Published in final edited form as:

Mil Psychol. 2015 March 1; 2(2): 108–114. doi:10.1037/mil0000067.

Distraction during Deployment: Marital Relationship Associations with Spillover for Deployed Army Soldiers

S. P. Carter^a, B. Loew^b, E. S. Allen^c, L. Osborne^b, S. M. Stanley^b, and H. J. Markman^b

^a Department of Psychology, George Mason University, Fairfax, Virginia

^b Department of Psychology, University of Denver, Denver, Colorado

^c Department of Psychology, University of Colorado Denver, Denver, Colorado

Abstract

Military spouses often have concerns regarding the impact of their communication on soldiers during deployment. However, literature is mixed regarding how communication between soldiers and spouses may impact soldiers' self-reported work functioning during deployment, suggesting the need to evaluate moderating factors. In the current study, three relationship factors (marital satisfaction, conflictual communication, and proportion of conversation focused on problems) were tested as moderators of communication frequency and negative marriage-to-work spillover for soldiers. Whereas the three relationship factors were independently related to negative spillover, none significantly moderated the relationship between communication frequency and spillover. The overall pattern of results suggests that (a) lower marital satisfaction, a focus on problems during communication, and conflictual communication are each strongly linked to spillover for deployed soldiers, and (b) military couples may be self-restricting deployment communication frequency when experiencing less marital satisfaction and higher rates of negative communication. Implications for communication during deployment are discussed.

Keywords

military; couples; communication; spillover; deployment

Boundary theory posits that stress in one domain (e.g., marriage or family) may spillover into another domain (e.g., work; Desrochers & Sargent, 2004), and research has shown that relationship and family stresses can spillover and interfere with work functioning (e.g., Demerouti, Taris & Bakker, 2007; Ford, Heinen & Langkamer, 2007). Although research has assessed this pattern in civilian couples (e.g., Rogers & May, 2003), little empirical research has addressed spillover in military couples separated by a deployment. Relationship maintenance for military couples during a deployment appears to differ compared to civilians in long-distance relationships (for review see Carter & Renshaw, in press). Spillover may also differ in this population and context, particularly due to issues of safety

that are relatively unique for military couples. Specifically, military couples may be concerned with the possibility that a soldier's distress from family concerns will spill over into preoccupation and distress during work (henceforth referred to as negative spillover). This concern is heightened due to the possibility for physical harm for the one deployed. For example, an adage that has emerged for military families is: *A distracted soldier is a dead soldier* (Houppert, 2006). The potential for negative spillover to result in physical harm differentiates spillover for soldiers in high-risk military deployments from other potential samples. Evaluating rates of this type of spillover, Bray et al. (2009) found that 39% of service members who had previously deployed indicated that family stress interfered with their job performance at least a little. Similarly, Cigrang et al. (2013) reported that about a third of Airmen in their sample felt that conflicts or worries involving their partner or spouse back home led them to feel distracted at least once a month. The potential for negative spillover may influence how much military couples communicate during a deployment. Some service members have described purposefully choosing to restrict communication with home and family in order to better focus on their missions (Durham, 2010; Hinojosa, Hinojosa & Hognas, 2012).

However, other research has suggested that communication during deployment is either unassociated with spillover or may actually be helpful for work focus. Cigrang et al. (2013) found no direct relationship between Airmen's communication frequency with a spouse and interference with job performance. Gewirtz, Polusny, DeGarmo, Khaylis, & Erbes (2010) found high average endorsement on a two item social support measure which included one item which asked service members how much contact with family and friends helped them feel better about their mission and focused on their duties. Whereas this study was not focused on marital communication solely, the suggestion is that contact with loved ones back home can increase, rather than reduce, work focus.

These diverse reports regarding the impact of communication on spillover during a deployment may indicate that there are conditions under which communication does not increase negative spillover and some conditions under which communication does increase negative spillover. Greene, Buckman, Dandeker, and Greenberg (2010) have suggested that frequent spousal communications may benefit soldiers, as long as these communications remain positive and constructive. In fact, spouses have reported avoiding potentially stressful conversation topics in order to buffer their deployed spouses from distraction (e.g., Rossetto, 2013). Thus, the extent to which communication during deployment impacts deployed service members may depend upon the nature of the communication. It may be that communication in the context of lower marital satisfaction or stressful problems is associated with negative spillover, but communication with lower levels of such stressors is not associated with negative spillover.

Based on the literature reviewed above, communication frequency may be unrelated or inversely related to negative spillover; and we hypothesize that relationship factors of lower marital satisfaction, higher conflictual communication, and a higher proportion of conversation focused on problems will all predict greater negative spillover. Beyond these basic analyses, the current study was designed to investigate potential relationship moderators of the association between spousal communication frequency and negative

spillover during deployment. The three specific relationship factors listed above were also tested as moderators: marital satisfaction, conflictual communication, and the degree to which communication is problem-focused. It is hypothesized that a positive association between communication frequency and negative spillover during deployment will be found in the context of a) lower marital satisfaction, b) higher conflictual communication, and c) a higher proportion of conversation focused on problems. Without such levels of the relationship factors, greater communication frequency is hypothesized to be negatively associated or not related with negative spillover.

Method

Procedure

Data were drawn from a large, randomized clinical trial of marriage education in the Army wherein participants completed self-report measures six months after the intervention phase of the trial¹. From this assessment point, 161 participants were selected who were (1) male active duty Army service members, (2) currently married to civilian, non-deployed females, and (3) deployed at the time of the assessment. These data were collected in 2007-2008.

Participants

These 161 soldiers averaged 28.07 ($SD = 5.84$) years of age, 5.32 ($SD = 4.73$) years married, and 1.51 ($SD = 1.39$) children living in the home. Most (70%) soldiers identified as Caucasian, 14% as Hispanic, 11% as African-American, 3% as multi-ethnic, and 2% as Asian. Additionally, 35% ranked as Jr. NCOs, 33% as SPCs, 10% as Company Grade Officers, 9% as Sr. NCOs, 7% as PFCs, 3% as PVTs, and 2% as Field Grade Officers.

Measures

Negative Spillover

The spillover subscale of the Work Readiness and Effectiveness Scale (WRES; Stanley et al., 2005) was used to assess how much a soldier perceives that conflict with his wife interferes with his work functioning. Four items (“At times, I have missed work, been late to work, or worked less effectively because of a marital conflict”; “I sometimes think about the stress in my marriage while I’m at work”; “I am sometimes distracted at work by unresolved conflicts with my spouse”; and “Conflicts with my spouse sometimes impact my day-to-day functioning at work.”) were rated from 1 = *strongly disagree* to 7 = *strongly agree* ($\alpha = .93$). As the measure was completed by soldiers during deployment, “work” reflects their military work in theater.

¹In order to assure the relationships between negative spillover and relationship factors did not vary as a function of assigned condition (intervention versus control), negative spillover was regressed on each of the study variables (communication frequency, marital satisfaction, conflictual communication, proportion of conversation focused on problems) individually, with assigned condition included as a moderating variable. None of the interaction terms approached statistical significance. Thus, we combined participants from both conditions into the analyses.

Communication Frequency

Communication frequency was assessed as the average frequency with which a soldier reported communicating with his wife via (a) phone, (b) e-mail, or (c) instant messaging (IM) during deployment (each rated 1 = *never*, 2 = *1-2 times per month*, 3 = *1-2 times per week*, 4 = *3-4 times per week*, and 5 = *daily*). We examined these types of communication, compared to methods such as letters, as they are relatively interactive and can thus be more affected by communication quality and dynamics. These three scores were averaged; higher scores indicate higher communication frequency.

Conflictual Communication

Conflictual communication was measured with the mean score of a four-item version of the Relationship Dynamics Scale (Stanley & Markman, 1997), which assesses negative communication patterns within a relationship. Items (e.g., “Little arguments escalate into ugly fights with accusations, criticisms, name calling, or bringing up past hurts”) were rated from 1 = *never or almost never* to 3 = *frequently* ($\alpha = .76$). Thus, higher numbers indicate more conflictual communication. Various forms of this measure have demonstrated excellent reliability and validity (Stanley, Markman, & Whitton, 2002).

Proportion of Conversation Focused on Problems

Agreement with the item “Most of our conversations seem to be about problems that we have to deal with” was rated on a 7-point Likert-type scale, on which higher numbers indicate a higher proportion of the conversation focused on problems.

Marital Satisfaction

Marital satisfaction was measured with the three-item Kansas Marital Satisfaction Scale (KMS; Schumm et al., 1986). The KMS has excellent reliability, as well as convergent and discriminant validity (Schumm et al., 1986). Items (e.g., “How satisfied are you with your relationship with your spouse?”) were rated from 1 = *extremely dissatisfied* to 7 = *extremely satisfied* ($\alpha = .95$).

Results

As seen by the means reported in Table 1, participants endorsed frequent average communication throughout their current deployment (i.e., a mean score corresponding to 3-4 times per week). First, bivariate correlations were conducted between negative spillover, communication frequency, and the three relationship factors (see Table 1). Communication frequency was negatively correlated with negative spillover, such that more frequent communication was associated with less negative spillover. Negative spillover was inversely correlated with marital satisfaction and was positively correlated with conflictual communication and proportion of the conversation focused on problems. Thus, more conflictual and problem-focused communication was associated with more negative spillover, whereas more frequent communication and higher marital satisfaction was associated with less negative spillover. However, more conflictual communication and lower marital satisfaction both predicted lower communication frequency. Thus, the association between greater communication frequency and less negative spillover may be an

artifact of less satisfied/conflictual couples communicating less. In fact, controlling for marital satisfaction or conflictual communication eliminated the significant relationship between communication frequency and negative spillover ($\beta = -.14, p = .132$; see Table 2). Communication frequency was unrelated to proportion of conversation focused on problems in a bivariate correlation, and controlling for proportion of conversation focused on problems did not affect the significance of the relationship between frequency and negative spillover. We also regressed all predictors simultaneously onto negative spillover to examine unique associations (see Table 2). Proportion of conversation focused on problems had the most unique variance with negative spillover, even controlling for the other variables.

To test the hypothesis regarding whether the association of communication frequency and negative spillover was moderated by the relationship factors, we followed procedures delineated by Aiken and West (1991) to test moderations. Specifically, we performed three separate simultaneous multiple regressions (one per potential moderator) in which negative spillover was predicted by communication frequency (centered), the potential moderator (centered), and the interaction term of communication frequency and the potential moderator. Contrary to hypotheses, the interaction terms for marital satisfaction ($\beta = .14, p = .141$), conflictual communication ($\beta = -.07, p = .365$), and proportion of conversation focused on problems ($\beta = .05, p = .533$) indicated that none of these constructs significantly moderated the association between communication frequency and negative spillover.

Discussion

In this sample of deployed, married Army soldiers, more frequent spousal communication was not associated with greater negative spillover. In fact, more frequent communication during deployment was associated with *less* spillover. However, this association may be a function of the fact that marital satisfaction and conflictual communication were related to less frequent communication. This is consistent with findings from Cigrang et al. (2013), who found marital distress was associated with less communication frequency during deployment. Thus, the association of communication frequency with negative spillover may be somewhat confounded with relationship processes. That is, our findings also converge with earlier research (e.g., Cigrang et al., 2013) in that lower marriage satisfaction, conflictual communication, and proportion of conversation focused on problems are all associated with more spillover. Thus, it is important to evaluate the influence of these factors. When controlling for marital satisfaction or conflictual communication, communication frequency was no longer negatively related to negative spillover. The exception to this pattern was the proportion of conversation focused on problems. The more conversations focused on problems, the greater the negative spillover. However, the proportion of conversation focused on problems did not relate to communication frequency or account for the relationship between communication frequency and negative spillover.

A suggested metaphor for the process of communication during deployment is that it acts as a pipeline between a deployed service member and his/her spouse. That pipeline could deliver positive support or stressful conflict; thus we had hypothesized that the association of how much communication was flowing through this pipeline (i.e., communication frequency) with negative spillover would depend on (i.e., be moderated by) what type of

communication was coming through it. That is, we hypothesized that the association between communication frequency and negative spillover would be moderated by factors such as conflictual communication. However, we found no support for this hypothesis. Instead, it may be that military couples regulate how much communication flows through the pipeline based on how their relationships are going. The current findings suggest that when such couples have less marital satisfaction or have conflictual communication, they may communicate less often (of course, less frequent communication may also contribute to such relationship problems). This possible self-regulation of frequency of communication may converge with prior data indicating that some soldiers make a “clean break” to focus on their mission, whereas others find that communication with family helps them focus (Hinojosa et al., 2012).

Whereas the proportion of conversation focused on problems did relate to negative spillover, marital satisfaction and conflictual communication, the proportion of conversation focused on problems was not associated with less communication frequency. It may be that even if a couple is experiencing less marital satisfaction (which is linked to less frequent communication) but also has specific problems that need to be addressed, they ultimately must communicate. That is, any inhibition of communication that may naturally arise from being less maritally satisfaction may be overridden if a couple has a situation that they must resolve.

These results do not allow for definitive conclusions about the impact of communication frequency during deployment, nor do they allow us to make conclusive recommendations about the conditions under which more or less communication would be advisable. Rather, they reinforce the importance of healthy relationship functioning for soldier performance during deployment. Consistent with Cigrang et al. (2013), our results suggests that soldiers in less satisfying, conflictual, and problem-focused marriages are likely going to struggle more to function optimally in their mission while deployed. Presumably, the more such relationship problems can be addressed, the better soldier performance will be. Marriage interventions may be helpful for Army couples to resolve relationship problems (Wadsworth et al., 2013).

Military couples know that low marital satisfaction and high conflict are sources of pain for both partners, and they may minimize contact during deployment when these issues are present. However, military couples are still faced with decisions about how much to discuss problems during deployment, and the reality of needing to resolve some issues while a soldier is deployed. The current findings showed that soldiers’ negative spillover was significantly associated with the proportion of spousal communication focused on problems. Nevertheless, we cannot conclude that deployed soldiers and their spouses should avoid all discussion of conflictual topics in order to minimize risk for soldier functioning. It may be that reducing the *proportion* of their conversation that focuses on problems is beneficial. For instance, balancing such discussions with affectionate talk and casual, friendship talk is consistent with the importance of a high positive-to-negative ratio in marital interactions (Gottman, Coan, Carrere & Swanson, 1998). At the same time, perhaps more problem talk is simply a function of having more problems. Thus, the association with negative spillover may reflect the number of problems a couple has to deal with, rather than constituting a

problematic communication pattern. Indeed, problem-focused content continued to be significantly associated with negative spillover even when controlling for conflictual communication or communication frequency.

There were several limitations to this study. The data's cross-sectional nature means that directionality of effects is unclear. Relatedly, the data are self-reported. It may be that soldiers experiencing more interference during deployment from communication may be prone to biased recall in favor of more conversation focused on problems or conflictual spousal communication. However, it should be noted that the sample was, on average, highly satisfied, which may limit the generalizability of the findings to more dissatisfied couples. It is also a limitation that the proportion of conversation focused on problems was assessed with only a single item. Additionally, we were unable to assess potentially important features of communication such as the actual content of conversations or who initiated the communications. Whereas further research on this topic is required to address these and other limitations to the current findings, such as limited generalizability to the broader population of Army couples, these analyses reinforce the importance of relationship functioning for service members, even during deployment.

Acknowledgments

The project described was supported by Award Number R01HD048780 from the Eunice Kennedy Shriver National Institute of Child Health & Human Development. The content is solely the responsibility of the authors and does not necessarily represent the official views of the Eunice Kennedy Shriver National Institute of Child Health & Human Development or the National Institutes of Health.

References

- Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Sage; Newbury Park, CA: 1991.
- Bray RM, Pemberton MR, Hourani LL, Witt M, Olmsted KL, Brown JM, Scheffler S. 2008 Department of Defense survey of health related behaviors among military personnel: Final report. Sep.2009 Research Triangle InstituteResearch Triangle Park, NC (prepared for the Assistant Secretary of Defense [Health Affairs], U.S. Department of Defense, Cooperative Agreement No. DAMD17-96-2-6021, RTI/10940-FR).
- Carter S, Renshaw K. Spousal communication during military deployments: A review. *Family Issues*. in press.
- Cigrang JA, Talcott GW, Tatum J, Baker M, Cassidy D, Sonnek S, Smith Slep AM. Intimate partner communication from the war zone: A prospective study of relationship functioning, communication frequency, and combat effectiveness. *Journal of Marital and Family Therapy*. 2013; 40(3):332–343. doi: 10.1111/jmft.12043. [PubMed: 24111535]
- Demerouti E, Taris TW, Bakker AB. Need for recovery, home–work interference and performance: Is lack of concentration the link?. *Journal of Vocational Behavior*. 2007; 71(2):204–220. doi: 10.1016/j.jvb.2007.06.002.
- Desrochers S, Sargent LD. Boundary/Border Theory and work-family integration. *Organization Management Journal*. 2004; 1(1):40–48. doi: 10.1057/omj.2004.11.
- Durham SW. In their own words: Staying connected in a combat environment. *Military Medicine*. 2010; 175(8):554–559. [PubMed: 20731258]
- Ford MT, Heinen BA, Langkamer KL. Work and family satisfaction and conflict: A meta-analysis of cross-domain relations. *Journal of Applied Psychology*. 2007; 92(1):57–80. doi: 10.1037/0021-9010.92.1.57. [PubMed: 17227151]

- Gottman JM, Coan J, Carrere S, Swanson C. Predicting marital happiness and stability from newlywed interactions. *Journal of Marriage and the Family*. 1998; 60(1):5–22. doi: 10.2307/353438.
- Greene T, Buckman J, Dandeker C, Greenberg N. How communication with families can both help and hinder service members' mental health and occupational effectiveness on deployment. *Military Medicine*. 2010; 175(10):745–749. [PubMed: 20968264]
- Gewirtz AH, Polusny MA, DeGarmo DS, Khaylis A, Erbes CR. Posttraumatic stress symptoms among National Guard soldiers deployed to Iraq: Associations with parenting behaviors and couple adjustment. *Journal of Consulting and Clinical Psychology*. 2010; 78(5):599–610. doi: 10.1037/a0020571. [PubMed: 20873896]
- Hinojosa R, Hinojosa MS, Hognas RS. Problems with veteran-family communication during Operation Enduring Freedom/Operation Iraqi Freedom military deployment. *Military Medicine*. 2012; 177(2):191–197. [PubMed: 22360066]
- Houppert, K. Home Fires Burning: Married to the Military-for Better or Worse. Ballantine Books; New York City, NY: 2007.
- Rogers SJ, May DC. Spillover between marital quality and job satisfaction: Long term patterns and gender differences. *Journal of Marriage and Family*. 2003; 65(2):482–495. doi: 10.1111/j.1741-3737.2003.00482.x.
- Rossetto KR. Relational coping during deployment: Managing communication and connection in relationships. *Personal Relationships*. 2012; 20(3):568–586. doi: 10.1111/pere.12000.
- Schumm WR, Paff-Bergen LA, Hatch RC, Obiorah FC, Copeland JM, Meens LD, Bugaiguis MA. Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. *Journal Of Marriage & The Family*. 1986; 48(2):381–387. doi:10.2307/35240.
- Stanley SM, Allen ES, Markman HJ, Saiz CC, Bloomstrom G, Thomas R, Bailey AE. Dissemination and evaluation of marriage education in the Army. *Family Process*. 2005; 44(2):187–201. doi: 10.1111/j.1545-5300.2005.00053.x. [PubMed: 16013745]
- Stanley, SM.; Markman, HJ. Marriage in the 90s: A nationwide random phone survey. PREP; Denver, CO: 1997.
- Stanley SM, Markman HJ, Whitton S. Communication, conflict, and commitment: Insights on the foundations of relationship success from a national survey. *Family Process*. 2002; 41:659–675. [PubMed: 12613123]
- Wadsworth SM, Lester P, Marini C, Cozza S, Sornborger J, Strouse T, Beardslee W. Approaching family-focused systems of care for military and veteran families. *Military Behavioral Health*. 2013; 1(1):31–40. doi: 10.1080/21635781.2012.721062.

Table 1
Descriptive Statistics and Associations between Negative Spillover and Relationship Factors

	Mean (SD)	1	2	3	4	5	6	7	8
1. Negative Spillover	2.74 (1.67)								
2. Communication Frequency	3.99 (.75)	-.23**							
3. Conflictual Communication	1.71 (.49)	.46***	-.22**						
4. Proportion of the Conversation Focused on Problems	3.74 (1.66)	.46***	-.08	.41***					
5. Marital Satisfaction	6.18 (.98)	-.34***	.33***	-.63***	-.26**				
6. Service Member Age	28.07 (5.84)	-.15	.05	.05	.03	-.02			
7. Years Married [/]	5.32 (4.73)	-.19*	.03	-.01	.05	.02	.71***		
8. Number of Children	1.51 (1.39)	-.08	.11	-.01	-.00	.02	.54***	.60***	
9. Service Member Rank	3.79 (1.23) ^a	-.32***	.05	-.05	-.08	.04	.47***	.35***	.27**

Note:

^aThe mean service member rank places soldiers just below Junior NCO.

*

$p < .05$.

**

$p < .01$.

$p < .001$

[/] Although the demographic variables of years married and rank were significantly related to negative spillover, we did not expect for these to change the relationship between frequency of communication and negative spillover. To confirm this, all analyses were rerun while controlling for years married and rank. Controlling for these factors did not change the patterns of significance. Thus, we report results without these control variables included.

Table 2**Relationship Factors Regressed onto Negative Spillover**

	<i>B</i>	<i>SE B</i>	β	<i>R</i> ²
Communication Frequency Controlling for Marital Satisfaction				.11
Communication Frequency	-.30	.20	-.14	
Marital Satisfaction	-.48	.16	-.27**	
Communication Frequency Controlling for Conflictual Communication				.20
Communication Frequency	-.32	.18	-.14	
Conflictual Communication	1.34	.27	.39***	
Communication Frequency Controlling for Proportion of the Conversation Focused on Problems				.24
Communication Frequency	-.43	.17	-.20*	
Proportion of the Conversation Focused on Problems	.43	.08	.43***	
Multiple Regression with All Relationship Factors				.29
Communication Frequency	-.31	.18	-.14 ^a	
Conflictual Communication	.83	.34	.25*	
Proportion of the Conversation Focused on Problems	.33	.08	.33***	
Marital Satisfaction	-.05	.18	-.03	

Note: In each of the four regressions above, all variables are entered simultaneously. Moderation analyses are not reported here.

^aWhen controlling for years married and rank, a trend was eliminated.

* $p < .05$.

** $p < .01$.

*** $p < .001$