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Linguistic Indicators of Wives' Attachment Security and Communal Orientation During Military Deployment

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Abstract

Military deployment affects thousands of families each year, yet little is known about its impact on non-deployed spouses (NDSs) and romantic relationships. This report examines two factors—attachment security and a communal orientation with respect to the deployment—that may be crucial to successful dyadic adjustment by the NDS. Thirty-seven female NDSs reported on their relationship satisfaction before and during their partner's deployment, and 20 also did so two weeks following their partner's return. Participants provided a stream-of-consciousness speech sample regarding their relationship during the deployment; linguistic coding of sample transcripts provided measures of each participant's (a) narrative coherence, hypothesized to reflect attachment security with respect to their deployed spouse; and, (b) frequency of first person plural pronoun use (*we*-talk), hypothesized to reflect a communal orientation to coping. More frequent first person plural pronouns—*we*-talk—was uniquely associated with higher relationship satisfaction during the deployment, and greater narrative coherence was uniquely associated with higher relationship satisfaction post-deployment. Discussion centers on the value of relationship security and communal orientations in predicting how couples cope with deployment and other types of relationship stressors.

Keywords

deployment; attachment; relationship satisfaction; romantic relationships; word count

"It's so difficult not to worry about the cumulative, long-term effect of the gaps in connection but somewhere inside I guess I know that my understanding of what defines 'connection' between a man and his wife is going to be stretched." – Stella, military spouse, August 2007: <http://fifteenmonths.blogspot.com>.

Repeated deployments are now a commonplace fixture of the contemporary military lifestyle: They affect approximately 250,000 service members each year, and three-fifths of deployed service members leave families at home (e.g., Department of Defense, 2010). Although ample research documents the impact of deployment on service members' mental health (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Hoge, Auchterlonie, & Miliken,

2006), work examining deployment's impact on military families is lacking. The studies that do exist suggest that non-deployed spouses (NDSs) are at increased risk for clinically significant psychiatric distress during and after their spouse's deployment (Lester et al., 2010; Mansfield et al., 2010; Pincus, House, Christensen, & Adler, 2001), and the deployment also takes a toll on marital relationships (Nelson-Goff, Crow, Reisbig, & Hamilton, 2007; but see Karney & Crown, 2011). Perhaps unsurprisingly, divorce rates are higher among military service members than civilians (Department of Defense, 2010) and previously deployed service members are now 30–40% more likely to perpetrate violence on their spouses and children than was the case in 2006 (Chiarelli, 2012).

Although studies investigate risk of divorce and domestic violence in military samples, little work has directly examined changes in relationship satisfaction over the course of a deployment. Military theorists (Logan, 1987; Pincus et al., 2001) argue that couples progress through stages of adjustment over the course of the deployment – during predeployment, for example, families begin to prepare psychologically for the service member's departure. During the deployment, family members adjust to the service member's absence but may also deal with feelings of loss or grief. In the reunification (postdeployment) phase, families may experience intense joy at the service member's return but also negative emotions related to the service member's return and the shifts that must occur in the family to accommodate this (Esposito-Smythers et al., 2011; Pincus et al., 2001). For the most part, however, these contentions await empirical investigation. In this study we examine changes in NDSs' relationship satisfaction across a deployment cycle—specifically, by evaluating relationship satisfaction two weeks before the spouse's departure, two weeks into the deployment, and two weeks following the spouse's return. We hypothesize that for the sample as a whole, relationship satisfaction will decrease from before to during and after the deployment (Hypothesis One).

Military deployment impacts service members and their families in myriad ways. When service members deploy, NDSs face not only the challenges of physical separation but, in some instances, the near constant threat of their partner's death or permanent injury. It is arguable that few life events provide such a consistent threat to one's sense of security and connection vis-à-vis a relationship. *Will my partner make it home safely? Will we have the same relationship after the deployment? Will we still be us?* How people think about these questions likely has deep implications for how couples navigate post-deployment life together and whether they can maintain the feelings of security and connection that characterize strong marital relationships (Riggs & Riggs, 2011; Vormbrock, 1993).

Using Relationship Theory to Understand Military Deployments

In this project we draw upon two theoretical models regarding relational dynamics to help shed light on factors that predict variability in relationship satisfaction in response to military deployment: attachment theory and interdependence theory. Both of these perspectives consider individuals' psychological experience and behavior within romantic relationships but differ in theoretical focus: attachment theory focuses on threats to the availability of the romantic partner whereas interdependence theory emphasizes the degree to which romantic partners influence one another's sense of self. Here we argue that deployment likely exerts its impact on couple relationships through a variety of pathways, including reducing each partner's sense of security and safety in the relationship (attachment theory), as well as reducing feelings of partnership and “we-ness” with respect to the relationship (interdependence theory). In the sections that follow, we briefly review the two theoretical frameworks and their operational definitions which form the basis for the hypotheses tested in this study.

Attachment theory and deployment

According to attachment theory, early interactions with primary caregivers, and in particular the degree to which caregivers respond sensitively to infants' cues, guide the formation of infants' internal working models of attachment (IWM), schemas comprised of implicit beliefs and expectations about close relationships, the self, and the self in relationships (Ainsworth, 1967; Bowlby, 1988). IWMs are thought to be relatively stable across development and to influence adults' beliefs about and expectations for interactions in close relationships (Waters, Merick, Treboux, Crowell, & Albersheim, 2000) – for example, an adult with a secure IWM may believe that others will be there to support him/her in times of distress whereas an adult with an insecure IWM may expect that if he/she reveals vulnerability to a significant other, it will make that person less responsive. The attachment system is thought to facilitate affiliation goals by motivating connection with significant others, particularly under times of stress (Bowlby, 1988).

In order to emerge from a deployment feeling confident and committed to one's relationship, NDSs must be able to maintain a sense of security vis-à-vis the deployed spouse despite months of physical separation (Vormbrock, 1993). From the NDS's perspective, the physical separation, difficulty communicating, and threat of loss have the potential to activate and permanently destabilize her sense of security in the relationship (Bowlby, 1973; Riggs & Riggs, 2011; Vormbrock, 1993). Bowlby argued that separations from attachment figures are a primary activator of the attachment system (Bowlby, 1973), and as such, individual differences in coping with attachment-related stress are likely to emerge in response to a deployment. For spouses whose sense of security in the relationship is tenuous, deployments have the potential to leave her feeling insecure in her romantic relationship, which in turn can lead to reduced satisfaction with and commitment to the relationship. Conversely, NDSs who are secure with respect to their couple relationships may be able to construe the deployment as a temporary disruption in a secure relationship, and may then emerge from the deployment relatively unscathed in terms of their commitment to the relationship.

Interdependence theory and deployment

Interdependence theory, on the other hand, focuses on the degree to which relationship partners interact and act upon or influence one another's experiences (Kelley, Bercheid, Christensen, Harvey, & Huston, 1983; Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003). According to this perspective, an integral part of becoming a committed couple is developing a sense of "we-ness," or including one's partner in one's sense of self (Aron, Aron, Tudor, & Nelson, 1991; Stanley & Markman, 1992). One aspect of this interdependence involves prioritizing the needs of the couple even when these go against the needs of the individual (Agnew, Van Lange, Rusbult, & Langston, 1998; Clark & Mills, 1979; Whitton, Stanley, & Markman, 2007). Interdependence theorists argue that this self-sacrifice in the service of couple-level needs, which in part is driven by relationship commitment, actually enhances one's feelings of commitment because it creates a greater sense of "we-ness" or partnership between each member of the couple (Whitton et al., 2007). Indeed, when individuals are motivated to sacrifice for their partners they experience more positive emotions, better relationship quality, and less relationship conflict (Impett, Gable, & Peplau, 2005).

A specific example of this interdependent process can be observed in the context of couples coping with stressors affecting one member of a couple as though they are shared, which has been termed *communal coping* (Lyons, Mickelson, Sullivan, & Coyne, 1998). Communal coping entails appraising a stressor as "our" problem (rather than "his" or "her" problem) and taking steps as a couple to improve the issue (Lyons et al., 1998; Rohrbach, Shoham,

Shoyen, Jensen, & Mehl, 2012). Feeling that one's problems are shared by a partner can reduce the sense of isolation one may feel as a result of the problem in question and may promote more effective problem-solving (Lewis et al., 2006; Lyons et al., 1998; Robbins, Mehl, Smith, & Weihs, 2012). Therefore, interdependent theorists argue that a communal orientation promotes health within the individual and the relationship (Lyons et al., 1998). Importantly, unlike attachment theory, interdependence theory assigns less importance to an individual's developmental history, previous experiences in intimate relationships, and internal experiences (cognitions and emotions); instead, the central focus of interdependence theory is on the impact of behaviors within relationships and the ways in which these actions maintain or alter commitment.

The fact that deployment creates non-shared experiences and stressors for the NDS (e.g., financial problems) and service member (e.g., combat) may result in reduced feelings of partnership, collaboration, or "we-ness" in one or both members of the couple. Adopting a communal orientation to coping with problems (i.e., viewing deployment as "our" problem rather than "my" or "your" problem and adopting a couple-based approach to address it, Lyons et al., 1998) may predict better outcomes for both members of the couple (Berg & Upchurch, 2007; Bodenmann, 2005; Lewis et al., 2006; Rohrbaugh, Mehl, Shoham, Reilly, & Ewy, 2008), but the very nature of deployment, with its non-shared stressors, makes having a communal, "we"-oriented perspective challenging. Consequently, deployment has the potential to leave a NDS feeling alone in her struggles, which in turn can lead to reduced satisfaction with and commitment to the relationship.

In this report, we examine NDSs' relationship satisfaction before, during, and after a deployment. Based on the argument that deployment represents a multifaceted challenge to romantic relationships (Vormbrock, 1993), we anticipate that NDSs' relationship satisfaction will decrease from pre- to post-deployment. Our central goal is to examine two processes that may protect against this decrease in relationship satisfaction. Drawing from attachment and interdependence theories, we focus specifically on two linguistic markers of NDSs' psychological state during the deployment; we derive these markers from a speech sample the NDSs provided during the early part of their spouse's deployment and propose that high levels of attachment security and communal orientation will protect against declines in relationship satisfaction throughout the deployment.

Integrating Self-report and Observational Research on Close Relationships

Applying linguistic measures to the study of relationships is a relatively new enterprise, and this approach enables the assessment of observable behaviors and their association with psychological health (Baumeister, Vohs, & Funder, 2007; Borelli, Sbarra, Mehl, & David, 2011; Pennebaker, Mehl, & Niederhoffer, 2003; Tausczik & Pennebaker, 2010). Whereas self-report measures are commonly used to assess aspects of romantic relationships, including romantic attachment and communal orientation (e.g., Bernier & Dozier, 2002; Brennan, Clark, & Shaver, 1998; Roisman et al., 2007), this method rests on the premise that individuals have the insight necessary to complete measures honestly and the ability to consciously appraise their behaviors (Jacobvitz, Curran, & Moller, 2002). Linguistic analyses, in contrast, can reveal variability in psychological states that exists outside of conscious awareness and, as behavioral samples, are not susceptible to the limitations of self-report (Borelli et al., 2011; Jacobvitz et al., 2002; Pennebaker et al., 2003). Importantly, self-reports often do not converge with linguistic assessments, such as in the case of romantic attachment (Crowell, Fraley, & Shaver, 1999; Riggs et al., 2007; Roisman et al., 2007) and communal coping (Rohrbaugh et al., 2012), and this fact calls into question the utility of relying exclusively on self-reported data (Bernier & Dozier, 2002; Jacobvitz et al., 2002; Rohrbaugh et al., 2008). One reason why relationship measures, specifically, may not

converge with observational linguistic analyses may be because self-reports ask respondents how they generally act, whereas observational and linguistic measures occur within a specific context (Rohrbaugh et al., 2012).

The Language of Attachment: A Narrative Perspective

Drawing on the work of Main and colleagues (Main, Goldwyn, & Hesse, 2002), we examine the degree to which NDSs demonstrate narrative coherence (NC), a narrative-based indicator of attachment security, when discussing their marital relationships. Main's basic theory regarding narrative coherence holds that when discussing relationship experiences, individuals who are secure with respect to their relationships demonstrate valuing of attachment figures and experiences, and these people are able to freely and openly discuss relationship experiences in such a way that enables them to maintain discourse that would be easily understood by another person (Hesse, 2008; Main, 2000). According to attachment researchers, a coherent relationship narrative is "both believable and true to the listener, .. (and).. the events and affectsare conveyed without distortion, contradiction or derailment of discourse" (Slade, 1999, p. 580). The way in which narrative coherence in attachment narratives is operationalized is through adherence to Gricean maxims of collaborative and coherent discourse (Grice, 1975), which comprise rules for generating speech that is comprehensible and adheres to certain conventions of conversation. These maxims include quality ("be truthful, and have evidence for what you say"), quantity ("be succinct, and yet complete"), relation ("be relevant to the topic as presented"), and manner ("be clear and orderly," avoiding using entangled, vague, or highly repetitive speech; Grice, 1975; Hesse, 2008). In sum, an individual's narrative coherence when discussing attachment relationships is thought to reveal important information about the mental representation or model the person has about the relationship in question.

Indeed, decades of research using the narrative coherence framework have revealed that adults who demonstrate higher narrative coherence when discussing childhood relationships with caregivers and current relationships with romantic partners have better individual (e.g., psychological health, stress regulation, response to psychotherapy) and interpersonal adjustment (e.g., romantic relationship quality, parenting sensitivity; De Wolff & van IJzendoorn, 1997; Fonagy et al., 1996; Heinicke & Levine, 2007; Mehta, Cowan, & Cowan, 2009; Roisman, Tsai, & Chiang, 2004; Roisman et al., 2007; Treboux, Crowell, & Waters, 2004). In the current study we analyze NDSs' narrative coherence when discussing their relationship with the spouse in order to test the hypothesis that high narrative coherence will protect against declines in marital satisfaction during and following deployment.

Due to our interest in linguistic markers of relational constructs, we assess NDSs' narrative coherence (when they are asked to describe their relationship with their spouse during his deployment) and examine its association with relationship satisfaction. We predict that higher narrative coherence regarding the spousal relationship will protect against declines in relationship satisfaction over the deployment (Hypothesis Two). Due to our desire to demonstrate that narrative coherence is associated with relationship satisfaction above and beyond the contribution of self-reported attachment style, we also assess self-reported attachment anxiety and avoidance for use as covariates in analyses.

We-ness and Relationship Satisfaction

To evaluate the degree to which NDSs adopt a communal, *we*-oriented stance to the deployment, we examine NDSs' word use when describing their relationships with their spouses during the deployment. Specifically, we examine the frequency of NDSs' use of first person plural pronouns (i.e., "we", "us", "our") when discussing their relationships, which has been used as an unobtrusively assessed indicator of communal coping in recent

years (e.g., Rohrbaugh et al., 2008). *We*-talk during deployment may indicate a psychological state of *we*-ness in regard to the separation and the stresses inherent in deployment (e.g., “when dealing with our money problems” versus “when dealing with my money problems”). Previous research suggests that greater *we*-talk among couples is associated both with individual health outcomes and with relationship-level outcomes. For instance, greater *we*-talk among the spouses of adults with heart failure predicts improvement in the health of the ill spouse over a six month period (Rohrbaugh et al., 2008); greater *we*-talk among spouses of health-compromised smokers predicts abstinence 12 months after smoking cessation (Rohrbaugh et al., 2012); and, greater *we*-talk among spouses of women with breast cancer predicts greater relationship satisfaction (Robbins et al., 2012). In terms of relational outcomes, greater *we*-talk is associated with higher relationship commitment, more effective problem-solving, and greater shared sense of responsibility among couples with a medically-involved spouse (Agnew et al., 1998; Rohrbaugh et al., 2008; Simmons, Gordon, & Chambless, 2005). In the context of couple interactions, non-distressed couples use more *we*-talk as compared to distressed couples (Williams-Baucom, Atkins, Sevier, Eldridge, & Christensen, 2010). Greater *we*-talk also is related to the generation of positive solutions to conflicts (Simmons et al., 2005) and associated with lower cardiovascular reactivity and less negative affect (Seider, Hirschberger, Nelson, & Levenson, 2009). In this study we seek to extend these findings to another significant relationship stressor. Here we evaluate the prediction (Hypothesis Three) that greater use of *we*-talk will predict greater relationship satisfaction among NDSs during and following deployment.

Method

Participants

Forty-one female spouses of deploying service members ($M_{\text{age}} = 30.24$, $SD_{\text{age}} = 6.64$) were recruited from a city in the Southwestern United States to participate in this three session study. Due to the fact that the majority of deploying service members are male (Department of Defense, 2011), we elected to restrict our sample to female NDSs in order to reduce noise in the data. Participants were married (93%) or cohabitating (7%) with their partners for two years or more, were not currently suicidal, and had not been diagnosed with a psychotic disorder within the past year. Most participants (76%) identified as Caucasian, had at least one child (66%), reported an annual household income of \$41,000 to \$60,000 (30%), and reported depressive symptoms below the clinical cut-off for mild depression on the Beck Depression Inventory (80%; BDI; Beck, Steer, & Brown, 1996). Consistent with the surrounding area, most participants' spouses were members of the active duty Air Force (83%), were enlisted (89%), were deploying to Afghanistan or Iraq (71%), had been on five or fewer deployments (median = 3 previous deployments; only one participant reported no previous deployments), were embarking on a deployment lasting 6 months or longer (range: 2–12 months), and were anticipating being involved in on-the-ground military work (e.g., infantry, special operations; 62%) as opposed to providing administrative support during the deployment.

Procedure

Two weeks prior to their spouses' projected date of departure, participants completed an online questionnaire battery that included assessments of their background information, relationship satisfaction, self-reported romantic attachment style, and psychological adjustment ($N = 41$, Time 1). Two weeks following their spouses' departure, participants attended a laboratory session where they reported on their relationship satisfaction and psychological adjustment and then completed a stream-of-consciousness speech task (SOC) in which they spoke continuously for four minutes about their thoughts and feelings about

the deployment and their relationship with their spouse ($n = 37$; Time 2). Two weeks following their spouses' return, participants completed an online questionnaire assessing their relationship satisfaction ($n = 20$; Time 3). The remaining 17 participants were unresponsive to phone calls and emails from study personnel and therefore we were unable to collect data from them within the stated timeframe.

Measures

Demographics and potential covariates—At T1, in addition to standard demographic questions, participants reported the projected length of the current deployment, number of spouse's previous deployments, spouse's occupation within the military, and spouse's branch of military. Participants reported on the number of children they had as well as whether or not they were also a member of the military. Participants also completed a number of reliable, valid, and widely used questionnaires that we used for descriptive and statistical control purposes. These included measures of depressive symptoms (BDI, Beck et al., 1996), anxiety (Brief Symptoms Inventory [BSI] anxiety subscale, Derogatis, 1992), stress (Perceived Stress Scale-4 [PSS-4], Cohen, Kamarack, & Mermelstein, 1983), and romantic attachment style¹ (Experience of Close Relationships-Revised [ECR-R], Fraley, Waller, & Brennan, 2000). Further, because we anticipated that the amount of contact the couple had during the deployment might impact relationship satisfaction, at T2 and T3 participants reported the frequency of contact they had with the deployed spouse during the deployment using a scale devised for the purposes of this study (total number of spouse contacts since beginning of deployment as assessed at T2 [including electronic communication, phone, letter]: $M = 28.77$, $SD = 21.93$; number of spouse contacts per month of deployment as assessed at T3 [including electronic communication, phone, letter]: $M = 62.45$, $SD = 47.27$). We then utilized this and other variables as covariates in analyses examining study hypotheses.

Stream-of-consciousness task—Participants' four minute speech samples comprised the basis of our narrative data, which were used to assess our linguistic indicators. Participants responded to the following prompt: *"Please discuss in detail your experience during the deployment. Discuss your thoughts, feelings, hopes, and concerns about the deployment and your relationship with your spouse. Remember, there are no right or wrong answers, so please say whatever comes to mind. Your job is to talk continuously about this for the four minute period."*

The stream of consciousness task provided participants with an unstructured opportunity to explore their thoughts and feelings about their current relationship situation. This procedure of eliciting stream of consciousness relationship narratives has been used in previous research involving relationship challenges (see Borelli & Sbarra, 2011; Sbarra, Smith, & Mehl, 2012). In the current study, most participants approached the task by talking about how they were feeling about the deployment (e.g., "...so this deployment is the third one that we've had to go through in the last fifteen months. So I think I'm wearing down just a little bit"), their relationships with their spouses (e.g., "...when we do just talk on the phone um usually it's usually pretty positive and upbeat and very encouraging and very loving and um just helps us to continually refocus on uh what's important in life and who the important

¹In brief, there are two traditions within attachment research – one is to measure individuals' state of mind with respect to attachment (using interview assessments) and the other is to measure their reported attachment style vis-à-vis a romantic partner (using self-report questionnaires). These two traditions have relatively separate literatures supporting their use (Roisman et al., 2007). Whereas the assessment of attachment narratives yields narrative coherence scores and attachment classifications, the use of self-report scales traditionally yields assessments on two dimensions of attachment security, attachment anxiety and avoidance. For a review of the merits and overlap of these approaches, we refer the reader to other sources (e.g., Crowell et al., 2008; Roisman et al., 2007). In this study, in order to be comprehensive, we also asked participants to complete a well-established self-report measure of attachment for use as a competing predictor of relationship satisfaction.

people are in life”), and the effect of the deployment on their relationships (e.g., “Every time we have this deployment it’s going to be seen as something that we both endured in this relationship ...and the more deployments as comes we’re going to learn something new from um our experiences from the time that he’s here uh we’ll learn from our falls and our rights and wrongs”).

Narrative attachment security—To assess attachment security, we adapted the dominant coding scheme used to evaluate attachment narratives: we used Main’s coding system for the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1996) and her concept of narrative coherence and applied them to the analysis of narrative discourse on the stream-of-consciousness task used in our study. Main’s narrative coherence coding system has been applied to greater than 10,000 attachment interviews since its advent, has demonstrated reliability and validity in both clinical and community adult samples (Bakermans-Kranenburg & van IJzendoorn, 2009; van IJzendoorn & Bakermans-Kranenburg, 2010), and has been adapted for use in studying narratives regarding couple relationships (Crowell et al., 1999). Among both adults and children, attachment classification based on narrative coherence is unrelated to age, gender, or verbal and performance intelligence (Bakermans-Kranenburg & van IJzendoorn, 1993; see Hesse, 1999, 2008, for reviews; Target, Fonagy, & Shmueli-Goetz, 2003). However, attachment classification based on narrative coherence is association with socioeconomic status (SES), with lower SES individuals being more likely to be classified as insecure and have low narrative coherence (van IJzendoorn & Bakermans-Kranenburg, 1996).

Here we adapted Main’s coding system for use with brief relationship narratives provided during the stream-of-consciousness task. According to this system, a highly secure participant generates a narrative that satisfies Grice’s (1975) maxims of coherent discourse, including manner, relevance, quality, and quantity. Importantly, in this coding system, linguistic process trumps content – for example, a highly secure participant might speak entirely about the negative aspects of her relationship with her spouse but will do so coherently, so that the ideas are presented in an orderly, consistent, and comprehensible way. A highly secure participant may also demonstrate that she has implicit trust in her partner’s availability and responsiveness, that her partner loves her and has her best interests at heart, and that the deployment represents a temporary disruption in partner responsiveness, not a change in the partner’s desire to be connected to the NDS. In contrast, low security participants violate Grice’s maxims in myriad ways. For example, they may avoid discussing the deployment and the couple relationship entirely (violation of relevance), discuss these topics in a superficial, idealized, or contradictory way (violation of quality), or become so caught up in anger at the spouse during the stream of consciousness that they begin directly speaking to the spouse without alerting the listener (violation of manner; see Table 1).

Verbatim stream-of-consciousness transcripts were coded on a single five-point scale, with a score of 1 indicating *not at all secure in the relationship (low narrative coherence/many violations of Grice’s maxims)* and a score of 5 indicating *extremely secure in the relationship (high narrative coherence/few violations of Grice’s maxims)*. Six raters underwent training on the coding system and completed a reliability test consisting of 14 cases (intercoder agreement was $ICC(6, k) = .65$) before coding the 37 transcripts from the current study, $ICC(6, k) = .60$. All materials used in coder training and reliability testing were derived from a different sample of NDSs. The 37 transcripts in the current study were coded by all six coders— we then took the mean of the six raters’ codes for each participant for use in subsequent analyses. Mean narrative coherence in this sample was 2.85, $SD = .93$.

Word use—Verbatim stream-of-consciousness transcripts were edited according to the protocol outlined by Pennebaker and analyzed by the Linguistic Inquiry and Word Count system (LIWC; Pennebaker, Francis, & Booth, 2001), which tabulates word use as a percentage of total words in a text that fall into a given category. This report utilizes the first person plural pronoun category (“we”, “us”, “our”), or *we*-talk, as a potential indicator of communal coping, and total word count in the stream of consciousness task as a covariate. For example, in the following quote from a NDS in our study, LIWC would identify six instances of first person plural words out of a total of 47 words uttered: “*We* got more time to move into *our* house and set up this time than *we* did last time. *We* have been here for 8 months. Last time *we* moved and he left 4 months after *we* moved. So *we* are in a better position this time.”²

Although most pronoun studies have used the *we*-talk variable derived from LIWC alone for this purpose, some have taken first-person singular usage (I-talk) into account as well by using a *we/I*-ratio score (first person plural pronouns divided by total first person pronouns; Robbins et al., 2012; Rohrbaugh et al., 2008, 2012). Because the latter indicator can show stronger associations with health and/or relationship outcomes than *we*-talk alone, we examined both indices in the present study³. Mean *we*-talk in this sample was 1.83, *SD* = 1.11.

Relationship satisfaction—Participants completed the Dyadic Adjustment Scale (DAS; Spanier, 1976) at T1 and the Dyadic Adjustment Scale Short Form (DAS-4; Sabourin, Valois, & Lussier, 2005) at T2 and T3, which consists of four items from the original DAS: 1) “How often do you discuss or have you considered divorce, separation, or terminating your relationship?”; 2) “In general, how often do you think that things between you and your partner are going well?”; 3) “Do you confide in your partner?”; 4) “Please circle the dot which best describes the degree of happiness, all things considered, of your relationship.” Due to our desire to compare across the different time points, we extracted the four items on the DAS-4 from participants’ T1 DAS responses for subsequent analyses. The DAS-4 demonstrates high reliability and was validated with the original and other short forms of the DAS (Sabourin et al., 2005). The four questions on the DAS-4 derive from the consensus section of the DAS, indicating that they measure the degree to which couples agree on matters that are important to the relationship (Graham, Liu, & Jeziorski, 2006; Spanier, 1976). For the purposes of this study, we used the four items included in the DAS-4 at all three time points. Higher scores reflect greater satisfaction in the relationship. Internal consistency in this sample ranged from $\alpha = .80 - .89$.

Data Analytic Plan

We conducted a series of hierarchical linear regressions to evaluate the study hypotheses. Following the initial models, we evaluated the influence of covariates on the observed effects in order to assess whether the linguistic markers examined here were associated with relationship satisfaction variables above and beyond the contribution of other factors known to be associated with relationship satisfaction (e.g., whether or not the couple had children).

²Given that LIWC does not take into account the greater context of the word use, it is possible that NDSs could have been using first person plural words in reference to people other than their spouses. Although our anecdotal observations suggested that most *we*-talk on the stream of consciousness task occurred in relation to the spouse, it is possible that for any particular NDS, high *we*-talk could be due to the use of first person plural pronouns in reference to their children, family members, or friends, thereby indicating a relational stance of sorts but not a communal orientation vis-à-vis the spouse. Our hope was that in assessing two very different linguistic indicators in our study, we would capture different facets of psychological orientation with respect to the relationship during deployment.

³Although we report the results in terms of frequency of first person plural pronouns used, we conducted an additional set of analyses with the *we/I* proportion variable and the effects were consistent.

Results

Table 2 shows bivariate correlations among the main study variables. Correlations revealed that narrative coherence was positively associated with T3 relationship satisfaction and that *we-talk* was positively associated with T2 relationship satisfaction; narrative coherence and *we-talk* were not significantly associated, and narrative coherence was not significantly associated with T1 or T2 relationship satisfaction (see Table 2). Further, consistent with other studies examining overlap in narrative coherence-derived attachment security and self-reported attachment security (e.g., Roisman et al., 2007), narrative coherence was not significantly associated with ECR-R anxiety or avoidance. Surprisingly, T1 DAS scores were negatively associated with T2 and T3 DAS scores. To further explore these correlations we inserted the T1 DAS scores for participants who did not complete the T2 and T3 assessments and evaluated the bivariate correlation between T1 and these modified T2, $r = -.17$, $p = \text{ns}$, and T3 DAS variables, $r = .20$, $p = \text{ns}$. We interpret this to mean that had all of the participants completed the study, the associations would be non-significant across time, which can simply reflect instability in a construct we might expect to be unstable in this sample.

Self-reported attachment anxiety and attachment avoidance were both positively associated with *we-talk*. Follow-up partial correlations revealed that, after controlling for ECR-R avoidance, attachment anxiety was not significantly associated with *we-talk*, and after controlling for ECR-R anxiety, attachment avoidance was not significantly associated with *we-talk*. Similarly, the results of a hierarchical regression revealed that the interaction between attachment anxiety and avoidance was not associated with *we-talk*, which means that the fearful-avoidant attachment grouping (i.e., those individuals high in both anxiety and avoidance) is not entirely driving the effect observed here.

Hypothesis Testing: Relationship Satisfaction Across the Deployment

Paired-samples *t*-tests revealed significant decreases in relationship satisfaction on the DAS-4 from T1 (pre-deployment) to T2 (during deployment), $t(36) = 13.37$, $p < .001$, and from T1 to T3 (post-deployment), $t(19) = 9.40$, $p < .001$. Although DAS means became progressively lower across measurement occasions, relationship satisfaction scores for T2 and T3 were not significantly different. Participants' depressive symptoms increased non-significantly from T1 to T2 and then decreased from T2 to T3 at a marginal level of statistical significance, $t = 1.93$, $p = .07$. Participants who did and did not complete the Time 2 (T2) and Time 3 (T3) assessments did not differ in age, relationship satisfaction, T1 psychiatric symptoms, family structure, deployment length, number of previous deployments, or narrative coherence or *we-talk* on the stream of consciousness task.

Hierarchical regressions were used to predict T2 and T3 DAS-4 scores after accounting for T1 DAS-4 scores. As shown in Table 3, after accounting for the relevant covariates, *we-talk*, but not judge-rated narrative coherence, predicted greater relationship satisfaction at T2. With respect to T3 relationship satisfaction, judge-rated narrative coherence, but not *we-talk*, predicted greater relationship satisfaction. Follow-up analyses indicated that both of these effects remained significant after accounting for the following covariates: T1 psychiatric adjustment [anxiety symptoms, depressive symptoms, stress], T1 self-reported romantic attachment style, and demographic/military variables (number of children the couple has, whether the NDS is a member of the military, number of spouse's previous deployments). Participants who used more *we-talk* showed lower relationship satisfaction during deployment, and participants who had higher judge-rated narrative coherence showed lower relationship satisfaction post-deployment after controlling for covariates and their initial levels of relationship satisfaction. The interaction between narrative coherence and *we-talk* was not significantly associated with relationship satisfaction at T2 or T3. Further,

because T1 DAS (relationship satisfaction) was negatively correlated with T2 and T3 DAS scores, we conducted an additional set of models predicting T2 and T3 DAS without accounting for T1 DAS. The pattern of findings remained the same, though the effect sizes of the independent variables were larger.

Finally, because the sample size at T3 was small, we used two imputation techniques to examine the potential influence of missing data on the prospective effect of narrative coherence on relationship satisfaction. First, we estimated participants' T3 relationship satisfaction data by using their T2 DAS-4 score. Second, we estimated T3 relationship satisfaction by taking the average change in DAS-4 score from T1 to T3 and applying this difference to the T1 DAS-4 scores of participants with missing T3 data. The pattern of results was identical with both methods of imputation and with the original analysis: Beta weights indicated that narrative coherence, $\beta = .44, p < .01$, but not *we-talk*, $\beta = .11, p = ns$, was significantly associated with higher T3 relationship satisfaction.

Discussion

The goal of the current study was to evaluate whether non-deployed spouses' (NDSs) relationship satisfaction decreases over the course of a deployment, and to enhance our understanding of how NDSs cope with military deployment. We focused on two conceptually important topics— NDSs' sense of security with and communal orientation vis-à-vis their deployed spouse— and evaluated whether these variables protected participants against declines in relationship satisfaction across the deployment.

Consistent with the study hypotheses, NDSs' relationship satisfaction significantly decreased from pre-deployment to assessments obtained two weeks following spouses' departures and two weeks following their return. Of note is that our assessment of pre-deployment satisfaction occurred within the period of time when military family members are thought to begin preparing psychologically for the service member's absence, which is characterized by some researchers as a detachment process (DeVoe & Ross, 2012; Logan, 1987; Pincus et al., 2001). It is noteworthy that NDSs' relationship satisfaction did not recover to its pre-deployment level by the post-deployment assessment. The reunion phase (the time period immediately following the service member's return) is often discussed as a time when family members experience intense joy at the service member's return but also may experience negative emotions (anger, confusion) as they adjust to post-deployment circumstances (Knobloch & Theiss, 2011; Pincus et al., 2001). Our results suggest that following the deployment, NDSs may be feeling less certain about the stability of their marital relationship than they did immediately before the deployment, suggesting prolonged impacts of the deployment on relationship satisfaction. In future studies it will be important to follow NDSs over longer periods of time (for example, six months after a deployment) in order to see how long this effect lasts and also to compare these changes in relationship satisfaction to those observed in a control group.

Further, both linguistic indicators were associated with relationship satisfaction— greater *we-talk* was associated with higher relationship satisfaction during the deployment and greater judge-rated narrative coherence predicted higher levels of relationship satisfaction at post-deployment. These state of mind indicators were only modestly intercorrelated, suggesting that they tapped into distinct aspects of relational behavior, and both variables were associated with relationship satisfaction after accounting for a wide range of covariates, including demographic factors, and NDSs' self-reported attachment style, pre-deployment psychiatric adjustment, and amount of contact with spouse during the deployment.

Greater use of *we* words when speaking about the deployment may reflect how a NDS approaches relationship challenges and indicate a strong sense of shared identity with the deployed spouse. In this case, despite his physical absence, she views the deployment as a shared experience and her spouse as present in her psychological world, and linguistically represents “her” and “his” experiences as shared experiences. This is consistent with interdependence theory, which states that sacrificing for one’s partner and having a *we*-oriented stance toward relationship challenges boosts problem-solving and relationship satisfaction within a couple (Impett et al., 2005; Whitton et al., 2007). Further, it also is possible that this relational orientation enables the NDS to feel that the deployed spouse’s work and experiences are partly hers— in other words, it may enable her to feel that she is part of the mission, which in turn may help her weather the deployment with less resentment towards her spouse.

That *we*-talk was associated with relationship satisfaction during deployment but not after may be an artifact of the small sample size at T3 (given that the direction of the effect was in the hypothesized direction), or it may indicate that adopting this communal orientation to the relationship challenge only predicts greater satisfaction during but not after deployment, which would be perplexing. We expect that viewing relationship challenges as shared obstacles would protect marital satisfaction after deployment, but *we*-talk during a deployment may ironically reflect a failed strategy to feel closer to a spouse who is physical absent. Alternatively, a communal orientation (during deployment) may not predict post-deployment satisfaction because service members return from deployment with distinct experiences that may not be easily integrated into a couple’s sense of shared experience. In other words, perhaps NDSs who have a *we* stance during deployment have difficulty accepting the distance that has grown between the spouses upon the service member’s return. In future work it will be important to examine the service member’s response to reunion and whether this interacts with the NDSs’ relational orientation during the deployment— for example, do high *we*-talk NDSs with spouses who return in a more disengaged state ironically struggle more than low *we*-talk spouses?

Narrative coherence, on the other hand, was only associated with post-deployment relationship satisfaction. This may reflect the fact that narrative coherence can be high even in narratives where NDSs describe feeling badly about their relationships and the deployment (see Table 1 for an example). The ability to speak coherently about negative emotional experiences may predict longer-term relationship outcomes better than it does current relationship satisfaction. This perspective is consistent with findings demonstrating that highly secure adults can recognize, experience, and tolerate relational distress, all the while maintaining a sense of emotional equanimity (see Mikulincer & Shaver, 2003). In other words, high levels of narrative coherence may protect against long-term declines in relationship satisfaction even when people are confronted with periods of object difficulty.

Perhaps for highly secure and connected NDSs, deployments represent a temporary hurdle, one they are able to weather with relatively intact or even improved feelings about their relationships. The prospective increase in relationship satisfaction we observed among highly secure/connected NDSs may indicate that these NDSs are able to use what is a stressful relationship challenge to strengthen their confidence in and commitment to their relationships. Further, our results suggest that attachment security (as indexed by narrative coherence) may be a more important factor than communal orientation to coping in this military deployment separation context. It will be important for future studies to examine relationship satisfaction over a longer follow-up period to see if the effects observed here hold after more time has passed and even following subsequent deployments. Given the rapid operations tempo of the armed forces, it is important to identify factors that enable couples to re-engage in their relationships quickly following deployment, especially in light

of the fact that service members often have little time before they begin preparing for the next deployment (Karney et al., 2011).

Consistent with previous work examining adult attachment from the narrative tradition (e.g., Roisman et al., 2007), our narrative coherence measure of attachment security was not significantly associated with NDSs' self-reported attachment anxiety and avoidance. These two methodological traditions approach the assessment of attachment differently – self-report measures elicit adults' assessment of their style towards romantic relationships (specifically, how much anxiety and avoidance they experience in general in romantic relationships), whereas the state of mind approach to assessing attachment involves the use of independent raters' evaluation of linguistic markers of coherence, consistency and collaboration within a specific relationship narrative (Crowell et al., 1999; Roisman et al., 2007). Given the differences in mode of assessment, it is unsurprising that these methodologies often yield discrepant results. In this sample, self-reported attachment style was unrelated to changes in relationship satisfaction while coder-rated narrative coherence predicted post-deployment relationship satisfaction after accounting for pre-deployment relationship satisfaction.

Although not a central goal of the investigation, it is noteworthy that both self-reported attachment avoidance and anxiety were positively associated with *we*-talk. Follow-up analyses revealed that neither attachment anxiety nor avoidance were associated with *we*-talk after controlling for the other ECR-R scale. Further, the interaction between anxiety and avoidance was not significantly associated with *we*-talk, suggesting that wives with the fearful-avoidant attachment style are not driving this association. In other words, wives' reports of *both* attachment and avoidance were associated with greater *we*-talk when discussing the deployment and their relationship, and this observation is likely due to overlap in these attachment constructs rather than *we*-talk being uniquely associated with either anxiety or avoidance. These findings suggest that *we*-talk may serve different functions for different people. On one hand, *we*-talk may reflect communal coping for some people in some situations (cf. Rohrbaugh et al., 2008); on the other hand, high levels of *we*-talk may also reflect blurred boundaries within a relationship, which would be more consistent with the behaviors of someone high in attachment anxiety (and fearful avoidance). Use of *we*-talk during the stressful period of a partner's physical absence may derive from anxiety about the partner's absence, avoidance or denial of the fact that he is gone, or, as proposed above, a communal coping orientation (i.e., approaching the deployment and the separation as a shared challenge). Replications of these findings would yield important information about the meaning of *we*-talk, particularly during significant relational stressors⁴.

Limitations and Conclusions

The results of this preliminary report should be interpreted in light of its limitations. First, we employed linguistic (observational) indicators of attachment security and communal coping but self-report measures of relationship satisfaction. In future research it will be important to examine more comprehensively how linguistic indicators of attachment security and communal coping do and do not correlate with self-report measures of the same or similar constructs, as well as with perceptions of relationship quality. Second, pre- and

⁴In an attempt to better understand the meaning of *we*-talk during deployment, we evaluated the association between *we*-talk and loneliness (as reported on the UCLA Loneliness Scale, Russell, 1996). *We*-talk during deployment was not significantly associated with greater loneliness at pre-deployment, $r = .27, p = .11$, during deployment, $r = -.01, p = .99$, or at post-deployment, $r = -.17, p = .47$. On the other hand, narrative coherence was associated with lower loneliness at all three time points, though this association was only statistically significant at the T2 assessment: $r = -.33, p = .04$. Given the small sample size, we think it unwise to over-interpret these findings, but they increase our curiosity about the meaning of *we*-talk during a separation – does it stem from loneliness and difficulty dealing with the separation, or is it an attempt to stave off loneliness via over-involvement in the relationship?

post-deployment assessments occurred approximately two weeks before and after the deployment, which may not constitute a broad enough window in which to examine changes in relationship satisfaction – specifically, NDSs may already begin preparing themselves for the impending separation by two weeks prior; similarly, two weeks after the spouse's return may still be part of a "honeymoon" phase for some couples (cf. Riggs & Riggs, 2011) and may not represent a stable assessment of post-deployment relationship satisfaction. Further, our initial sample was small and our post-deployment sample had significant attrition due to substantial barriers in the recruitment and retention of military spouses. In future work it will be important to examine these questions among a larger and more heterogeneous sample of NDSs. In addition, by design our sample was exclusively comprised of female NDSs – although this gender homogeneity likely reduced statistical noise in an already small sample, in future work it will be important to evaluate these questions among male NDSs, and potentially, among non-deploying partners in same-sex couples. It is likely that these relationship partners experience different stressors during the deployment, and potentially that their modes of coping are distinct. Finally, here we only assessed NDSs' perception of relationship satisfaction. Future studies should assess both members of the couple, not only for their perceptions of relationship quality, but also for how they evince attachment security and communal orientation linguistically.

Despite these limitations, the current findings have implications for military couples and may also inform our understanding of non-military couples undergoing prolonged separations. High quality relationships, especially marriage and marriage-like partnerships, are vital to our physical and mental health (Holt-Lunstad, Smith, & Layton, 2010; Sbarra, Law, & Portley, 2011; Uchino, 2004). Approaching relationship challenges, even ones that physically separate spouses, with a sense of security and collaboration may be essential for weathering these stressors (see Diamond, Hicks, & Otter-Henderson, 2008). Our results suggest that behavioral markers of a wife's attachment security and communal coping during a husband's military deployment are relevant to her psychological and relational adjustment. If these findings replicate in future work, it will be critical to find ways to enhance narrative coherence and communal orientations via intervention research.

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Table 1

Selected Excerpts of Stream-of-Consciousness Speech Samples Rated by Independent Coders as Having High and Low Narrative Coherence

Narrative Coherence	Stream-of-consciousness Speech Sample
<p>High: <i>Satisfies Gricean maxims</i></p>	<p>“...And, um, um, it’s just been hard. I mean I’m tired and I’m sad and I try to just push it away, but I don’t. I try to deal with it too because I know that if I don’t get rid of it it’s going to creep up on me at some point and I’m not going to know what it is anymore because it’s morphed into something else and I won’t even realize what emotion I’m feeling. So basically as far as feelings and emotions go with the deployment I’m dealing with them as they come...”</p> <p>“So I think having his continuity in my life has been needed, but he’s not here. ... Um I do miss him terribly, I always miss him. Of course I think your heart always grows fonder when they’re gone. You tend to forget any of the negatives, but um you know I guess the benefits of deployment is you constantly get to revisit how much you do care and love each other and you get to have that constant excitement of counting down until when you see each other again. Um so not that I would trade it for that”</p>
<p>Low: <i>Violations of Relation (talking about children), Manner (grammatically entangled, repeats words, changes focus of discussion repeatedly and without notice)</i> <i>Violation of Quality (circularity to her discussion about these topics); Manner (sentences/thoughts not always easy to understand)</i></p>	<p>“...And I spend a lot of this deployment wondering if he is going to be hurt or if the helicopter is going to crash and what will happen to me and my kids if he dies and then on the flipside being at home my kids are seventeen and thirteen, and my son is taking this deployment very hard. My husband was gone eleven months last year and now three and a half months this year. It’s been really hard it’s been a continual he’s been gone gone gone and so my son you know really needs his dad during this time in his life and he is really struggling...”</p> <p>“Well this one actually seems so far better than the last one. It is annoying and sad ...this time I’m not alone... but it is annoying because you can’t know where he is and I rarely get to talk to him, the last time I got to see him on webcam and I rarely get phone calls and if I do they are at like two in the morning. And I don’t get emails I get letters and that takes forever because it takes like a month to get letters there and a month to get letters back. I don’t know I think it is kind of scary because it hasn’t even been that long and I have so much longer to go. So I don’t even know if I really even begun to fully experience it yet. I think I am still in denial because it just feels like I’m in a new house and he just home. ... I just I don’t know I just want everything to stay the same I just I worry there is chance they are going to {Country} and that would kill me can’t even imagine it...”</p>

Table 2

Correlation Matrix for Key Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 We-talk T2	-----															
2 Niar Coh T2	.20	-----														
3 T1 Rel Sat	-.21	.12	-----													
4 T2 Rel Sat	.45**	.10	-.56**	-----												
5 T3 Rel Sat	.08	.44*	-.35	.47*	-----											
6 T1 Age	-.15	.01	-.13	.01	-.16	-----										
7 T2 Anx Sxs	-.08	.01	-.21	-.01	.29	-.04	-----									
8 T2 Dep Sxs	-.03	-.18	-.13	-.12	-.15	.27	.35*	-----								
9 T2 Per Stress	-.01	-.23	-.25	.05	-.03	.23	.47**	.54**	-----							
10 T1 Att Anx	.42**	-.04	-.40*	.24	.34	-.15	.38*	.42**	.22	-----						
11 T1 Att Avoid	.36*	.16	-.39*	.29	.09	-.16	.13	.27	-.11	.64**	-----					
12 Children	.01	.02	.09	-.03	-.30	.44**	-.26	-.05	-.23	-.12	-.16	-----				
13 Mil Mem	.10	.14	-.06	.02	-.26	.13	-.16	-.03	-.23	-.09	-.05	.24	-----			
14 Dep Length	-.01	-.20	-.27	.12	.26	.31*	.31*	.33*	.49***	.36*	.03	-.04	-.15	-----		
15 War Deps	-.23	.08	.18	-.01	-.18	.43*	-.18	.09	-.14	-.40*	.02	.29	-.06	-.32	-----	
16 T2 Contact	.06	.21	.34*	-.14	-.18	.04	-.13	-.08	-.40*	-.15	.19	.24	-.07	-.39*	.55**	-----
17 T3 Contact	.22	-.05	.07	-.03	.13	-.29	.14	.56*	.03	.34	.39	-.05	-.07	-.01	-.05	.37

Note.

*
 $p < .05$,**
 $p < .01$,***
 $p < .001$;

T1 = Time 1 (pre-deployment assessment); T2 = Time 2; T3 = Time 3 (post-deployment assessment); Rel Sat = relationship satisfaction; Dep Length = Length of Deployment; NC = judge-rated attachment security on the SOC; Anx Sxs = self-reported anxiety symptoms; Dep Sxs = self-reported depressive symptoms; Per Stress = perceived stress; Att Anx = self-reported romantic attachment anxiety (ECR-R); Att Avoid = self-reported romantic attachment avoidance (ECR-R); Mil Mem = whether or not NDS is also a member of the military; Children = One or more children in family; War Deps = number of spouse's previous wartime deployments; Contact = amount of contact with deployed spouse per month.

Table 3
Hierarchical Regression Analyses Examining Security (Narrative Coherence) and Communal Orientation (*We-talk*) in the Longitudinal Prediction of Relationship Satisfaction

Model	Step	Variable	Predicting T2 Relationship Satisfaction				Predicting T3 Relationship Satisfaction			
			<i>R</i> ²	<i>b</i> (<i>SE</i>)	<i>t</i>	95% CI	<i>R</i> ²	<i>b</i> (<i>SE</i>)	<i>t</i>	95% CI
Basic	1		0.03				0.14			
		Dep Length		0.02 (0.02)	0.74	[-0.03, 0.06]		0.05 (0.03)	1.54	[-0.02, 0.11]
		Age		-0.01 (0.01)	-0.21	[-0.02, 0.02]		-0.02 (0.01)	-1.24	[-0.04, 0.01]
	2		0.31				0.23			
		T1 Rel Sat		-0.54 (0.14)	-3.87**	[-0.83, -0.26]		-0.25 (0.19)	-1.31	[-0.66, 0.16]
	3		0.12				0.57			
		NC		0.04 (0.06)	0.65	[-0.08, 0.15]		0.22 (0.07)	3.32**	[0.08, 0.35]
		<i>We-talk</i>		0.11 (0.05)	2.28*	[0.01, 0.20]		0.00 (0.07)	0.04	[0.15, 0.16]
Total <i>F</i> (5, 31) = 4.94, <i>p</i> = .002							Total <i>F</i> (5, 14) = 3.68, <i>p</i> = .025			

Note.

* *p* < .05,
 ** = *p* < .01,
 *** = *p* < .001;

CI = confidence intervals; T1 = Time 1 (pre-deployment assessment); T2 = Time 2; T3 = Time 3 (post-deployment assessment); Rel Sat = relationship satisfaction; Dep Length = length of deployment; NC = judge-rated attachment security on the SOC; only participants who completed the study are included in the presented analyses.