return of the military personnel (Pincas et al., 2005). Additionally, the stage immediately following deployment is marked by a honeymoon period, which is often joyous (Pincas et al., 2005). Perhaps secure individuals' stress decreased at time 2 because of the positive emotions present during those stages of the deployment cycle. Finally, individuals with dismissive attachment styles did not have any significant results. This could be because individuals high in attachment avoidance (i.e., dismissive) tend to engage in defensive mechanisms, such as repression, to control any unpleasant emotions during stressful experiences (Shaver & Mikulincer, 2007). Further, dismissing individuals often report less stress than preoccupied and fearful individuals (Kidd et al., 2011), perhaps because those high in avoidance attempt to disassociate from situations that threaten autonomy (Mikulincer, 1998).

Finally, it was expected that perceptions of equity in their romantic relationships during deployment would associate with relational satisfaction and stress. Specifically, it was predicted that the degree to which individuals perceived equity in their romantic relationships, the more relational satisfaction and the less stress they would report. Participants' perceptions of equity in the beginning of the study were associated with high levels of relational satisfaction at the end of the study. Participants' perceptions of being overbenefitted at the end of the study were associated with high levels of relational satisfaction as well. However, perceptions of equity was not significantly associated with stress.

Literature using equity theory as a framework support the idea that perceptions of equity in relationships are associated with relational satisfaction (Sprecher & Schwartz, 1994; Walster, Traupmann, & Walster, 1978) whereas perceptions of inequity are associated with relational dissatisfaction (Walster et al., 1985) and negative emotions, such as anger, guilt, and sadness (Guerrero et al., 2008; Sprecher, 2001; Walster, Traupmann, Sprecher, Utne, & Hay, 1985). As such, in the current study, individuals' perceptions of equity at time 1 were associated with relational satisfaction at time 2, a curvilinear relationship as middle scores on the equity scale represented perceptions of equity whereas higher and lower scores on the equity scale represented perceptions of inequity. Additionally, however, participants perceptions of being overbenefitted were positively associated with perceptions of equity, a linear relationship as higher scores on the equity scale represented perceptions of being overbenefitted, middle scores represented perceptions of equity, and lower scores represented perceptions of being underbenefitted. Prior research suggests perceptions of inequity is uncomfortable, distressing, dissatisfying (Walster et al., 1985), and related to feelings of guilt (Sprecher, 1986; Walster et al., 1985). However, in one study, Buunk and Mutsaers (1999) found that perceptions of being overbenefitted were positively associated with feelings of happiness in the marriage. This could be because overbenefitted individuals enjoy the benefits they receive (Canary & Stafford, 1994). Additionally, other work has found relational satisfaction to be high for relationships characterized by equity and overbenefitness versus underbenefitness (Guerrero et al., 2008).

Although research suggests couples in inequitable relationships should be distressed (Walster et al., 1978), that was not the case in this study as there were no

significant relationships between perceptions of equity and stress. Perhaps stress does not increase or decrease because of perceptions of equity, but rather military families are resilient despite of the stress (Knobloch & Wilson, 2015). Over time, families become acclimated to military life, so distress may decrease (Orthner & Bowen, 1990). Perhaps the individuals in the current study were well acclimated to military life and therefore not stressed because they are used to adjusting to their “new normal” (Maguire, 2015) and establishing new routines during military deployment (Pincus et al., 2005). Furthermore, military families are “expected to be as committed to the military lifestyle and mission as the military member” (Knox & Price, 1999, p. 129). Perhaps because military families are committed to the military lifestyle, perceptions of equity and stress are unique experiences and do not reflect the civilian literature.

Questions about Attachment

In addition to the above predictions, the researcher was curious about how attachment styles interact with affectionate communication during military deployment and if attachment styles remain consistent across the deployment cycle. As for affectionate communication, it appeared individuals with high scores on preoccupied, dismissive, and fearful attachment tended to report relatively low levels of affectionate communication whereas those with high scores on secure attachment style at the end of the study tended to report relatively high levels of affectionate communication at the end of the study. This finding is in line with previous literature on affectionate communication and attachment style. Specifically, Floyd (2002) found that individuals with secure attachment styles report significantly higher levels of expressed and received trait affectionate communication than do individuals with dismissive, preoccupied, or

fearful-avoidant attachment styles. It appears this result replicates from civilian literature to military literature, as secure individuals reported higher expressed affectionate communication during military deployment than insecure individuals.

Additionally, there do appear to be some changes in attachment style across the deployment cycle. Specifically, scores on preoccupied and fearful attachment tended to go down from the pre- to post-test for those in the affectionate writing. Scores on fearful attachment also decreased for those in the innocuous writing condition. There were no significant changes in attachment scores for individuals in the no writing condition.

It appears affectionate writing reduces preoccupation and fearfulness. Although individuals high in preoccupied and fearful attachment are afraid of abandonment and rejection, it appears writing about positive emotions is helpful for these individuals. Compared to writing about negative emotional experience, individuals can benefit from writing about positive emotional experiences (Fredrickson & Joiner, 2002). Specifically, recognizing positive feelings in negative life experiences, such as deployments, is an effective way individuals can cope (Keltner & Bonanno, 1997). Perhaps by writing about positive feelings, such as the affection they feel toward their deployed romantic partner, preoccupied and fearful individuals can be less insecure in their relationships.

Further, although research indicates adult attachment styles tend to be relatively stable across relationships and time (Baldwin & Fehr, 1995; Bowlby, 1977; Fraley, 2002; Scharfe & Bartholomew, 1994), there are reasons why attachment styles may change, including critical events, relational partner's style, and relationship type (Guerrero, 2014). Writing affectionate words during military deployment could be a critical event

positively impacting attachment styles, as preoccupied and fearful individuals became less preoccupied and less fearful after writing affectionate words.

It also appears writing about innocuous topics helped decrease fearful attachment. Writing about innocuous topics did not pose any additional threats to fearful individuals who avoid intimacy and have difficulty self-disclosing emotions. Perhaps the act of writing for 20-minutes once a week for three weeks provided was helpful simply because of the “healing power of writing” (Pennebaker, 1990) and creating a cohesive narrative (Pennebaker & Seagal, 1999) about innocuous topics, such as careers or TV shows. Individuals can benefit from writing by writing about topics that are not negative traumas (King, 2001; King & Miner, 2000). These findings are especially noteworthy considering there were no changes in attachment style for individuals in the no writing group.

Theoretical Implications

The proposed study expanded AET in two major ways. First, the proposed study examined only given, and control for received, affection. In particular, Floyd and colleagues claim when participants are asked to increase affection, such as by kissing more, or writing affectionately to a close relational partner, they possibly feel relational satisfaction and have significant reductions in cholesterol because their partner reciprocated affection outside of the study (Floyd et al., 2009; Floyd, Mikkelson, Hesse, et al., 2007). Thus, there is an apparent reciprocal relationship between given and received affectionate communication. However, the reciprocity of affection during a military deployment is not reliable, although at-home romantic partners might expect communication to be easily reciprocated (Greene et al., 2010; Pincus et al., 2005). Thus, investigating the expectations of romantic partners concerning reciprocity and only

having participants increase given affectionate communication through writing aided in the pure focus on affectionate communication given not received.

Second, the proposed study answers Floyd's (2006) call to empirically answer the question of why some individuals might convey affection through written rather than spoken methods. When individuals portray affection using language, they can communicate that affection using spoken and written forms. This raises Floyd's (2006) question of "what factors influence people's decisions to convey affection through written versus spoken means?" (p. 32). Floyd (2006) speculates individuals might write if they are certain of their affectionate feelings, as written word is more permanent than spoken, and individuals might speak if they desire to reduce ambiguity, as spoken word utilizes nonverbal forms as well, such as tone of voice or body language. Although Floyd (2006) offers speculations, he claims the question requires empirical explanations. Thus, the proposed study partially answers Floyd's call. The proposed experiment controls for individuals to communicate affection through written rather than spoken means to better examine the context of written communication. Further, components of the proposed study regularly recorded the amount of communication between military couples during deployment to offer control when examining the benefits of written word.

Methodological Implications

This study applied a specific component of affectionate communication, particularly affectionate writing, to military couples during deployment. "Much of the research focused on the health benefits of affectionate behavior has focused on recipients, rather than the providers, of affectionate expressions" (Floyd, 2006, p. 191). Because expressed and received affection is strongly reciprocal, such a delineation is often moot

(Floyd, 2006). However, writing interventions are unique because typically the written products are only given to the researchers, not to the relational partners (Floyd, Mikkelson, Hesse, et al., 2007; Pennebaker, 1997). Thus, researchers have more confidence the benefits are due to the expression, rather than the reception, of the writing (Floyd, 2006). Although it is possible affection increased in other ways outside of an affectionate writing intervention (Floyd, Mikkelson, Hesse, et al., 2007), such a limitation is less applicable to military deployments when communication is restricted (Pincus et al., 2005).

Further, many of the prior experiments on expressive writing were conducted in laboratories (Floyd, Mikkelson, Hesse, et al., 2007; Pennebaker & Beall, 1986; Pennebaker & Chung, 2011). Although the studies provide important insight into the importance of affectionate and expressive writing, they lose the ability to examine how expressive writing occurs in a naturalistic setting. In the current study, participants were instructed to write and complete the questionnaires in the comfort of their own homes. This increased ecological validity.

The current study also expanded methodological understanding of expressive writing during military deployments. There has only been one documented writing intervention for the military population (Baddeley & Pennebaker, 2011). However, the published military intervention is different from the current study in two major ways. The first major difference is that Baddeley and Pennebaker (2011) utilized a writing intervention post-deployment to assist in marital adjustment. The various stages of the deployment process, for comparison the deployment and post-deployment stages, are qualitatively different and characterized by different emotions (Pincus et al., 2005). The

deployment stage is often marked by feelings of anxiety, such as overwhelming feelings of sadness or being alone, whereas the post-deployment stage is often characterized a time for renegotiation, such as perceived tensions associated with reasserting the deployed soldier back into the family (Pincus et al., 2005). Thus, there are different traumas and emotions military families feel at different stages of deployment and while writing interventions have shown to be beneficial, they have not yet been tested in the various deployment stages.

The second major difference is that Baddeley and Pennebaker (2011) asked the individuals in the experimental group to write about their deepest thoughts and emotions regarding the post-deployment transition. This instruction strays from the typical topic of trauma that Pennebaker's written paradigm usually employs (Pennebaker, 1993). However, the instructions given by Baddeley and Pennebaker (2011) do not highlight the benefits of expressing emotion. Although Baddeley and Pennebaker (2011) did not explain the range of emotional topics written by the experimental group, the post-deployment stage is often marked by positive feelings of joy, such as the excitement of hugging the returning soldier, but also marked by negative feelings of frustration, such as distress or resentment for feeling abandoned during the deployment (Pincus et al., 2005; Zeff, Lewis, & Hirsch, 1997). Thus, the possible responses to Baddeley and Pennebaker's (2011) study could vary widely. Tight control over the procedures and variables are a major benefit of constructing an experiment. Thus, having control over the prompt, such as by asking participants to write affectionately to the deployed U.S. service member, increased the validity of the study while maintaining its unique contribution to communicative research on military families during deployment.

Clinical Implications

Understanding affectionate communication and its benefits is useful to social scientists, clinicians, and therapists (Floyd, 2006). Floyd et al. (2015) note the most important future directions for research utilizing AET relate to mental and physical health. For example, Floyd et al. (2015) believe experiments relating to mental and emotional regulation could aid in the development of interventions useful for potential treatments. Thus, this study offers clinicians and therapists an empirically supported intervention to execute with couples experiencing low relational satisfaction and affectionate communication in their relationships during military deployment. Additionally, affectionate writing could be offered as a coping mechanism for couples struggling during deployment.

Pedagogical Implications

Although the military offers programs for military members and their families, such as workshops and retreats, the American Psychological Association (2007) and Maguire (2015) claim these programs are not grounded in theory or empirically tested. Further, the National Military Family Association (2004) suggests there are few resources to help military families set realistic expectations for communication during deployment. So, the results of this study begin to introduce theoretical support to programs and could serve as a stepping stone into testing the effects of the already established programs for military families as well.

Specifically, the findings of this study could be used to integrate affectionate writing practices into family readiness groups (FRG). According to the U.S. Navy Family Readiness Groups Handbook (2011), FRGs are important to the military lifestyle as the

groups “serve the needs of individuals who share a common experience, particularly that of deployment” (p. 2). Specifically related to deployments, FRGs help prepare members for deployments and provide family support during deployments. So then, FRGs are viewed as important groups to facilitate family readiness (Parcell & Maguire, 2014a). As part of FRG curriculum, the current study could help participants prepare for military deployments by discussing the positive outcomes of affectionate writing. The groups could also facilitate affectionate writing, by offering journals to interested participants, organizing a space each week for participants to independently write, or providing paper, envelopes, and stamps for hosted letter writing sessions during the duration of deployment.

This study could also inform how affectionate communication is taught in communication courses. Results of the current study can provide instructors with empirical evidence for the importance of writing. Writing has benefits, regardless if writing about negative traumas or positive feelings of affection (King, 2001; Pennebaker & Seagal, 1999). This could inform how instructors lesson plan (i.e., offering time in class for reflection) or allocate assignments (i.e., encourage students to write about emotions in graded reflection papers). It could also inform how instructors foster conversations about theory and how theory is related to real-life (Sanders, 2010), such as by leading discussions about how affectionate behavior positively influences relationships.

Strengths and Limitations

One strength of the current study is the experimental design. The current study utilized a modified Solomon four-group design. The fourth group (i.e., the group not pre-

tested) was eliminated because in general it does not add much to the design and rather wastes resources.

The Solomon four-group design is considered to be the most prestigious experimental design because it increases power while decreasing threats to internal validity (Campbell & Stanley, 1963). The pre-test/post-test nature of the design helps precisely assess change in the dependent variable and helps researchers confidently assert the change in the dependent variable was because of the manipulated treatment. Cross-sectional studies provide a glimpse at only one moment in time, allowing only for identified associations between variables, and thus cross-sectional designs have been critiqued (Lindell & Whitney, 2001). The experimental design used for this study, specifically a four-week longitudinal experiment, allowed for the investigation of causal associations between variables; that is, by manipulating the independent variable (i.e., writing condition), the researcher was able to attest that affectionate writing changed outcomes such as relational satisfaction and several attachment styles.

Further, the use of comparison groups, specifically the no writing group, were used to test alternative explanations, thus strengthening the findings. An alternative explanation in this study were that writing in general may alter the results. By having participants not engage in writing, but still complete the pre-test/post-test, the researcher could say with certainty that affectionate writing, not writing in general, impacts outcomes such as relational satisfaction.

Another strength of the current study was the population. Many prior studies on expressive writing have included students as participants (Francis & Pennebaker, 1992; Pennebaker & Francis, 1996). Undergraduate student participants tend to be relatively

homogeneous (Peterson, 2001). However, the sample of the current study included the at-home partners of deployed military personnel located all over the United States.

Although the findings of this study cannot be generalized to individuals in all types of long-distance relationships, the sample can strengthen the application of results to other branches of the military during deployment.

Although this study certainly had strengths, it also had its limitations. One limitation was the high dropout rate, with 87 women immediately dropping out of the study following the pre-test by not answering the first-week's prompt in sufficient time. An additional 26 participants were dropped from the study for not fully completing the writing prompts, such as by letting the 20-minute timer run down until she could click to the end of the study, or by submitting the exact same written response as another participant. The plagiarized written responses obviously compromised the data and were therefore dropped. Although the current data were not collected via Amazon Mechanical Turk, researchers using such services have become skeptical of the quality of data collected online (Ryan, 2018). In all, the high dropout rate in the current study was a waste of researcher resources, specifically monetary funds, and the researcher did not have enough funds to replace the participant dropouts which could have helped increase power in the study.

Another limitation to the current study is also related to the sample. The participants who chose to participate in the study could be qualitatively different from the individuals who chose not to participate. For example, the participants in the current study could have been less stressed than other at-home partners experiencing military

deployments and therefore willing to commit to the responsibilities associated with a four-week-long study.

Future Directions

The results of this study could spark further work in the contexts of affectionate writing and military families. First, the results of this study support the notion that affectionate writing does impact relational satisfaction, so the study should be replicated for other members of the military family. Specifically, the military partner who is deployed could engage in the affectionate writing exercise. Although it might be tricky to coordinate a scheduled time to engage in affectionate writing due to training and missions, military personnel do have free time to communicate with home (Ponder & Aguirre, 2012) and exercise. Thus, engaging in an affectionate writing exercise, comparable to communicating with at-home partners during deployment, might result in resilience (Wilson & Knobloch, 2016) and boosts in morale (National Military Family Association, 2004).

Additionally, the children of the military couple could also engage in the affectionate writing exercise. During deployments, children may focus on their deployed parent missing key events, such as birthdays (Pincas et al., 2005). Engaging in an affectionate writing exercise might be able to help the children cope with loneliness associated with such life transitions (Pennebaker, 1993; Pennebaker & Francis, 1996) and feel connected to the person they are addressing through written form (Floyd, Mikkelsen, Hesse, et al., 2007).

Furthermore, the findings from this study could serve as a springboard for engaging in affectionate writing interventions across the other stages of the deployment

cycle. Each individual stage of the deployment cycle is met with different challenges (Pincas et al., 2005). The pre-deployment stage is characterized by behaviors such as denial that the military member must leave, mental distancing because of all the work-ups military members must engage in to prepare for deployment, and arguments concerning the future of the relationship (Pincas et al., 2005). The post-deployment or reintegration stage is characterized first by a honeymoon period full of joy and warm embraces; following the honeymoon period, the post-deployment stage is marked by feelings of resentment for being abandoned during the deployment, feelings of anxiety and uncertainty, and the desire for space (Knobloch et al., 2013; Pincas et al., 2005). Thus, the findings of this study could help military families deal with the transitions between the various stages of deployment cycle and their associated emotions and behaviors. It is important for individuals to translate experiences into language (Pennebaker, 1997) because not confronting important experiences can later manifest in disease (Pennebaker et al., 1988). Thus, an affectionate writing intervention could be applied to the various stages of deployment.

Conclusion

To conclude, the current study clarified that affectionate communication need not be reciprocated for individuals to increase their relational satisfaction during military deployment. Specifically, giving affectionate communication through affectionate writing increases feelings of relational satisfaction during military deployment compared to individuals who wrote about innocuous topics and individuals who did not write at all during deployment. Although affectionate writing did not decrease stress, as predicted, it appears stress decreases as deployment time passes; this suggests military couples are

resilient to stress (Knobloch & Wilson, 2015). Further, this study suggests there are other ways at-home romantic partners of deployed military personnel can increase their relational satisfaction and decrease their stress during deployment; these are setting low expectations so the expectations are exceeded, forming secure attachment styles, and perceiving equity in the relationship. Specifically, one way individuals can lessen their levels of insecure attachment and strengthen their level of secure attachment is through affectionate writing. Overall, the current study offers more empirical support for the “healing power of writing” (Pennebaker, 1990) specifically by writing about affectionate feelings during military deployment.

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Table 1

Descriptive Statistics for Relational Satisfaction

Time	Condition	Mean	Std Deviation
Time 1 (pre-test)	Affectionate Writing	5.48	.60
	Innocuous Writing	5.34	.53
	No Writing	5.45	.70
Time 2 (post-test)	Affectionate Writing	6.04	.70
	Innocuous Writing	5.52	.81
	No Writing	5.67	.88

Table 2

Descriptive Statistics for Stress

Time	Condition	Mean	Std Deviation
Time 1 (pre-test)	Affectionate Writing	2.83	.31
	Innocuous Writing	2.82	.32
	No Writing	2.84	.39
Time 2 (post-test)	Affectionate Writing	2.45	.32
	Innocuous Writing	2.68	.49
	No Writing	2.46	.43

Table 3

Descriptive Statistics for Affectionate Communication Given

Time	Condition	Mean	Std Deviation
Time 1 (pre-test)	Affectionate Writing	5.32	1.11
	Innocuous Writing	5.12	1.12
	No Writing	5.46	1.06
Time 2 (post-test)	Affectionate Writing	5.52	1.06
	Innocuous Writing	4.79	1.05
	No Writing	5.38	.96

Table 4

Associations Among Attachment Styles and Relational Satisfaction

	Relational Satisfaction Time 1	Relational Satisfaction Time 2
Security Time 1	.45***	.51***
Security Time 2	.51***	.43***
Preoccupation Time 1	-.35**	-.33**
Preoccupation Time 2	-.33**	-.47***
Dismissiveness Time 1	-.04	-.19*
Dismissiveness Time 2	-.10	-.06
Fearfulness Time 1	-.44***	-.37***
Fearfulness Time 2	-.42***	-.49***

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 5

Associations Among Attachment Styles and Stress

	Stress Time 1	Stress Time 2
Security Time 1	-.09	-.05
Security Time 2	-.24*	-.23*
Preoccupation Time 1	.52***	.43***
Preoccupation Time 2	.52***	.54***
Dismissiveness Time 1	.10	.15
Dismissiveness Time 2	.09	.08
Fearfulness Time 1	.54***	.40***
Fearfulness Time 2	.52***	.54***

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

Table 6

Associations Among Attachment Styles and Affectionate Communication

	Affectionate Communication Time 1	Affectionate Communication Time 2
Security Time 1	.10	.05
Security Time 2	.18	.25*
Preoccupation Time 1	-.67***	-.64***
Preoccupation Time 2	-.73**	-.77***
Dismissiveness Time 1	-.27*	-.27*
Dismissiveness Time 2	-.28*	-.32**
Fearfulness Time 1	-.69***	-.64***
Fearfulness Time 2	-.81***	-.78***

Notes: * $p < .05$, ** $p < .01$, *** $p < .001$

APPENDIX A
INSTITUTIONAL REVIEW BOARD DOCUMENTATION



APPROVAL: EXPEDITED REVIEW

Laura Guerrero
 Human Communication, Hugh Downs School of
 480/965-3730
 Laura.Guerrero@asu.edu

Dear Laura Guerrero:

On 4/28/2018 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Military Couples' Communication during Deployment
Investigator:	Laura Guerrero
IRB ID:	STUDY00008112
Category of review:	(7)(b) Social science methods, (7)(a) Behavioral research
Funding:	Name: Human Communication, Hugh Downs School of; COPP
Grant Title:	
Grant ID:	
Documents Reviewed:	<ul style="list-style-type: none"> • Dissertation - Affectionate Writing 3.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - Affectionate Writing 2.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - No Writing Week 3.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - No Writing Week 1.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation Week 2 Script.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dissertation IRB Protocol.docx, Category: IRB Protocol;

	<ul style="list-style-type: none"> • Dissertation - Control Writing 3.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation Full Study Script.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dissertation Exit Survey Script.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dissertation Recruitment Script.pdf, Category: Recruitment Materials; • Dissertation - Control Writing 1.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - No Writing Week 2.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - Consent.pdf, Category: Consent Form; • Dissertation - Control Writing 2.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Veluscek_HDSHC SummerResearchGrant2018.docx, Category: Sponsor Attachment; • Dissertation - Pre-Screening Questionnaire Pre-Test (without Consent form).pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Correspondence_for_STUDY00008112 Response.pdf, Category: Other (to reflect anything not captured above); • Dissertation Week 3 Script.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dissertation Week 1 Script.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dissertation - Affectionate Writing 1.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dissertation - Exit Questionnaire Post-Test.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);
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The IRB approved the protocol from 4/28/2018 to 4/27/2019 inclusive. Three weeks before 4/27/2019 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 4/27/2019 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the “Documents” tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Alaina Veluscek
Alaina Veluscek

APPENDIX B

PRE-SCREENING INFORMATION AND CONSENT FORM

Hello,

I am a doctoral student working under the direction of Professor Laura Guerrero in the Hugh Downs School of Human Communication at Arizona State University. I am conducting a research study designed to gain information about military couples during deployment.

I am inviting your participation to an online survey which should take approximately 15-20 minutes to complete. To participate in the study, you must (a) be at least 18 years of age, (b) be able to speak, read, and write English, (c) be a woman, (d) identify as the significant other of a member in the U.S. Navy, and (e) your romantic partner must currently be deployed. Only if you meet these qualifications will you be paid for your participation through Amazon.com gift card. Payment for the online survey is \$5.

The online survey you answer today includes questions about yourself (e.g., age, education level, etc.), your partner (e.g., age, military rank, etc.), and your relationship. It is estimated about 90 people will participate in this research study.

After participating in this online survey, we will be able to determine your eligibility for a three-week long study where you could receive up to an additional \$30 in Amazon.com gift cards. If you qualify for the full study, I will contact you via email, describe the nature of the study, and invite your participation. In the three-week long study, you will be asked to complete a short survey once a week for three weeks. You may also be asked to engage in a communication exercise as part of the study. If you are asked to engage in a communication exercise, please do not share identifiable information (e.g., names, partner location, etc.).

If you agree to participate in the second part of the study, you will be sent \$10 per week per week (for three weeks) and an additional \$5 once you have finished the last survey. This study is being funded by the Hugh Downs School of Human Communication Summer Research Grant.

Your participation in this study is voluntary. You can skip questions if you wish. You may choose not to participate or to withdraw from the study at any time without penalty.

Your responses in the online questionnaire are important and will be used to gain a better understanding of military couples during deployment. One benefit of participating is the potential to receive Amazon.com gift cards. Another benefit of participating is self-reflection of the current status of your romantic relationship as well as how to navigate any future military deployments. There are no foreseeable risks or discomforts to your participation.

Your responses will be confidential. You will be asked to report your initials and the last four digits of your cell phone number, but this is done so that we can match these responses that you might provide in future surveys. You will also be asked for your email address, but this information will only be seen by the researchers in the study, will remain

confidential, and will be deleted at the end of the study. This information is needed to distribute the gift cards if you qualify and agree to participate in the three-week full study. The results of this study may be used in reports, presentations, or publications, but your personal information will not be known. The responses you provide will be categorized and combined with other, similar, responses.

If you have any questions concerning the research study, please contact Alaina Veluscek at Alaina.Veluscek@asu.edu or Laura Guerrero at Laura.Guerrero@asu.edu. This study has been reviewed and approved by the Arizona State University Institutional Review Board. If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Institutional Review Board through the ASU Office of Research Integrity and Assurance at 480-965-6788 or by email at research.integrity@asu.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research participant.
- You want to get information or provide input about this research.

If at any point in time you feel like you have questions about the state of your relationship or wish to speak with a professional counselor about any of the items on this questionnaire, please feel free to contact a qualified therapist in your area. You can find out more information about mental health counseling or finding a therapist in your area by calling or visiting the following offices:

TRICARE

tricare.mil/ContactUs/~link.aspx?_id=02AD98084CC544A1B06B14688163A905&_z=z

Military OneSource

800-342-9647

www.militaryonesource.mil/web/mos/confidential-help

Safe Helpline

877-995-5247

National Domestic Violence Hotline

800-799-SAFE (7233)

American Association for Marriage and Family Therapy

703-838-9808

www.aamft.org

American Family Therapy Academy

202-483-8002

www.afta.org

National Association of Social Workers

202-408-8600 ext. 367

www.socialworkers.org

Sincerely,

Alaina M. Veluscek

Please provide an electronic signature below to provide consent to participate in the study.

APPENDIX C
PRE-SCREENING QUESTIONNAIRE

Pre-Screening Questions

1. Is your romantic partner currently deployed?
 - a. Yes
 - b. No
2. Will your romantic partner be deployed for at least the next four (4) weeks?
 - a. Yes
 - b. No
 - c. Not sure
3. Is your romantic partner associated with the U.S. Navy?
 - a. Yes
 - b. No
4. What is your biological sex?
 - a. Male
 - b. Female
 - c. Other
5. Are you at least 18 years of age or older?
 - a. Yes
 - b. No
6. Can you read, write, and speak English?
 - a. Yes
 - b. No

Matching Questions

Directions: The following two questions are for future survey matching purposes only. Your responses will remain confidential and will not be connected to you in any way.

1. What are your initials? Please include your first, middle, and last initials (e.g., AMV). Do NOT include periods or spaces.
2. What is your birthdate? Please use the mm/dd/yyyy format.

Affectionate Communication

7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree)

Directions: We would like you to think about how you *express* love or affection to others. That is, how do you let others know that you love/care for them? To what extent would you say that you do each of the following things *as a way to express affection to others*?

Trait Affection Given:

1. I consider myself to be a very affectionate person.
2. I am always telling my loved ones how much I care about them.
3. When I feel affection for someone, I usually express it.
4. I have a hard time telling people that I love them or care about them.*
5. I'm not very good at expressing affection.*
6. I'm not a very affectionate person.*

7. I love giving people hugs or putting my arms around them.
8. I don't tend to express affection to other people very much.*
9. Anyone who knows me well would say that I'm pretty affectionate.
10. Expressing affection to other people makes me uncomfortable.*

Now we would like you to think about how you *receive* love or affection from others. That is, how do others let you know that they love/care for you? To what extent would you say that others do each of the following things *as a way to express their affection toward you*?

Trait Affection Received:

1. People hug me quite a bit.
2. People are always telling me that they like me, love me, or care about me.
3. I don't get very much affection from other people.*
4. I get quite a bit of affection from others.
5. Many people I know are quite affectionate with me.
6. Most of the people I know don't express affection to me very often.*

Stress

5-point Likert-type scale (0 = never; 1 = almost never; 2 = sometimes; 3 = fairly often; 4 = very often)

Directions: The questions in this scale ask you about your feelings and thoughts during military deployment. In each case, you will be asked to indicate by indicating how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?
2. In the last month, how often have you felt that you were unable to control the important things in your life?
3. In the last month, how often have you felt nervous and "stressed"?
4. In the last month, how often have you felt confident about your ability to handle your personal problems?*
5. In the last month, how often have you felt that things were going your way?*
6. In the last month, how often have you found that you could not cope with all the things that you had to do?
7. In the last month, how often have you been able to control irritations in your life?*
8. In the last month, how often have you felt that you were on top of things?*
9. In the last month, how often have you been angered because of things that were outside of your control?
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Relational Satisfaction

7-point Likert-type scale

Directions: Please think about your relationship with your romantic partner. We would like to know, in general, how satisfied you are with your relationship with your romantic partner.

1. How well does your partner meet your needs? (1 = not very well; 7 = very well)
2. In general, how satisfied are you with your relationship? (1 = very dissatisfied; 7 = very satisfied)
3. How good is your relationship compared to most? (1 = not good at all; 7 = very good)
4. How often do you wish you hadn't gotten into this relationship?* (1 = never; 7 = very often)
5. To what extent has your relationship met your original expectations? (1 = has not met at all; 7 = has exceeded expectations)
6. How much do you love your partner? (1 = not at all; 7 = very much)
7. How many problems are there in your relationship?* (1 = none; 7 = a lot)

Expectations for Communication during Deployment

7-point Likert-type scale

1. Which statement best describes the amount of communication you engaged in with your partner during this deployment? (1 = We communicated a lot more than I thought we would; 7 = We communicated a lot less than I thought we would)
2. You probably had expectations for how much you would communicate during your partner's deployment. Which statement best describes how your communication compares to those expectations? (1 = Our communication is a lot less frequent than I expected it to be; 7 = Our communication is a lot more frequent than I expected it to be)
3. Which of the following statements best describes the extent to which your communication with your partner during this deployment matches what you anticipated would happen? (1 = I anticipated that we would communicate a lot more; 7 = I anticipated that we would communicate a lot less)

Attachment

7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree)

Directions: This questionnaire asks you to think about your general attitudes toward yourself, others, and relationships.

1. I fit in well with other people.
2. I worry that people don't like me as much as I like them.

3. I would like to trust others, but worry that if I open up too much people might reject me.
4. Sometimes others seem reluctant to get as close to me as I would like.
5. I worry a lot about the well-being of my relationships.
6. I feel smothered when a relationship takes too much time away from my personal pursuits.
7. I worry about getting hurt if I allow myself to get too close to someone.
8. I would like to have closer relationships, but getting close makes me feel vulnerable.
9. I tend not to take risks in relationships for fear of getting hurt or rejected.
10. I rarely worry that I won't "measure up" to other people.
11. Achieving personal goals is more important to me than maintaining good relationships.
12. I avoid getting too close to others so that I won't get hurt.
13. I am confident that other people will like me.
14. I worry that others do not care about me as much as I care about them.
15. I wonder how I would cope without someone to love me.
16. I rarely worry that others might reject me.
17. Being independent is more important to me than having good relationships.
18. I am confident that others will accept me.
19. I find it relatively easy to get close to people.
20. Pleasing myself is much more important to me than getting along with others.
21. I need relational partners to give me space to "do my own thing."
22. I sometimes worry that my relational partners will leave me.
23. It is easy for me to get along with others.
24. I frequently pull away from relational partners when I need time to pursue my personal goals.
25. I need to be in a close relationship to be happy.

Secure: 1, 10, 13, 16, 18, 19, 23

Preoccupied: 2, 4, 5, 14, 15, 22, 25

Dismissive: 6, 11, 17, 20, 21, 24

Fearful: 3, 7, 8, 9, 12

Equity

7-point Likert-type scale (1 = My partner is getting a much better deal than I am; 4 = We are both getting an equally good or bad deal; 7 = I am getting a much better deal than my partner)

Directions: We're interested in the give-and-take that goes on in a dating relationship or marriage. We'd like to ask you a few questions about the things you put into your relationship... and the kinds of things you get out of it.

1. Considering what you put into your relationship or marriage during military deployment, compared to what you get out of it...and what your partner puts in compared to what he or she gets out of it, how does your relationship ‘stack up’?

7-point Likert-type scale (1 = I am much more likely to be the one to contribute more; 4 = We are equally likely to be the one to contribute more; 7 = My partner is much more likely to be the one to contribute more)

2. Sometimes things get out of balance in a relationship and one partner contributes more to the relationship than the other. Consider all the times when the exchange of your relationship has become unbalanced and one partner contributes more to your relationship or marriage during military deployment than the other for a times. When your relationship becomes unbalanced, which of you is more likely to be the one who contributes more?

7-point Likert-type scale (1 = My partner gets much more than me; 4 = We are both getting as much or as little rewards; 7 = I get much more than my partner)

3. Think about the rewards that you and your partner receive from having a relationship with one another. When comparing your rewards to your partner’s rewards during military deployment, who is getting more from the relationship?

Amount of Communication between Romantic Partners and Military Personnel

1. How many times this week did you communicate with your romantic partner via email?
2. How many times this week did you receive a response from your romantic partner?
3. How many minutes this week did you communicate with your romantic partner over the phone?
4. How many times this week did you communicate with your romantic partner via social media?
5. How many times this week did you video chat with your romantic partner?

Demographics

1. What is your age?
2. What is your biological sex?
 - a. Male
 - b. Female
 - c. Other
3. What is your ethnicity?
 - a. African American
 - b. Caucasian/White
 - c. Latina/Hispanic
 - d. Native American

- e. Asian/Pacific Islander
 - f. Other
4. What is your highest degree earned?
 - a. High school
 - b. Some college
 - c. College
 - d. Professional
 - e. Masters
 - f. Doctorate
 - g. Other
 5. What is your job/career?
 6. What is your current marital status?
 - a. Dating
 - b. Engaged
 - c. Married
 - d. Divorced
 - e. Other
 7. How many years have you been in a romantic relationship with your current romantic partner?
 8. How many children do you have?
 9. If you have children, what are the ages of your children? (Please enter children's ages in order of oldest to youngest, separated by commas. E.g., 12, 9, 5)
 10. When your romantic partner is not deployed, do you live on base?
 - a. Yes
 - b. No
 11. Where are you currently living while your partner is deployed?
 12. What is the expected length of deployment for your romantic partner (in weeks)?
 13. How many previous deployments have you and your romantic partner endured?
 14. When your romantic partner is not deployed, what percent of time is your partner your go-to person for communication and support?
 15. Is your romantic partner enlisted or a commissioned officer?
 - a. Enlisted
 - b. Officer
 16. What is your romantic partner's military rank (e.g., seaman, petty officer, lieutenant, etc.)?
 17. What is your romantic partner's job during deployment (e.g., aviation, food services, flight operations, medical support, etc.)?
 18. How many years has your romantic partner been in the military?

What is your email address? This information will only be used to send you your \$5 Amazon.com gift card and to contact you for full participation in the study.

APPENDIX D

EMAIL RECRUITMENT FOR FULL STUDY

Writing Groups

Hello,

I am contacting you because your responses in the Military Couples During Deployment Study survey qualified you to participate in the three-week long full study. Below I describe more information about what the study entails and what you would be asked to do.

Over a three-week period, we would like you to respond to writing prompts for 20-minutes every Sunday. Additionally, you will be asked to complete a brief online survey (about 2 minutes each time) once a week over the course of the study. If you agree to participate in the three-week long study, these instructions will be sent to you again on a Sunday so you may begin the study that day.

Your participation in this study is voluntary. Your responses in the surveys will be confidential. You will be asked to report your initials and the last four digits of your cell phone number each time you take the survey so we may match your responses to future surveys. You can skip questions or decide not to participate at any time. There will be no penalty if you decide not to participate.

If you agree to participate in the study and complete a very brief study, I will send you a \$10 Amazon.com gift card for each week you participate (up to \$30 total for the three weeks). If you complete all future online surveys and a post-study survey, you will receive another \$5 Amazon.com gift card. This is my way to thank you for your important contributions to the study.

While receiving Amazon.com gift cards might be viewed as a benefit, other benefits of your participation include contributing to a better understanding of military relationships during deployment. There are no foreseeable risks or discomforts to your participation.

If you have any questions concerning the research study, please contact Alaina Veluscek at Alaina.Veluscek@asu.edu or Laura Guerrero at Laura.Guerrero@asu.edu.

Sincerely,
Alaina M. Veluscek

No Writing Group

Hello,

I am contacting you because your responses in the Military Couples During Deployment Study survey qualified you to participate in the three-week long full study. Below I describe more information about what the study entails and what you would be asked to do.

Over a three-week period, you will be asked to complete a brief online survey (about 2 minutes each time) once a week over the course of the study. If you agree to participate in the three-week long study, these instructions will be sent to you again on a Sunday so you may begin the study that day.

Your participation in this study is voluntary. Your responses in the surveys will be confidential. You will be asked to report your initials and the last four digits of your cell phone number each time you take the survey so we may match your responses to future surveys. You can skip questions or decide not to participate at any time. There will be no penalty if you decide not to participate.

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If you have any questions concerning the research study, please contact Alaina Veluscek at Alaina.Veluscek@asu.edu or Laura Guerrero at Laura.Guerrero@asu.edu.

Sincerely,
Alaina M. Veluscek

APPENDIX E
EMAIL TO BEGIN FULL STUDY

Hello,

Thank you for agreeing to participate in the three-week long Military Couples during Deployment study! Your pre-study \$5 Amazon.com gift card has been sent to you. You will receive additional Amazon.com gift cards throughout the duration of the study (\$10 per week and a second \$5 gift card at the end of the study).

Please click the link below and begin the study sometime today.

[link to study entered here]

Please let me know if you have any questions.

Thank you,
Alaina

APPENDIX F

EMAIL TO BEGIN STUDY WEEK 2

Hello,

Thank you for continuing to participate in the three-week long Military Couples during Deployment study! Your first \$10 Amazon.com gift card for participating last week has been sent to you. You will receive additional Amazon.com gift cards throughout the duration of the study (\$10 per week and a second \$5 gift card at the end of the study).

Please click the link below and begin the study sometime today.

[link to study entered here]

Please let me know if you have any questions.

Thank you,
Alaina

APPENDIX G

EMAIL TO BEGIN STUDY WEEK 3

Hello,

Thank you for continuing to participate in the three-week long Military Couples during Deployment study! Your second \$10 Amazon.com gift card for participating last week has been sent to you. You will receive additional Amazon.com gift cards throughout the duration of the study (\$10 per week and a second \$5 gift card at the end of the study).

Please click the link below and begin the study sometime today.

[link to study entered here]

Please let me know if you have any questions.

Thank you,
Alaina

APPENDIX H
POST-TEST EMAIL

Hello,

Thank you for participating in the three-week long Military Couples during Deployment study! Your final \$10 Amazon.com gift card for participating last week has been sent to you. We hope you enjoyed the study.

Please find below the last survey link for you to complete. It should take you less than 15 minutes to complete. Once this last survey is complete, you will be sent a \$5 Amazon.com gift card to the email of your choice. The last gift card will be sent within one week of your response.

[link to study entered here]

Please let me know if you have any questions.

Thank you,
Alaina

APPENDIX I
POST-STUDY SURVEY MEASURES

Matching Questions

Directions: The following two questions are for future survey matching purposes only. Your responses will remain confidential and will not be connected to you in any way.

3. What are your initials? Please include your first, middle, and last initials (e.g., AMV). Do NOT include periods or spaces.
4. What is your birthdate? Please use the mm/dd/yyyy format.

Screening Question

1. Has your partner returned from deployment?
 - a. Yes
 - b. No
 - c. Other

Affectionate Communication

7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree)

Directions: We would like you to think about how you *express* love or affection to others. That is, how do you let others know that you love/care for them? To what extent would you say that you do each of the following things *as a way to express affection to others*?

Trait Affection Given:

11. I consider myself to be a very affectionate person.
12. I am always telling my loved ones how much I care about them.
13. When I feel affection for someone, I usually express it.
14. I have a hard time telling people that I love them or care about them.*
15. I'm not very good at expressing affection.*
16. I'm not a very affectionate person.*
17. I love giving people hugs or putting my arms around them.
18. I don't tend to express affection to other people very much.*
19. Anyone who knows me well would say that I'm pretty affectionate.
20. Expressing affection to other people makes me uncomfortable.*

Now we would like you to think about how you *receive* love or affection from others. That is, how do others let you know that they love/care for you? To what extent would you say that others do each of the following things *as a way to express their affection toward you*?

Trait Affection Received:

7. People hug me quite a bit.
8. People are always telling me that they like me, love me, or care about me.
9. I don't get very much affection from other people.*
10. I get quite a bit of affection from others.
11. Many people I know are quite affectionate with me.
12. Most of the people I know don't express affection to me very often.*

Stress

5-point Likert-type scale (0 = never; 1 = almost never; 2 = sometimes; 3 = fairly often; 4 = very often)

Directions: The questions in this scale ask you about your feelings and thoughts during military deployment. In each case, you will be asked to indicate by indicating how often you felt or thought a certain way.

11. In the last month, how often have you been upset because of something that happened unexpectedly?
12. In the last month, how often have you felt that you were unable to control the important things in your life?
13. In the last month, how often have you felt nervous and “stressed”?
14. In the last month, how often have you felt confident about your ability to handle your personal problems?*
15. In the last month, how often have you felt that things were going your way?*
16. In the last month, how often have you found that you could not cope with all the things that you had to do?
17. In the last month, how often have you been able to control irritations in your life?*
18. In the last month, how often have you felt that you were on top of things?*
19. In the last month, how often have you been angered because of things that were outside of your control?
20. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Relational Satisfaction

7-point Likert-type scale

Directions: Please think about your relationship with your romantic partner. We would like to know, in general, how satisfied you are with your relationship with your romantic partner.

8. How well does your partner meet your needs? (1 = not very well; 7 = very well)
9. In general, how satisfied are you with your relationship? (1 = very dissatisfied; 7 = very satisfied)
10. How good is your relationship compared to most? (1 = not good at all; 7 = very good)
11. How often do you wish you hadn't gotten into this relationship?* (1 = never; 7 = very often)
12. To what extent has your relationship met your original expectations? (1 = has not met at all; 7 = has exceeded expectations)

13. How much do you love your partner? (1 = not at all; 7 = very much)
14. How many problems are there in your relationship? (1 = none; 7 = a lot)

Expectations for Communication during Deployment

7-point Likert-type scale

4. Which statement best describes the amount of communication you engaged in with your partner during this deployment? (1 = We communicated a lot more than I thought we would; 7 = We communicated a lot less than I thought we would)
5. You probably had expectations for how much you would communicate during your partner's deployment. Which statement best describes how your communication compares to those expectations? (1 = Our communication is a lot less frequent than I expected it to be; 7 = Our communication is a lot more frequent than I expected it to be)
6. Which of the following statements best describes the extent to which your communication with your partner during this deployment matches what you anticipated would happen? (1 = I anticipated that we would communicate a lot more; 7 = I anticipated that we would communicate a lot less)

Attachment

7-point Likert-type scale (1 = strongly disagree; 7 = strongly agree)

Directions: This questionnaire asks you to think about your general attitudes toward yourself, others, and relationships.

26. I fit in well with other people.
27. I worry that people don't like me as much as I like them.
28. I would like to trust others, but worry that if I open up too much people might reject me.
29. Sometimes others seem reluctant to get as close to me as I would like.
30. I worry a lot about the well-being of my relationships.
31. I feel smothered when a relationship takes too much time away from my personal pursuits.
32. I worry about getting hurt if I allow myself to get too close to someone.
33. I would like to have closer relationships, but getting close makes me feel vulnerable.
34. I tend not to take risks in relationships for fear of getting hurt or rejected.
35. I rarely worry that I won't "measure up" to other people.
36. Achieving personal goals is more important to me than maintaining good relationships.
37. I avoid getting too close to others so that I won't get hurt.
38. I am confident that other people will like me.
39. I worry that others do not care about me as much as I care about them.
40. I wonder how I would cope without someone to love me.

41. I rarely worry that others might reject me.
42. Being independent is more important to me than having good relationships.
43. I am confident that others will accept me.
44. I find it relatively easy to get close to people.
45. Pleasing myself is much more important to me than getting along with others.
46. I need relational partners to give me space to “do my own thing.”
47. I sometimes worry that my relational partners will leave me.
48. It is easy for me to get along with others.
49. I frequently pull away from relational partners when I need time to pursue my personal goals.
50. I need to be in a close relationship to be happy.

Secure: 1, 10, 13, 16, 18, 19, 23
 Preoccupied: 2, 4, 5, 14, 15, 22, 25
 Dismissive: 6, 11, 17, 20, 21, 24
 Fearful: 3, 7, 8, 9, 12

Equity

7-point Likert-type scale (1 = My partner is getting a much better deal than I am; 4 = We are both getting an equally good or bad deal; 7 = I am getting a much better deal than my partner)

Directions: We’re interested in the give-and-take that goes on in a dating relationship or marriage. We’d like to ask you a few questions about the things you put into your relationship... and the kinds of things you get out of it.

4. Considering what you put into your relationship or marriage during military deployment, compared to what you get out of it...and what your partner puts in compared to what he or she gets out of it, how does your relationship ‘stack up’?

7-point Likert-type scale (1 = I am much more likely to be the one to contribute more; 4 = We are equally likely to be the one to contribute more; 7 = My partner is much more likely to be the one to contribute more)

5. Sometimes things get out of balance in a relationship and one partner contributes more to the relationship than the other. Consider all the times when the exchange of your relationship has become unbalanced and one partner contributes more to your relationship or marriage during military deployment than the other for a times. When your relationship becomes unbalanced, which of you is more likely to be the one who contributes more?

7-point Likert-type scale (1 = My partner gets much more than me; 4 = We are both getting as much or as little rewards; 7 = I get much more than my partner)

6. Think about the rewards that you and your partner receive from having a relationship with one another. When comparing your rewards to your partner's rewards during military deployment, who is getting more from the relationship?

Amount of Communication between Romantic Partners and Military Personnel

6. How many times this week did you communicate with your romantic partner via email?
7. How many times this week did you receive a response from your romantic partner?
8. How many minutes this week did you communicate with your romantic partner over the phone?
9. How many times this week did you communicate with your romantic partner via social media?
10. How many times this week did you video chat with your romantic partner?

Demographics

19. What is the expected length of deployment for your romantic partner (in weeks)?
20. What is your romantic partner's job during deployment (e.g., aviation, food services, flight operations, medical support, etc.)?
21. When your romantic partner is not deployed, what percent of time is your partner your go-to person for communication and support?