

With or Without You: Preliminary Evidence That Attachment Avoidance Predicts Nondeployed Spouses' Reactions to Relationship Challenges During Deployment

Jessica L. Borelli
Pomona College

David A. Sbarra
University of Arizona

Jonathan E. Snavely
Claremont Graduate University

Dana L. McMakin
University of Pittsburgh School of Medicine

John K. Coffey
Claremont Graduate University

Sarah K. Ruiz
University of Minnesota

Binghuang A. Wang and Samuel Y. Chung
Pomona College

Although much is written about the impact of deployment on nondeployed spouses (NDSs) and couple relationships, few empirical studies address this directly. Using attachment theory as a guiding framework, this study followed 32 NDSs across a military deployment. We examined the prospective association between NDSs' attachment avoidance and their response to relational challenges (assessed using both correlational and experimental designs) during a deployment. Two weeks before deployment, NDSs provided self-reports of their attachment avoidance and relationship satisfaction. During the deployment, they provided stream-of-consciousness speech samples regarding (a) the deployment and (b) their anticipated reunion with their spouse: after each speech sample they reported on their subjective anxiety. Based on random assignment, NDSs then completed either an experimenter-led "personal" or "relational" memory savoring task, reporting on their emotional state before and after the task. Two

JESSICA L. BORELLI received her PhD in clinical psychology from Yale University and completed her predoctoral clinical internship at University of California, Los Angeles's Semel Institute for Neuroscience and Human Behavior. She is currently an assistant professor of psychology at Pomona College in Claremont, California. Her research program focuses on attachment relationships, emotion, parenting, and the goal of developing attachment-based interventions to enhance well-being.

DAVID A. SBARRA received his PhD in clinical psychology at the University of Virginia. He is an associate professor of Psychology at the University of Arizona, where he also serves as director of Clinical Training. The focus of his research is on close relationships and health, especially the stress that follows social separations like divorce and military deployment.

JONATHAN E. SNAVELY received his MA in psychology and evaluation from Claremont Graduate University, where he is now pursuing a doctorate in applied social psychology. His primary research investigates the differential impact of relational and collective self-construal on social cognition, especially in relation to prosocial behavior, health, and the meaning-making process.

DANA L. MCMAKIN received her PhD in clinical child psychology from the University of Denver and completed her predoctoral clinical internship at University of California, Los Angeles's Semel Institute for Neuroscience and Human Behavior. She is currently an assistant professor of psychiatry at University of Pittsburgh School of Medicine. Her research program focuses on using developmental affective neuroscience models to inform novel intervention strategies for adolescents, with a particular focus on sleep, anxiety and depression.

JOHN K. COFFEY received his MA in positive developmental psychology from Claremont Graduate University and his MSW in social work from the University of Michigan. He is currently a PhD candidate in positive developmental psychology at Claremont Graduate University. John is the past-president of the Student Division of the International Positive Psychology Association. His research interests include emotions, relationships, motivation, savoring, and well-being.

SARAH K. RUIZ received her BA in psychology from Scripps College. She is currently pursuing a PhD at the University of Minnesota's Institute of Child Development. Her research interests include early attachment relationships and their consequences across development.

BINGHUANG A. WANG received his BA in psychology from Vassar College. He is currently a research assistant at the Child Attachment, Relationships, and Emotion (CARE) laboratory at Pomona College. His areas of professional interests include investigating emotions and well-being within the context of attachments, and close relationships.

SAMUEL Y. CHUNG received his BS in psychology from the University of California, San Diego. He is currently a research assistant in Jessica Borelli's Child Attachment, Relationships, and Emotion (CARE) laboratory at Pomona College. His research interests include emotions and interpersonal relationships.

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CORRESPONDENCE CONCERNING THIS ARTICLE should be addressed to Jessica L. Borelli, Pomona College, 647 N. College Way, Claremont, CA 91711. E-mail: jessica.borelli@pomona.edu

weeks after the deployment, NDSs reported on their relationship satisfaction. Higher avoidance was associated with more frequent anxiety word use and higher self-reported anxiety when discussing the anticipated reunion. Avoidance moderated the association between savoring condition and postsavoring negative emotion, such that in the relational condition only, greater avoidance was related to more negative emotion. Postsavoring emotional state moderated the longitudinal association between predeployment attachment avoidance and postdeployment relationship satisfaction. Results are discussed in terms of their contribution to the literature on coping during attachment stressors as well as their implications for treatment with NDSs undergoing deployment.

Keywords: military deployment, attachment, avoidance, anxiety, savoring

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The impact of deployment on service members' mental health is well documented (Cook, Riggs, Thompson, Coyne, & Sheikh, 2004; Hoge, Auchterlonie, & Milliken, 2006), but research examining deployment's impact on military families lags far behind, with extant studies suggesting that military couples are at risk for poor outcomes after deployments (Goff, Crow, Reisbig, & Hamilton, 2007). Furthermore, nondeployed spouses (NDSs) are also at increased risk for clinically significant psychiatric distress during and after their spouse's deployment (e.g., Eaton et al., 2008; Lester et al., 2010). For NDSs, deployment has the potential to undermine feelings of security in the relationship itself. Learning how couples weather these types of relationship challenges—ones that threaten the very integrity of the relationship itself—may offer important information about risk and resilience in the face of significant relationship stressors (Riggs & Riggs, 2011; Vormbrock, 1993).

Using Attachment Theory to Understand Military Deployment

According to attachment theory (Ainsworth, 1967; Bowlby, 1988), the degree to which caregivers respond sensitively to infants' cues influences the development of infants' internal working models of attachment (IWM), schemas comprised of implicit beliefs and expectations about the self, intimate relationships, and the self in relationships. When caregivers consistently respond in a sensitive manner to infants' attachment bids (e.g., providing comfort to the infant when he or she is showing signs of distress), the infant learns to freely experience and express attachment-related needs (Bowlby, 1988). Such infants develop a secure IWM, expecting that others will be there to support them in times of need (Bowlby, 1969/1982). In contrast, when caregivers respond to attachment bids by rejecting or ignoring the infant, the infant then learns to turn his or her attention away from attachment-related thoughts and feelings, such as the desire for comfort from a caregiver. An infant exposed to this type of parental care is thought to develop an insecure-avoidant attachment IWM, such that he or she expects close others to be physically or psychologically unavailable during times of need and believes that the expression of personal need or vulnerability reduces others' responsiveness (Bowlby, 1969/1982). In general, IWMs born of parent-infant interactions are thought to be relatively stable across development and to influence individuals' expectations for, and beliefs about, close relationships into adulthood (e.g., Waters, Merrick, Treboux, Crowell, & Albersheim, 2000).

Attachment avoidance and anxiety are considered two individual differences in adult attachment styles that organize the way

people behave, think, and feel in close relationships (Mikulincer & Shaver, 2003). Individual differences in attachment styles may be critical in explaining how people respond to relational separations, particularly those involving threat to an attachment figure, such as military deployment (Vormbrock, 1993). Bowlby (1973) proposed that separations from attachment figures are a primary activator of the attachment system. Military deployment, characterized by physical separation, difficulty communicating, and threat of loss can activate attachment-related emotion regulatory strategies and, potentially, destabilize NDSs' security in the relationship (Bowlby, 1973; Riggs & Riggs, 2011; Vormbrock, 1993).

Adults high in attachment avoidance may be particularly vulnerable to destabilization because of separations. Research suggests that when a relationship stressor exceeds avoidant adults' ability to cope via deactivation of the attachment system, such individuals are at heightened risk for negative outcomes (e.g., Sbarra & Borelli, 2013). Military deployment may be one such stressor that exceeds the coping capacity of many NDSs, especially those who are high in attachment avoidance.

In the face of attachment threats, people high in attachment avoidance minimize attachment-related thoughts or feelings in the service of maintaining the proximity and investment of close others and use so-called deactivating emotion regulation strategies (e.g., Dozier & Kobak, 1992). In the context of military deployment, a deactivating, avoidant strategy might involve downplaying the importance of the separation, and minimizing the risk involved in the deployment, avoiding thinking about reintegration with one's spouse. Although this may be a relatively effective strategy for maintaining self-organization during the separation itself (Bowlby, 1969/1982), avoidant NDSs' vulnerabilities may emerge when the situation calls for a reengagement in the relationship, such as during the reunion with one's spouse.

The Current Investigation

We examined whether predeployment attachment avoidance predicted NDSs' responses to relational challenges during the deployment, adding to preliminary data suggesting that attachment insecurity predicts decreases in NDSs' relationship satisfaction across a deployment (Borelli et al., 2013). We focused on avoidance because the reunion phase of deployment is fraught with potential problems for military couples (Pincus, House, Christensen, & Adler, 2001), and reunions may be uniquely challenging for avoidant people (cf., Sroufe & Waters, 1977).

We adopted both correlational and experimental methods to examine the hypothesis that attachment avoidance would be asso-

ciated with negative emotion when NDSs are directed to focus on attachment-related themes during a deployment. First, using a speech task, we asked all NDSs to speak in an open-ended manner about (a) the deployment itself and (b) their anticipated reunion with their spouses. After each speech task, we asked participants to rate their felt anxiety. Participants' speech samples were transcribed and subjected to linguistic analysis (e.g., Pennebaker, Mehl, & Niederhoffer, 2003) to assess the frequency of anxiety word use, a behavioral measure of anxiety, in the two speech tasks. After the reunion speech task, participants evaluated the relative difficulty of the two speech tasks.

Based on the idea that for people high in attachment avoidance, thinking about the deployment and the reunion are equally stressful, we hypothesized that the association between the behavioral and subjective indicators of NDSs' anxiety (as well as appraisals of task difficulty) across the two tasks would be moderated by attachment avoidance. Specifically, we expected that for highly avoidant people, anxiety word use on the two tasks would be positively associated (Hypothesis 1A). Second, we predicted the same pattern would hold true for self-reported anxiety (Hypothesis 1B). In evaluating these hypotheses, we asked whether attachment avoidance is related to greater correspondence (signified by a stronger positive correlation) in indices of anxiety across the two tasks. Third, based on the idea that for highly avoidant NDSs, completing the reunion stream-of-consciousness (SOC) task would be of comparable or greater difficulty than completing the Deployment SOC, we hypothesized that attachment avoidance would be associated with perceptions that the reunion speech task was more difficult relative to the deployment speech task (Hypothesis 1C).

Next, using experimental methods, we examined whether attachment avoidance moderates the potential emotional benefits NDSs receive when thinking about their partner. Drawing from the positive psychology literature (Bryant & Veroff, 2007), we randomly assigned NDSs to one of two tasks in which they were prompted to focus on or savor the positive aspects of an experience, either a memory involving the self only (*personal savoring*) or one including the self and the deployed spouse (*relational savoring*). NDSs rated their emotional state before and after the savoring exercise. We predicted that attachment avoidance would moderate the association between savoring task condition and postsavoring task emotion, such that in the relational savoring condition, attachment avoidance would be associated with greater negative emotion (Hypothesis 2). Further, we examined the interaction between attachment avoidance, postsavoring emotional state, and NDSs' psychological state with respect to their marital relationships 2 weeks after the deployment. Specifically, here we examined (a) NDSs' confidence regarding their ability to stay emotionally connected to their spouses during future deployments, and (b) NDSs' postdeployment reports of relationship satisfaction after controlling for their predeployment reports of relationship satisfaction. We hypothesized that postsavoring emotional state would moderate the association between attachment avoidance and relationship confidence or satisfaction, such that only when NDSs report more higher-negative emotion would attachment avoidance be negatively associated with relationship outcomes (lower confidence regarding future deployments, lower postdeployment relationship satisfaction; Hypothesis 3).

Method

Participants

Forty-five female spouses of deploying United States military personnel ($M_{\text{age}} = 30.96$, $SD_{\text{age}} = 7.51$) enrolled in this prospective longitudinal study. We restricted our sample to female NDSs based on the fact that the majority of deploying service members are male (Department of Defense, Office of the Deputy Under Secretary of Defense Military Community and Family Policy, 2011). Exclusionary criteria included current suicidality, having been diagnosed with a psychotic disorder within the past year, and having previously experienced the combat-related death of a previous spouse. NDSs all resided with their service member spouses before the deployment. Participants were primarily of European American descent (80%), with 4.4% Asian American, 2.2% African American, and 8.9% Hispanic American. Most participants reported having at least one child (75.6%), having completed at least some college classes (82.2%), not working outside the home (73.3%), and being a civilian (95.5%). Most participants had not previously been divorced (77.3%) and had been married for five or more years (52.5%). Most deployed spouses were members of the army (54%), with the remaining service members in the Navy (21%), Air Force (21%), and Marines (5%). Service members were embarking on a deployment to Afghanistan (41%), Iraq (21%), Kuwait (9%), Qatar (2%), or other, undisclosed location (27%). Deploying service members had on-base support roles (31.1%), infantry (21%), special operations (11%), or other occupational designations (25%, such as equipment testers, combat controllers, and air defense). Service members were primarily part of the active duty military (91%), with a minority serving in the National Guard (7%) or as Reservists (2%). Most service members had completed at least one deployment before the current one (66.7%) and were planning to be gone for 9 months or longer (50%).

Procedure

Participants were recruited using social media, online advertising, and word of mouth. Two weeks before their spouses' projected departure date, participants were asked to complete an online questionnaire battery that included assessments of their background information, romantic attachment style, and relationship satisfaction ($N = 45$; Time 1 [T1]). Two weeks after their spouses' departure, participants completed both a phone assessment and several online questionnaires ($n = 32$; Time 2 [T2]). Participants who did and did not complete the second assessment did not differ in their attachment avoidance, attachment anxiety, relationship satisfaction, anxiety word use on the two SOCs, self-reported anxiety in response to the two SOCs, pre- or postsavoring emotional state, or age.

After answering questionnaires during the second assessment, participants then completed three SOC speech tasks. The first SOC (Mundane Events Recall SOC) lasted 3 min and was designed to accustom them to the format of the SOC task, which involved calling a phone number, listening to instructions regarding the particular SOC task, and leaving a confidential message containing their speech sample. In the Mundane Events Recall SOC participants were asked to describe the last time they did laundry. Next, they completed the Deployment SOC, in which they spoke con-

tinuously for 4 min about their thoughts and feelings about the deployment. Finally, they completed the third SOC, in which they were asked to discuss their thoughts and feelings toward the anticipated reunion with the deployed spouse (Reunion SOC). Immediately after each SOC, participants completed a questionnaire in which they reported on their anxiety. After the Reunion SOC only, participants reported on the relative difficulty of the two SOC tasks (Deployment SOC and Reunion SOC).

The second part of this assessment consisted of the experimental manipulation. At study entry each participant was randomly assigned to an experimental condition (personal vs. relational savoring) by the principal investigator. Experimenters remained blind to participants' experimental condition until the second assessment session. In each condition, experimenters read verbatim instructions to the participants, assisted them in generating appropriate memories for the savoring task, and directed participants to mentally focus on the answers to the savoring prompts for ~10 min. Immediately before and immediately after the savoring tasks, participants rated their self-reported emotional state using the Self-Assessment Manikin in an online questionnaire format (Bradley & Lang, 1994; Lang, 1980).

The third part of the assessment occurred 2 weeks after NDSs' spouses' return from deployment ($n = 23$; Time 3 [T3]), which on average occurred 10 months after the T1 assessment. Participants who did and did not complete the T3 assessment did not differ from those who completed the other assessments in their attachment avoidance, attachment anxiety, relationship satisfaction, anxiety word use on the two SOCs, self-reported anxiety in response to the two SOCs, pre- or postsavoring emotional state, or age. Participants provided responses to questions probing their feelings about their spousal relationship during deployments and in general.

Measures

Attachment style. Participants completed the Experience of Close Relationships-Revised (ECR-R; Fraley, Waller, & Brennan, 2000) during the first study assessment. The ECR-R is a reliable, widely used 36-item self-report measure assessing individual differences in trait attachment avoidance and anxiety in romantic relationships. The attachment avoidance scale indexes discomfort with intimacy and closeness in romantic relationships (e.g., "I am nervous when partners get too close to me"). The anxiety scale assesses thoughts and feelings about approval and responsiveness from romantic partners and worry about close relationships (e.g., "I worry that romantic partners won't care about me as much as I care about them"). In this sample, internal consistencies for both scales were high (attachment avoidance $\alpha = .92$, anxiety $\alpha = .87$).

SOC tasks. Participants' speech samples comprised the basis of our narrative data, which were used to assess our linguistic indicators. These tasks provided participants with an unstructured opportunity to explore their thoughts and feelings about the topics of interest.

Deployment SOC. For the Deployment SOC, participants were instructed to speak in an open-ended way about their thoughts and feelings regarding the deployment and their relationships with their spouses.

Reunion SOC. For the Reunion SOC, participants were asked to discuss their thoughts and feelings regarding their spouses' homecoming.

Word use. Verbatim SOC 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. Because of our interest in NDSs' anxiety when responding to the two SOC prompts, here we analyzed the anxiety word category (e.g., "nervous," "afraid," and "tense"). Anxiety words use is thought to provide a behavioral measure of anxiety that is complementary, but not completely redundant with the subjective experience of anxiety (Ahmad & Farrell, 2014). In our own sample, anxiety word use on both the Deployment and Reunion SOC tasks was positively correlated with self-reported anxiety on the Brief Symptom Inventory, r 's = .43 and .45, respectively (Derogatis & Spencer, 1982).

Post-SOC self-reported anxiety rating. After both SOC tasks, participants responded to the following question, "How much anxiety or bodily tension did you experience during this task?" Respondents rated their anxiety level on a 7-point scale, with a score of 1 signifying "None at all" and a score of 7 signifying "A great deal of tension."

Task difficulty. After the Reunion SOC only, participants answered an additional question prompting them to rate the relative difficulty of the latter SOC task compared with the Deployment SOC task: "Relative to the task where you discussed the deployment more generally, how difficult did you find this task?" Participants indicated their response on a 7-point scale, with a score of 1 indicating "Much easier to think about/talk about than the deployment task" and a score of 7 indicating "Much harder to think about/talk about than the deployment task."

Savoring tasks. The protocol for the savoring exercises was developed for the purposes of this study (Borelli, McMakin, & Sbarra, 2010). Both conditions (personal and relational) progressed through the following steps: (a) participants completed an emotion rating scale, (b) participants were read standardized instructions describing the goal of the specific savoring exercise, (c) participants were asked to generate memories that fit the specified criteria and briefly report them to the experimenter, (d) for each memory generated by the participant, the experimenter asked two follow-up questions to gauge the suitability of the memory for the task, (e) based on the participants' responses to the questions, the experimenter selected a memory for the participant to focus on during the savoring task, (f) participants were asked to focus their attention on the chosen memory for ~10 min, guided by five prompts (Prompt A: focus on the details of the memory; Prompt B: participants' feelings at the time of the memory; Prompt C: participants' current or past thoughts about this memory; Prompt D: the implications of the memory for the future; Prompt E: open-ended prompt in which participants are invited to savor a previously mentioned or new aspect of the event), (g) participants completed the postsavoring emotion rating, and, (h) experimenters thanked participants for completing the task.

In the personal savoring condition, participants were directed to select a memory of a positive, private emotional experience, something they experienced on their own and had not had time to reflect on. After participants had generated sample memories, they rated each memory on two 5-point scales, one assessing how happy they felt at the time (1 = *Slightly happy*, 5 = *Extremely happy*), and one assessing how detailed was their memory for the event (1 =

Table 1
Correlation Matrix for Key Study Variables

Variable	Correlations table												
	1	2	3	4	5	6	7	8	9	10	11	12	
1. T1 attach avoidance	—												
2. T1 attach anxiety	0.62***	—											
3. T1 rel sat	-0.53**	-0.64*	—										
4. T3 rel sat	0.13	0.09	0.45*	—									
5. T2 anx words-dep SOC	0.11	0.2	-0.18	0.18	—								
6. T2 anx words-reun SOC	0.29	0.36*	-0.13	0.11	0.33	—							
7. T2 anx report-dep SOC	0.3	0.40*	-0.37	-0.22	0.24	0.24	—						
8. T2 anx report-reun SOC	0.40*	0.44*	-0.46*	-0.27	0.36*	0.35	0.76**	—					
9. T2 SOC task difficulty	0.42*	0.19	-0.4	-0.27	0.17	0.28	0.29	0.57**	—				
10. T2 presavoring emotion	0.28	0.38*	-0.33	-0.17	0.26	0.33	0.46*	0.45*	0.37*	—			
11. T2 postsavoring emotion	0.53**	0.22	-0.11	-0.16	-0.01	-0.07	-0.13	-0.08	0.22	0.15	—		
12. T3 confidence	-0.13	-0.2	0.3	0.72**	0.16	0.05	-0.05	-0.01	-0.02	-0.24	-0.38*	—	

Note. SOC = stream of consciousness; T1 = 2 weeks before deployment; T2 = 2 weeks into the deployment; T3 = 2 weeks postdeployment (on average 10 months after the T1 assessment); attach = attachment; rel sat = relationship satisfaction on the DAS-4; anx words = frequency of anxiety words; anx report = subjective report of anxiety; confidence = postdeployment confidence in ability to stay emotionally connected to spouse during future deployments.

^a Higher scores indicate more negative emotion.

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

Slightly detailed, 5 = *Extremely detailed*; see online supplemental materials for the verbatim instructions given to participants at the inception of the personal savoring task).

In the relational savoring condition, participants were asked to recall a memory of a time when they felt especially cherished, protected, or accepted by their spouse. Our goal was to prime participants to come up with a memory of a time when they felt secure in their attachment relationship. After participants generated memories, they rated each of them on two 5-point scales, one assessing how connected they felt to their spouse when thinking of the memory (1 = *Slightly connected*, 5 = *Extremely connected*), and one assessing how detailed was their memory for the event (1 = *Slightly detailed*, 5 = *Extremely detailed*).

Prepost savoring emotion. Subjective emotion was assessed immediately preceding and after the savoring task with the Self-Assessment Manikin (SAM; Bradley & Lang, 1994; Lang, 1980), a pictorial rating system featuring human-like figures for the assessment of the following aspects of emotion: Affective valence (unpleasant-pleasant), arousal, and control or dominance. In this investigation, only the single 5-point affective valence scale was used, which characterized participants responses along a dimension from positive emotion (low scores) to negative emotion (high scores). Participants were presented with the images and were asked to rate how they felt. The reliability and the validity of this single-item valence measure have been well-established (Bradley & Lang, 1994).

Spouse relationships during deployments. NDSs answered a question developed for the purposes of this study: NDSs reported on their confidence regarding the likelihood of staying emotionally connected to their spouses during future deployments by choosing options on a 5 point scale, with lower scores signifying lower confidence (“I am not at all confident that we will be able to stay emotionally connected during future deployments.”) and higher scores signifying high levels of confidence (“I am extremely confident that we will be able to stay emotionally connected during future deployments.”).

Relationship satisfaction. Participants completed the Dyadic Adjustment Scale Short Form (DAS-4; Sabourin, Valois, & Lusier, 2005) at T1 and T3, which consists of four items that derive from the consensus section of the original DAS and measure the degree to which couples agree on matters that are important to the relationship (Graham, Liu, & Jeziorski, 2006; Spanier, 1976). The DAS-4 demonstrates high reliability and was validated with the original and other short forms of the DAS (Sabourin et al., 2005). Higher scores reflect greater satisfaction in the relationship. Internal consistency in this sample was good: T1 $\alpha = .84$ and T3 $\alpha = .88$.

Data Analytic Plan

First, we examined the single-item scales for their skewness and kurtosis—none had statistically significant violations of normality so we did not transform them. Using the PROCESS Macro for SPSS (Hayes, 2012), we conducted a series of hierarchical linear regressions to evaluate the study hypotheses. In all analyses we included T1 attachment anxiety and participant age as covariates.¹ In additional models we also evaluated the influence of covariates such as projected length of spouses’ deployment, whether or not the NDS had children, and T1 levels of anxiety symptoms (measured using the anxiety scale on the Brief Symptom Index; Derogatis & Spencer, 1982). Because the addition of these covariates did not alter our pattern of findings, we do not include them in the models presented here.

Results

Table 1 displays the zero-order correlations among the main study variables. T1 attachment avoidance was positively associated with self-reported anxiety after the Reunion SOC, with per-

¹ When we evaluated our statistical models without attachment anxiety, the pattern of effects remained unaltered.

ceptions that the Reunion SOC was more difficult than the Deployment SOC, and with negative mood after the savoring task. Consistent with previous work (Borelli et al., 2013), a paired-sample *t* test revealed that for the sample as a whole relationship satisfaction decreased from pre- to postdeployment, $t = 3.06, p = .01$. Further, across the sample as a whole, both anxiety word use, $t = 2.11, p = .04$, and self-reported anxiety, $t = 2.02, p = .05$, were lower on the Reunion SOC as compared with the Deployment SOC.

Hypothesis 1: Participants’ Reactions to the Deployment Versus the Reunion SOC Tasks

To test Hypothesis 1A, we evaluated whether attachment avoidance moderated the association between anxiety word use on the Deployment SOC and anxiety word use on the Reunion SOC. After controlling for covariates, the Avoidance \times SOC Task interaction was significant. Among individuals reporting medium and high levels of attachment avoidance, anxiety word use on the two SOC was positively correlated (medium avoidance: $b = .28, p = .05$, high avoidance: $b = .57, p = .007$), and for individuals reporting low levels of avoidance, there was no significant association between anxiety word use on the two SOC (see Figure 1A; low avoidance: $b = -0.11, p = .57$).²

To test Hypothesis 1B, we evaluated whether attachment avoidance moderated the association between self-reported anxiety after the Deployment SOC and self-reported anxiety after the Reunion SOC. After controlling for covariates, the Avoidance \times SOC Task interaction was again significant. Among all NDSs, self-reported anxiety related to the Deployment SOC was positively associated with self-reported anxiety related to the Reunion SOC, but this relationship was stronger for those reporting medium and high levels of avoidance (low avoidance: $b = .45, p = .009$; medium avoidance: $b = .72, p = .00001$, high avoidance: $b = .98, p = .00001$; see Figure 1B).³

To test Hypothesis 1C we conducted a hierarchical linear regression with participants’ responses to our relative difficulty question as the dependent variable. After controlling for attachment anxiety and participant age on a first step, $R^2 = 0.05, p = .51$, attachment avoidance was a significant predictor of ratings of relative emotional difficulty of the task, $R^2 = 0.14, p = .04$. Greater avoidance was related to greater perceptions of Reunion SOC difficulty relative to the Deployment SOC, $b = 1.07, SE = .49, p = .04$.

Hypothesis 2: Attachment Avoidance and Emotional Savoring

We evaluated whether the association between savoring condition (relational vs. personal) and self-reported emotion after savoring was moderated by attachment avoidance. After controlling for covariates, the Avoidance \times Experimental Condition interaction was significant. Avoidance was only associated with greater negative emotion ratings (higher scores on the SAM) in the relational condition (personal savoring: $b = -0.01, p = .98$; relational savoring: $b = 1.19, p = .00001$). Further, when we reversed the pairwise comparisons, we observed the greatest levels of negative emotion among highly avoidant participants in the relational condition, $b = 1.25, p = .02$, and the greatest levels of positive emotion (i.e., lower scores on the

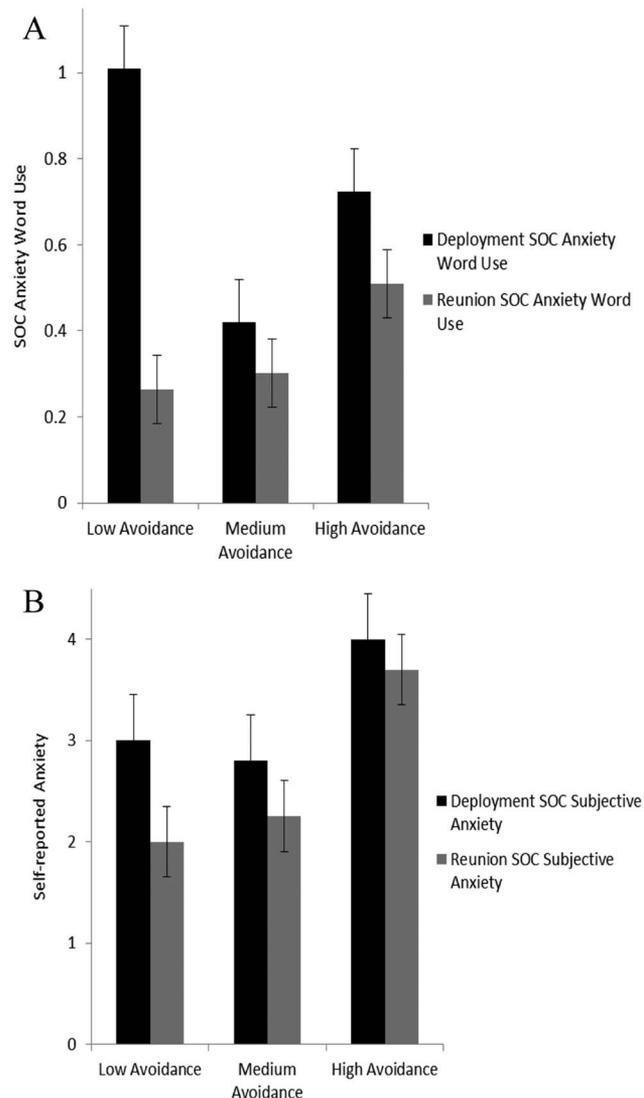


Figure 1. Attachment avoidance moderates the association between Deployment SOC and Reunion SOC (A) anxiety word use and (B) self-reported anxiety.

SAM) among low avoidance individuals in the relational condition, $b = -1.51, p = .003$ (see Figure 2).

Hypothesis 3: Attachment Avoidance, Postsavoring Emotion, and Postdeployment Outcomes

After controlling for participant age, savoring condition, and presavoring emotion, we found that there was a main effect of

² A follow-up regression showed that after controlling for covariates on a first step, $R^2 = 0.08, p = .27$, attachment avoidance associated with Reunion SOC anxiety word use, $\Delta R^2 = 0.11, p = .03$. Greater avoidance was related to greater anxiety word use on the Reunion SOC, $b = .18, SE = .09, p = .03$.

³ A follow-up regression showed that after controlling for covariates on a first step, $R^2 = 0.08, p = .29$, attachment avoidance was a significant predictor of Reunion SOC anxiety, $\Delta R^2 = 0.13, p = .02$. Greater avoidance was related to greater anxiety after the Reunion SOC, $b = .63, SE = .32, p = .03$.

postsavoring emotion on postdeployment confidence, $b = -1.78$, $p = .001$, such that more positive emotional state was associated with greater confidence. There was also a main effect of attachment avoidance, $b = -1.29$, $p = .004$: higher predeployment avoidance predicted lower confidence. The interaction between avoidance and postsavoring emotion was statistically significant, $\Delta R^2 = 0.38$, $p = .001$. There was a negative association between avoidance and confidence among NDSs reporting positive postsavoring emotion, $b = -0.53$, $p = .02$, and a positive association among NDSs reporting negative postsavoring emotion, $b = 0.69$, $p = .01$. Further, when we reversed the pairwise comparisons, we observed the greatest differences in confidence among low avoidance NDSs based on postsavoring emotion, $b = -1.06$, $p = .001$, and significantly higher confidence among NDSs with moderate levels of avoidance, $b = -0.41$, $p = .04$, with no differences among highly avoidant NDSs as a function of postsavoring emotion, $b = 0.24$, $p = .30$ (see Figure 3A).

Second, after controlling for the same set of covariates as above plus predeployment relationship satisfaction we found that there was a main effect of postsavoring emotion, $b = -3.57$, $p = .04$, such that more positive emotional state was associated with greater satisfaction. There was no main effect of attachment avoidance on postdeployment satisfaction, $b = -1.22$, $p = .40$. The interaction between attachment avoidance and postsavoring emotion in predicting postdeployment relationship satisfaction on the DAS-4 was statistically significant, $\Delta R^2 = 0.16$, $p = .04$. Follow-up probing revealed that there was a statistically significant positive relationship between attachment avoidance and postdeployment relationship satisfaction among NDSs reporting negative postsavoring emotion only, $b = 2.97$, $p = .02$, but no significant association between attachment avoidance and relationship satisfaction among NDSs who responded to the savoring task with neutral or positive emotion. Further, the association between postsavoring emotion and postdeployment relationship satisfaction was only significant among low avoidance NDSs, $b = -2.02$, $p = .05$, indicating that greater negative emotion postsavoring was associated with lower postdeployment relationship satisfaction, with no differences in postdeployment relationship satisfaction among NDSs with medium or high avoidance as a function of postsavoring emotion

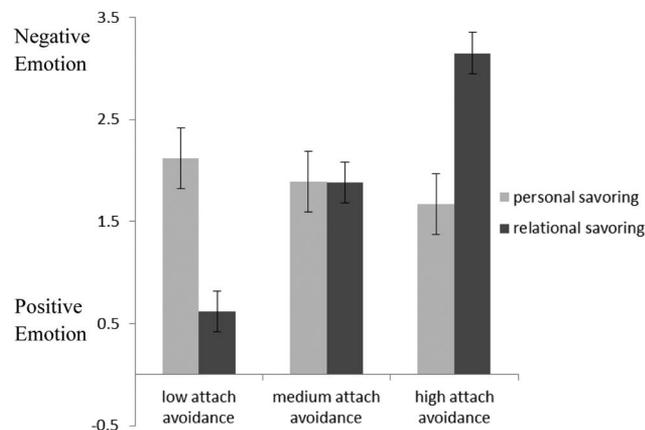


Figure 2. Savoring condition moderates the association between attachment avoidance and self-reported emotion after the savoring task.

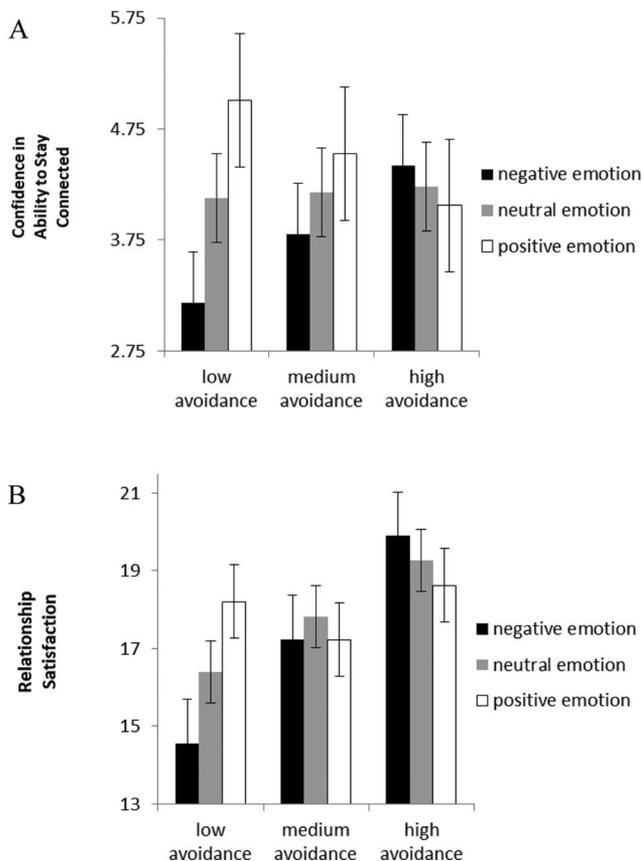


Figure 3. Postsavoring emotion moderates the association between attachment avoidance and postdeployment relationship feelings (A, confidence in ability to stay emotionally connected to spouse during future deployments; B, relationship satisfaction).

(medium: $b = -0.67$, $p = .32$, and low avoidance: $b = 0.72$, $p = .41$; see Figure 3B).

Discussion

The findings from this study generally converge on the notion that attachment avoidance is associated with a negative emotional response to relationship-focused reflection tasks during deployment. Using both correlational and experimental assessments, we documented that greater predeployment attachment avoidance among NDSs predicts greater emotional distress to tasks eliciting a relationship focus during a deployment. Postsavoring emotional states during deployment are important insofar as they predict postdeployment feelings about the spousal relationship, but the strength of these effects depends on predeployment attachment avoidance. In the sections that follow we review the specific findings and discuss their implications.

Greater T1 attachment avoidance was associated with greater correspondence between behavioral and subjective measures of anxiety on these two tasks. Our intention in comparing NDSs' performance during the deployment on the two tasks was to provide an assessment of the comfort with which NDSs are able to focus on the separation versus the reunion phase of the deploy-

ment—we posited that some NDSs would demonstrate reduced anxiety when discussing the reunion, but that this would vary by degree of attachment avoidance. In support of our prediction, we found that the greater the attachment avoidance, the less relief from anxiety the reunion task elicited and the more difficult the NDS perceived the Reunion SOC task to be relative to the Deployment SOC. These findings echo the central tenets of attachment theory. Bowlby (1969/1982) argued that after separations from one's attachment figure—because the attachment figure's absence was the cause of the person's distress—their return ought to be the solution to that distress. However, for NDSs high in attachment avoidance, reunions may be equally stressful to separations (Bartholomew, 1990; Main & Weston, 1982; Sroufe & Waters, 1977). To build upon our findings, future research should examine whether attachment avoidance is associated with greater anxiety among NDSs in response to reunification with spouses after a deployment.

We also found that reflecting on an attachment memory during the deployment caused a negative emotional response for highly avoidant NDSs; in contrast, for NDSs low in attachment avoidance, reflecting on an attachment memory resulted in significantly greater positive emotion. Although the sample size in this study is small, the observed effect is medium in magnitude (effect size: $r = .44$). We interpret this finding to suggest that disrupting highly avoidant NDSs' dominant strategy of disengaging from attachment-related thoughts and feelings causes affective discomfort for these people in the moment (cf. Mikulincer & Shaver, 2003; Sbarra & Borelli, 2013). More important, in the current study, we only assessed NDSs' emotion immediately after the savoring task, making it impossible to ascertain how long the emotional state elicited by the manipulation persisted. Future work can build upon these findings by probing adults' long-term emotional and behavioral responses to relational savoring.

In our final set of analyses we examined NDSs 2 weeks after their spouses had returned to identify whether emotion elicited during the savoring task during the deployment interacted with attachment avoidance in predicting NDSs' feelings about their marital relationships. Indeed, postsavoring emotion moderated the link between attachment avoidance and both of our relationship satisfaction indicators, with the general pattern of results indicating that for NDSs with low to moderate predeployment attachment avoidance, when the savoring task worked in terms of eliciting positive emotion, these women were more likely to report feeling better about their marital relationships after the deployment. Perhaps identifying ways to enhance positive emotion is important for NDSs with lower attachment avoidance, and we may need to develop and test other ways of improving postdeployment relationship sentiments among highly avoidant NDSs.

Our study provides the first report examining the role of attachment avoidance in predicting NDSs' response to military deployment. Despite the strengths of the current investigation, several limitations warrant attention. The first is the small sample size at T1 and the relatively high rate of attrition. Although the T2 and T3 samples did not differ systemically from the T1 sample in variables of theoretical importance to this study, the small samples qualify the conclusions that can be drawn from this work. Recruitment and retention of military service members and their family members in nonmilitary sponsored research projects has been cited as a barrier to conducting this type of work (e.g., Borelli et al.,

2013), but one that should be addressed in future studies. Second, some of our hypotheses rested on testing single-item indicators of emotional response, including questions developed for the purpose of this study, and in future work it will be important to replicate the current findings using well-established measures of emotional response. Third, although our goal in conducting this research was to be able to extrapolate to processes of clinical significance (i.e., to identify factors that result in the reduction of clinically significant anxiety), our assessment focused on variables that serve as proxies for these constructs, such as anxiety word use and self-reported negative emotion. In future work it will be crucial to establish a link between attachment avoidance as well as response to relational savoring and clinically relevant outcomes, such as postdeployment anxiety.

Fourth, in future work it will be important to identify how long the observed effects persist—do highly avoidant NDSs evidence disruptions in mood for hours, days, or weeks after a brief relational savoring task or is the disruption momentary? What, if any, strategies do avoidant NDSs use to recalibrate their psychological state vis-à-vis the deployment?

Clinical Implications

Although the sample size in this study was relatively small, the findings are consistent with and add to the growing body of literature suggesting that attachment styles predict adults' responses to clinical intervention, and, in particular, that adults with secure attachment may have a greater capacity for self-reflection, which is an essential ingredient in therapeutic outcomes (Daniel, 2006; Goodwin, 2003). Bowlby (1969/1982) argued that all attachment strategies are adaptive in the current relational context and, consequently, that disrupting a person's habitual mode of emotion regulation (with respect to attachment threats) can be problematic. In other words, it can be highly disruptive to redirect avoidant NDSs' attention toward their spousal relationship during a military deployment.

Over the long-term, however, it may be helpful to encourage highly avoidant NDSs to activate attachment-related feelings, though care should be taken to do this during times when the NDS is relatively unstressed. This perspective is consistent with the logic of exposure-based treatments for anxiety (e.g., Barlow, 2008); although highly avoidant NDSs may at first experience discomfort in directing their attention toward attachment-related thoughts and feelings, over time their negative emotions may dissipate and they may ultimately become more comfortable dealing with situations that evoke attachment-related feelings. It is important not to challenge avoidant NDSs' way of coping (i.e., deactivation) during a time when their resources are already taxed, such as during the deployment itself, but rather during a time of relative relational stability.

Conversely, for NDSs low in attachment avoidance, engaging relational savoring has the potential to improve their mood and may also help promote their ability to maintain feelings of attachment security during a prolonged attachment stressor. Furthermore, among low attachment avoidance NDSs, the more positive their emotional response to the savoring task, the better their postdeployment confidence in and satisfaction with their marital relationships. For clinicians working with this type of client,

systematically activating memories and feelings of security may help the NDS cope with the deployment.

Our findings speak to the potential dangers of adopting a one-size-fits-all approach to treating military spouses during a deployment. It has long been argued that understanding a client's attachment style is essential before engaging in therapeutic work (e.g., Slade, 2008), and this may be especially important during times of relationship stress, such as during a deployment. Military spouses already report significant internal barriers to seeking mental health treatment (Eaton et al., 2008), despite having a high level of risk for psychopathology during and after spouse deployments (Lester et al., 2010). NDSs cite not wanting to discuss their own emotional struggles for fear of upsetting their deployed spouses, feeling embarrassed, or jeopardizing their spouse's career standing (Eaton et al., 2008). Therefore, identifying effective methods of working with military spouses, including individualizing therapeutic approaches by clients' attachment styles, may be of the utmost importance to avoid further discouraging them from seeking mental health services.

In a clinical context, evaluation of attachment style can be achieved through the use of established research tools for assessing attachment (e.g., ECR-R; Fraley, Waller, & Brennan, 2000) or, perhaps more commonly, by listening for attachment processes in clients' discussion about their relationships (Slade, 2008). Our findings suggest that NDSs who demonstrate or report similar levels anxiety when discussing the reunion and the deployment may be more likely to have higher levels of attachment avoidance. Similarly, based on previous work examining adults' relationship narratives, NDSs who during deployment emphasize their strength in coping with the deployment, and who show signs of systematically turning their attention away from relationship-related thoughts and emotions may also be more likely to be avoidant (Dozier & Kobak, 1992; Slade, 2008). Formal or informal assessment of a client's attachment style before engaging in therapeutic work may help guide the therapy in a direction that has the greatest potential to effect positive change.

Conclusion

The findings from this study are provocative and theoretically consistent with models of adult attachment and emotion regulation (Kobak et al., 1993; Main, 1981, 2000; Mikulincer & Shaver, 2003). In one of the first studies examining NDSs' adjustment during deployment, we provided correlational and experimental evidence that greater attachment avoidance among NDSs predicts greater negative emotion when reflecting on their relationship with their deployed spouse. Furthermore, highly avoidant NDSs who report negative emotion after the savoring task were at risk for declines in relationship satisfaction across the course of a deployment. We interpreted these findings to suggest that disrupting avoidant NDSs' modal means of regulating distress (i.e., avoiding thoughts and feelings related to the attachment stressor) results in a negative emotional response. Though preliminary, our findings have a number of clinical implications for NDSs undergoing military deployment.

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