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On the Home Front: Stress for Recently Deployed Army Couples

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Abstract

Military couples who have experienced deployment and reintegration in current U.S. military operations frequently experience stress regarding the dangers and effects of such experiences. The current study evaluated a sample of 300 couples with an active duty Army husband and civilian spouse who experienced a deployment within the year prior to the survey (conducted in 2007). Wives generally reported greater levels of emotional stress compared to husbands. Overall, higher levels of stress were found for couples who reported lower income and greater economic strain, perceive the need for more support and are unsure about how to get support, have more marital conflict, and are generally less satisfied with the Army and the current mission. Husband combat exposure was also associated with more stress for husbands and wives. Additionally, for wives, stress was related to greater child behavior problems and a sense of less Army concern for families. The results suggest areas of intervention with military couples to help them cope with the challenges of military life and deployment.

U.S. Army military personnel serving in recent U.S. military operations in Iraq and Afghanistan have experienced relatively long and frequent deployments with high exposure to combat (Karney & Crown, 2007). Several authors have documented the challenges facing military families experiencing these extended deployments, such as loneliness, financial insecurity, changes in family roles, difficulties in children's discipline, concern for the service member's safety, and a sense that the military is unconcerned about their well-being (DiNola, 2008; Palmer, 2008). The uncertainty and danger that characterizes deployments in times of war are theorized to be particularly stressful and disruptive (Kelley, 1994; Wiens & Boss, 2006). Moderators of adjustment and stress before, during, and after deployment, such as active versus passive coping strategies, social support, and age, has been an important area of research (Kelley et al., 2002; Palmer, 2008; Rosen, Durand, Westhuis, & Teitelbaum, 1995; Rosen, Westhuis, & Teitelbaum, 1994; Wiens & Boss, 2006).

One of the most important aspects of stress for the nondeployed spouse appears to be the level of worry about issues commonly related to deployment during wartime such as the soldier's safety, emotional adjustment, and opportunities for communication (Wright, Burrell, Schroeder, & Thomas, 2006). In Wright et al.'s (2006) review, this type of

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Allen et al.

emotional stress (particularly concerns about injury and death) emerges as a potent predictor of psychological and health-related symptoms in both cross sectional and longitudinal work. Thus, for the current study, we focused on the level of stress Army couples experience regarding combat, reintegration, loneliness, sexual frustration, difficulty staying in touch, spouse fidelity, death, injury, psychological problems, and effects on children. While Wright et al. (2006) review how this stress is detrimental to the psychological and physical health of the nondeployed spouse, these are also concerns that the deployed spouse has to contend with. Thus, we also included assessment of these areas of stress for the active duty spouse.

Prior research in earlier military conflicts suggests that nondeployed spouses experience greater emotional stress when there is lack of support for the current mission, nonemployment of the spouse, lower rank of the Soldier, less prior military experience, lower social support, and greater direct communication with the Soldier (see review by Wright et al., 2006). The current study seeks to replicate and extend our knowledge of correlates of stress for both active duty male U.S. Army soldiers and their civilian wives in a recently collected (2007) sample of couples involved in the current military engagement in Iraq and Afghanistan. Replication with recently collected data is important given the changing experience of war and deployments over time (Norwood, Fullerton, & Hagen, 1996).

The literature in family stress suggest that the degree of stress families experience when faced with challenges is related to, among other things, the nature of the stressor, the resources or strengths of the family, and the perceptions of the stressor (e.g., Boss, 2002, building on Hill, 1958). Because all couples in the current study have, as a given, a recent deployment, we focus on the extent of combat exposure during this deployment as an index of the degree of threat or severity embedded in the deployment event, as this is posited to be an essential source of variance in how stressful deployments are (Kelley, 1994; Wiens & Boss, 2006).

There are many factors which can represent resources that are related to the degree of stress for couples (Dolan & Ender, 2008; Wiens & Boss, 2002, Wright et al., 2006). Based upon these earlier reviews, we evaluated (1) status variables (income, education, rank), (2) prior experiences that may help couples adapt to the demands of military life (coming from a military family, more total years in the service), (3) connection and support, and (4) marital quality (such as quality of communication and satisfaction). We also examined the number of children and children's behavioral problems, as parenting stress and child psychosocial problems are relatively high during deployment (Flake, Davis, Johnson, & Middleton, 2009).

Appraisal of a stressful situation is a critical component of stress (e.g., Dolan & Ender, 2008). A sense of value and meaning for military service is likely an important aspect of appraisal regarding military service and deployment. For example, Milgram and Bar (1993) found that spouses who disagreed with the military mission their partners were engaged in felt more fearful about their husbands safety, and Britt, Dickinson, Moore, Castro, and Adler (2007) found that a sense of pride in their military job related to lower depression and PTSD for soldiers deployed on a peacekeeping mission. Therefore, we predicted that individuals

who have negative attitudes towards the Army, Army service, and the value of the current mission will report more stress.

Method

Participants

The current sample consists of 300 married couples comprised of an Active Duty U.S. Army husband with deployment during the last year and a non-active duty (civilian) wife. The modal duration of the last deployment was 12 months. Couples were married an average of 5.3 years (SD = 4.5) and 78% of couples reported at least one child living in their household at least part time. Husbands averaged 28.4 years of age (SD = 5.7) and wives averaged 27.8 years of age (SD = 6.1). In terms of education, 70.2% of husbands and 53.5% of wives reported that the highest degree obtained was a high school diploma or GED. Of the husbands, 70% were White non-Hispanic, 13% were Hispanic, 9% were African American, 1% were American Indian/Alaska Native, 1% were Asian, 1% were Hawaiian or Pacific Islander, and 5% described themselves as multi-racial. Of the wives, 72% were White non-Hispanic, 11% were Hawaiian or Pacific Islander, and 5% described themselves as multi-racial. Overall, 61% of the couples were both White non-Hispanic, while the remainder reported at least one minority spouse.

Procedures

Couples for the current study were selected (based on which couples had recent deployment and consisted of an Active Duty Solider with civilian wife) from a sample of 476 couples who enrolled in a larger study of military families and marriage education¹ (Stanley, Allen, Markman, Rhoades, & Prentice, 2010). The study was conducted at Fort Campbell, KY, a base with a total military population of over 30,000. To enroll in the larger study, all couples were required to be married, have at least one active duty partner stationed at Fort Campbell, speak and read English fluently, and not have previously participated in a marriage workshop similar to the one being studied. All couples agreed to be randomly assigned to the intervention or control. The data for the current study were drawn from the baseline assessments conducted in 2007, prior to random assignment or the intervention.

Measures

Stress—In a section about the last deployment, participants were asked how stressful a number of issues commonly related to deployment (e.g., combat, loneliness, sexual frustration, fear of self/spouse getting physically injured) had been for them in the last year on a scale from 1 (not at all stressful) to 7 (very stressful). Table 1 includes all items on this scale; note wording of items that allows both spouses to report on concerns about self/ spouse as appropriate. Despite some difference in absolute level of ratings for different issues (see results), stress ratings showed strong internal consistency. For husbands, the

¹The vast majority (91%) of the overall sample consisted of an active duty Army husband and a civilian wife. To facilitate clear interpretation of husband and wife roles and because other couple configurations (e.g., both spouses active duty, civilian husband married to active duty wife) were infrequent enough to preclude separate groupings, we limited the sample to active duty husband and civilian wives.

Fam Process. Author manuscript; available in PMC 2014 October 27.

Allen et al.

alpha for the 10 stress items was .85 and for wives it was .84. Given the high internal consistency, we averaged all stress items into a mean score for correlation and regression analyses.

Combat exposure—For husbands who acknowledged being exposed to combat or similar situations of risk of harm during the last year, combat exposure during the last deployment for was assessed with the Combat Exposure Scale (CES; Keane et al., 1989). Husbands were asked to rate the frequency of exposure to various combat situations, such as firing rounds at the enemy and being on dangerous duty. Internal consistency for the current sample of husbands was .82.

Status—Husband military rank was endorsed on a continuum from lower (Private) to higher rank (Field Grade Officer). Husband annual income was assessed on a continuum delineated in \$10,000 increments ranging from under \$9,999 to \$70,000 or over. Subjective economic strain was the average of two items: "Our income never seeks to catch up with our expenses" and "I often worry about my poor financial situation" ($\alpha = .75$ for husbands and . 81 for wives). Husband and wife education was assessed by asking number of years of education.

Military experience—Participants were asked "Do you come from a military family?" (answered yes/no). We also asked husbands what year they joined the service and used this to estimate number of years total they had been in the service.

Connection and support—For connection, we asked two converging items about bonding and connection with other Army families (e.g., "We are bonded and connected with other Army families"; α for husbands = .84 and for wives = .91) which were averaged. Markers of support were (a) *need more support* (i.e., "I am in need of more emotional and social support than I am getting") and (b) *can get support* (i.e., "If I needed it I would know how to get help or support from Army agencies (for example, chaplains, health care workers, mental health, etc.)").

Marital quality—Four aspects of marital quality were assessed. General *marital satisfaction* was assessed using the 3-item Kansas Marital Satisfaction Scale (KMS; Schumm, Paff-Bergen, Hatch, & Obiorah, 1986; α greater than .90 for husbands and wives). *Negative communication* was assessed with the 4-item version of the Communication Danger Signs Scale (Stanley & Markman, 1997). Items reflect escalation, invalidation, negative interpretation, and withdrawal and show adequate internal consistency (wives' $\alpha = .75$, husbands' $\alpha = .74$). Drawing from the Work Readiness/Effectiveness Scale (WRES; Saiz, 2003, as cited in Stanley et al., 2003), *Spillover* represents the extent to which marital problems and work interfere with each other (e.g., "Conflicts with my spouse sometimes impact my day-to-day functioning at work," "Stress at work sometimes makes it harder to get along with my spouse."). Alpha across six spillover items was .83 for husbands and .86 for wives. Also from the WRES, the ability to *talk about Army* issues scale consists of two questions asking about ability and comfort when discussing Army matters (husbands' $\alpha = .73$; wives' $\alpha = .82$).

Children number and psychosocial functioning—Participants were asked the number of children living in their household (at least part time). Child internalizing and externalizing behaviors were assessed with items drawn from the Child Behavior Checklist (Achenbach, 1988). Husband and wife ratings of these behaviors generally showed adequate internal consistency (husband rating of externalizing = .83, wife rating of externalizing = .79, wife rating of internalizing = .77; but α for husband rating of internalizing was only = . 67).

Perceptions of Army and mission—Again drawing from the Work Readiness/ Effectiveness Scale (WRES; Saiz, 2003, as cited in Stanley et al., 2003), several types of perceptions were assessed regarding participants' feelings about the Army and Army service. Participants' overall adjustment to the Army (*Army adjustment*) was assessed with eight items that assess satisfaction with the Army, belonging and attachment to the Army, and the sense that one's family has adjusted well to Army life (husband and wife $\alpha = .90$). *Army concern* for families was assessed with two items asking about how responsive and concerned the Army is regarding the respondent's family well-being (husband $\alpha = .76$; wife $\alpha = .74$). Participants were also asked about the degree to which Army service is important, honorable, and valuable (*Army value*) and about the degree to which the U.S. mission in Iraq and Afghanistan is important and valuable (*mission value*).

Results

Husband vs. Wife Reports of Stress

Table 1 provides means for husbands and wives on the stress items. Husbands reported that most issues averaged close to 4 (corresponding to "somewhat stressful" on the scale), with highest ratings on combat, sexual frustration, and effects on the children. Wives tended to score higher on stress variables than their husbands. Paired samples t-tests indicated that wives scored significantly higher than their husbands on stress regarding combat, reintegration, loneliness, staying in touch, fear of death, physical injury, or psychological problems, and effects on the children. Spouses' stress ratings were significantly correlated (significant *rs* ranged from .14 to .43 (*p*s < . 05); the highest convergence was found on stress regarding impact on children), except for a trend for fear of death (*r* = .11) and nonsignificant correlations between spousal ratings for sexual frustration (*r* = .03) and loneliness (*r* = .01). Stress regarding the trust in one's partner to remain faithful earned the lowest rating for both husbands and wives and paired t-tests showed that, for both husbands and wives, the stress related to fidelity was significantly lower than stress regarding all other issues (*p* < .001 for all comparisons).

Correlates of Stress

Table 2 presents correlations between level of stress and level of combat exposure, resources, and perceptions. Combat exposure was significantly correlated with stress for both husbands and wives. Husband income showed small but significant negative correlations with husband and wife stress, and husband rank was similarly related to husband stress. The psychological sense of financial strain was a more potent predictor than rank or income, with stronger negative correlations between economic strain and stress for

both husbands and wives. Education level was not significantly related to stress. Prior military experience, operationalized by coming from a military family and years in the service, was not significantly related to stress.

Connection with other Army families was surprisingly not a significant correlate of stress. A sense of needing more support was positively correlated with more stress, while the sense of knowing how to get support if needed was negatively related to stress.

Stress was also related to marital functioning. Couples who reported higher general levels of negative communication and more negative spillover between work and marriage had higher levels of stress, while marital satisfaction and comfort talking about Army issues were associated with less stress.

While number of children was not significantly associated with stress for either husbands or wives, wives' ratings of children's externalizing and internalizing behaviors were associated with more stress for wives. For husbands, child behavior was not significantly associated with stress.

We also evaluated whether perceptions of the Army and Army service were related to stress. For both husbands and wives, greater Army adjustment was related to lower stress. Feeling that the Army is concerned about Army families was significantly related to lower stress for wives, but not husbands. Finally, while beliefs about the general value of Army service was not significantly associated with stress, more negative attitudes towards the U.S. missions in Iraq and Afghanistan were associated with more stress².

Regression Analyses

Clearly, many of the predictor variables are interrelated, with overlapping variance between each other and levels of stress. In order to evaluate how these predictors operate as a set, and to estimate the amount of variance in stress explained by the predictors as a whole, we computed two regressions, one for husbands' level of stress and one for wives' level of stress, in which we simultaneously entered the variables that were significantly correlated with stress for either husbands or wives as predictors (see Table 3). Listwise deletion resulted in a lower sample size for this analysis (196 for men, 163 for women) as many individuals were missing data on at least one variable, particularly the child behavior questions, as these were only answered by individuals with children of certain ages living at home, and the combat exposure questions, as these were only answered by husbands who endorsed some exposure to combat or risk during the last year. The set of variables explained about 30% of the variance in stress for husbands and wives. Even with all variables in the model, some emerged with significant unique variance: For both husbands and wives, husband combat exposure and perceived value of the mission were significant; for husbands, rank, economic strain, and spillover were significant; and for wives, negative communication was significant³.

²Both husbands and wives scored significantly higher on the value of general Army service relative to the value of the U.S. missions in Iraq and Afghanistan (*husbands' paired t* = 17.66, p < .001; *wives' paired t* = 15.89, p < .001).

Fam Process. Author manuscript; available in PMC 2014 October 27.

Discussion

Couples averaged moderate stress on almost all domains assessed, with the surprising exception of fidelity. Given the popular notion that infidelity is a common source of stress for couples separated by deployment, it was expected that this would be an area of greater concern. This study focuses on a sample of couples who are invested enough in their marriage to enroll in a longitudinal study of their marriage with a 50/50 chance of being assigned to a marriage education program, thus, these couples may represent relatively stable, committed couples. In addition, the assessment took place after the couples had been reunited, and thus concerns about fidelity may not be as currently salient (or recalled as less worrisome during the deployment) compared to intense or ongoing concerns about injury/ death or psychological adjustment.

In fact, couples had the highest stress regarding issues related to combat, death, physical or psychological injury, loneliness, and effects on the children. The civilian wives reported significantly more stress regarding these issues than their active duty husbands who had been deployed. Multiple contrasts are inherent in this difference: male versus female, military versus civilian, having been in the field versus at home. Thus, it is difficult to know what best explains this difference. It could be that military training better prepares soldiers for stress, or that male soldiers are less inclined to report stress, or perhaps the relative lack of information for the nondeployed wife during deployment about the day to day experiences of her husband could increase worry. This pattern also converges with the notion that in a dyadic stress situation, those who feel and have less perceived control (like wives in the current study) experience more stress, even when the other partner is actually under more objective threat. Whatever the explanation, it is clear that a significant number of wives in particular experience multiple issues related to military duty and deployment as very stressful.

Spouses' stress ratings were usually significantly correlated, and we also found fairly good convergence on the factors that were associated with higher stress for both husbands and wives. Several significant correlates of stress were found. Couples where the husband reported more combat exposure during the last deployment were higher on stress, which makes sense given the emphasis on injury and death in the stress ratings. Even in the regression analyses, where multiple factors were included, combat exposure still emerged as significant for both husbands and wives; thus, this issue predicted stress above and beyond the resource and perception variables included.

Of the resources assessed, most aspects of military or economic status were only weak buffers of stress, with the psychological sense of economic strain emerging as the strongest correlate for both husbands and wives, and retaining its significance for men in the regression analyses in which other variables were controlled. Thus, feeling challenged to

³Couples had been back together for varying amounts of time since deployment, and these aspects of stress may vary with time since deployment. For husbands, time together since deployment was unrelated to stress (r = -.06, ns), but for wives time together since deployment was significantly related to stress (r = -.20, p < .05). Results were the same when entering in time together since last deployment as a covariate in all correlation and regression analyses, except that the correlation between husband income and wife stress dropped slightly and became nonsignificant (p = .10).

Fam Process. Author manuscript; available in PMC 2014 October 27.

make ends meet was more salient than actual income, and fits with the idea that a "pile up" of stressors can exacerbate the stress experienced regarding any given issue (Wiens & Boss, 2002, p. 21).

Military experience, operationalized as years in service and coming from a military family, did not relate to lower levels of stress. This finding is inconsistent with Rosen, Teitelbaum, and Westhuis' (1993) findings for Gulf War spouses. It may be that it is important to understand the nature of prior military experience. For example, if one came from a military family in which the active duty parent suffered greater emotional or physical harm, then this prior experience may lead to more stress, whereas Army families of origin that did not experience such harm (or lower levels of such harm) may lead to less stress. This would mirror findings of Milgram and Bar (1993) who found that prior tours of reserve duty buffered stress but prior duty related injuries increased stress. Thus, greater specifics regarding military history may be needed in future research.

Surprisingly, connections with other Army families had no relation to stress. Persons with more stress did identify a need for more support, and the sense that help was available, if needed, emerged as a negative correlate of stress. Thus, individuals with more stress may not be aware of resources that are available to them and/or may feel these resources are inadequate.

Perceptions about the Army were also generally related to stress. Husbands and wives, on average, valued Army service in general more than they valued the current mission in Iraq and Afghanistan. Feeling less enthusiastic about this mission also related to greater stress in the correlational analyses, and this variable continued to show significant unique predictive ability in the regression analyses for both husbands and wives. The importance of this construct is consistent with Milgram and Bar's findings (1993), and the general literature on meaning-making and trauma (Schok, Kleber, Elands, & Weerts, 2008). It may be that couples who feel that the current mission is important and valuable are better able to feel good about and cope with the stresses inherent in dangerous military duty and deployment. Similarly, the more positive one's feelings about the Army, the lower one's stress.

Family problems emerged as significant correlate of stress. The number of children was unrelated to stress, but wives who felt that their children were having more psychological problems reported more stress related to deployment. Consistent with research by Dolan and Ender (2008), the stronger the relationship and marital communication, the lower the stress for military couples. In the regression analyses, the overlap between aspects of marital functioning led to some relationship constructs becoming non-significant predictors of stress; however, for husbands, spillover remained significant while for wives negative communication remained significant. Overall, in the regression there was unique variance retained for rank, economic strain, and spillover for husbands. These variables all seem to relate to issues of work, suggesting male stress is lower if they have more power or status within their job, more economic resources, and are able to compartmentalize work and home more effectively. In contrast, after controlling for the other marital variables, but rather was still significantly predicted by negative communication with her husband.

Limitations

There are limitations to the generalizability of these findings, as participants in this sample all joined a research study explicitly focused on their marriage, with a 50/50 chance of being assigned to a marital intervention. Thus, participants in this sample may not be representative of all Army couples and results can only be generalized to Army couples with these types of selection factors (e.g., still together after deployment, no couples included an active duty wife, all couples willing to participate in marital research and education). Moreover, husbands had been back from deployment for varying amounts of time, and many of the couples were likely aware of impending deployment (37% of the sample was redeployed at a follow up point approximately seven months later). Thus, when considering stress regarding these issues, couples varied in how much of the "last year" consisted of active deployment, phases of reintegration, and even anticipation of future deployment. These issues must be kept in mind when evaluating findings, as levels of stress and adjustment may vary over these phases. Consistent with this point, Schumm, Bell and Gade (2000) found a slight drop in marital satisfaction from pre-deployment to mid-deployment, followed by an increase from mid-deployment to post deployment. Considering the stress variables evaluated in the current study, there might be variations based on time frame; for example, concerns about fidelity may be higher if assessed during the time of deployment versus reintegration.

The cross sectional nature of the data also precludes the ability to isolate predictors versus sequelae, so these issues may have been pre-existing prior to deployment and increased the experience of stress, or higher stress during and after deployment could have influenced these issues. For example, greater child problems could increase stress for wives and/or wives' stress and fear about danger to their husbands could affect the children and increase psychosocial problems (consistent with general family systems and disaster literature; see Ronan et al., 2008). As another example, less satisfaction with the Army could increase stress and/or a more stressful deployment could undermine satisfaction with the Army or valuing of the mission. Additionally, third variables such as general mental health problems may account for the relationships between many variables. For example, depression and anxiety could predict both greater marital problems and deployment related stress.

Clinical Implications

However, the general picture that emerges from this data is that stress regarding military and deployment related issues is related to greater combat, greater family stress (economic strain, marital conflict, child problems), greater need for support, and more negative attitudes regarding the Army and mission. The results give us a greater understanding of the impact of military experiences on stress and relationship functioning, suggest areas for future inquiry, and provide evidence for targets of intervention with military couples. For example, Wright et al. (2006, p. 74) provide a list of recommendations for spouses coping with the fear of their partner's injury and death, such as increasing social support and "quality of communication" with family and friends. The current paper expands these recommendations to the active duty spouse, highlights some additional correlates of stress, updates findings with a contemporary sample, and provides more specifics about the types of communication which are most useful or detrimental to the couple. For instance, while

some couples may seek to avoid talking about Army issues because they are stressful, our results suggest that being able to talk openly and comfortably about Army life and issues is associated with reduced stress. Some issues the couple will not have much control over (e.g., rank, combat exposure), but other issues are more amenable to improvement (e.g., financial management, being aware of and using social support resources, actively strengthening one's marriage and communication, and improving child adjustment and behavior). Working on such issues can help couples improve coping and resiliency regarding military demands and reduce pile-up of stressors and additional challenges, and in turn reduce the stress related to military life and deployment.

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References

- Alt, BS. Following the flag: Marriage and the modern military. Westport, Connecticut: Greenwood Publishing Group; 2006.
- Boss, P. Family stress management: A contextual approach. 2. Thousand Oaks, CA: Sage; 2002.
- Britt TW, Dickinson JM, Moore D, Castro CA, Adler AB. Correlates and consequences of morale versus depression under stressful conditions. Journal of Occupational Health Psychology. 2007; 12(1):34–47. [PubMed: 17257065]
- Di Nola GM. Stressors afflicting families during military deployment. Military Medicine. 2008; 173(5):5–7.
- Dolan CA, Ender MG. The coping paradox: Work, stress, and coping in the U.S. army. Military Psychology. 2008; 20(3):151–169.
- Flake EM, Davis BE, Johnson PL, Middleton LS. The psychosocial effects of deployment on military children. Journal of Developmental and Behavioral Pediatrics. 2009; 30(4):271–278. [PubMed: 19606059]
- Karney, BR.; Crown, JS. Families under stress: An assessment of data, theory, and research on marriage and divorce in the military. National Defense Research Institute, RAND Corporation; 2007.
- Keane T, Fairbank J, Caddell J, Zimering R, Taylor K, Mora C. Clinical evaluation of a measure to assess combat exposure. Psychological Assessment. 1989; 1:53–55.
- Kelley ML. The effects of military-induced separation on family factors and child behavior. American Journal of Orthopsychiatry. 1994; 64(1):103–111. [PubMed: 8147419]
- Kelley ML, Hock E, Jarvis MS, Smith KM, Gaffney MA, Bonney JF. Psychological adjustment of navy mothers experiencing deployment. Military Psychology. 2002; 14(3):199–216.
- Milgram NA, Bar K. Stress on wives due to husbands' hazardous duty or absence. Military Psychology. 1993; 5(1):21–39.
- Norwood, AE.; Fullerton, CS.; Hagen, KP. Those left behind: Military families. In: Ursano, RJ.; Norwood, AE., editors. Emotional aftermath of the persian gulf war: Veterans, families, communities, and nations. Washington, DC, US: American Psychiatric Association; 1996. p. 163-196.
- Palmer C. A theory of risk and resilience factors in military families. Military Psychology. 2008; 20(3):205–217.
- Ronan KR, Crellin K, Johnston DM, Finnis K, Paton D, Becker J. Promoting child and family resilience to disasters: Effects, interventions, and prevention effectiveness. Children, Youth and Environments. 2008; 18(1):332–353.
- Rosen LN, Durand D, Westhuis DJ, Teitelbaum JM. Marital adjustment of army spouses one year after operation desert storm. Journal of Applied Social Psychology. 1995; 25(8):677–692.

Allen et al.

- Rosen LN, Teitelbaum JM, Westhuis DJ. Stressors, stress mediators, and emotional well-being among spouses of soldiers deployed to the persian gulf during operation desert Shield/Storm. Journal of Applied Social Psychology. 1993; 23(19):1587–1593.
- Rosen LN, Westhuis DJ, Teitelbaum JM. Patterns of adaptation among army wives during operations desert shield and desert storm. Military Medicine. 1994; 159(1):43–47. [PubMed: 8164866]
- Schok ML, Kleber RJ, Elands M, Weerts JMP. Meaning as a mission: A review of empirical studies on appraisals of war and peacekeeping experiences. Clinical Psychology Review. 2008; 28(3): 357–365. [PubMed: 17532104]
- Schumm WR, Bell DB, Gade PA. Effects of a military overseas peacekeeping deployment on marital quality, satisfaction, and stability. Psychological Reports. 2000; 87(3, Pt 1):815–821. [PubMed: 11191394]
- Schumm WR, Paff-Bergen LA, Hatch RC, Obiorah FC. Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. Journal of Marriage & the Family. 1986; 48(2):381–387.
- Stanley SM, Allen ES, Markman HJ, Rhoades GK, Prentice D. Decreasing divorce in Army couples: Results from a randomized clinical trial of PREP for Strong Bonds. Journal of Couple and Relationship Therapy. 2010; 9:149–160. [PubMed: 20634994]
- Stanley, SM.; Markman, HJ. Marriage in the 90s: A nationwide random phone survey. Denver, Colorado: PREP, Inc.; 1997.
- Stanley, SM.; Markman, HJ.; Saiz, CC.; Schumm, WR.; Bloomstrom, G.; Bailey, AE. Building Strong and Ready Families: Interim report. Washington D. C.: SAIC, Inc.; 2003.
- Wiens, TW.; Boss, P. Maintaining family resiliency before, during, and after military separation. In: Castro, CA.; Adler, AB.; Britt, TW., editors. Military life: The psychology of serving in peace and combat (vol. 3): The military family. Westport, CT: Praeger Security International; 2006. p. 13-38.
- Wright, KM.; Burrell, LM.; Schroeder, ED.; Thomas, JL. Military spouses: Coping with the fear and the reality of service member injury and death. In: Castro, CA.; Adler, AB.; Britt, TW., editors. Military life: The psychology of serving in peace and combat (vol. 3): The military family. Westport, CT: Praeger Security International; 2006. p. 64-90.

Table 1

Stressors for Couples Reporting Deployment within Prior Year

How stressful have the following issues been for you in the last year?	Husbands	Wives M (CD)	Paired t	Percentage rating "very stressful"	/ stressful"
				Husbands	Wives
Combat (your own or your spouse's)	4.88 (1.91)	5.20 (1.84)	2.26*	26.2	34.7
General fears about reintegration (making the transitions leaving and returning)	3.92 (1.88)	4.63 (1.88)	4.71 ***	7.7	19.3
Loneliness	3.63 (2.07)	5.31 (1.77)	10.00^{***}	11.7	36.6
Sexual Frustration	4.08 (2.21)	4.17 (2.12)	.47	20.1	19.9
Difficulty staying in touch with each other	3.31 (1.87)	3.67 (1.94)	2.34 *	5.0	9.9
Trust that your spouse is remaining faithful	2.40 (1.92)	2.54 (2.14)	.86	6.7	12.6
Fear of self or spouse dying	3.70 (2.22)	5.50 (1.92)	10.49^{***}	14.0	46.6
Fear of self or spouse getting physically injured	3.98 (2.18)	5.48 (1.90)	8.98 ***	15.5	44.6
Fear of self or spouse developing psychological problems or being "a changed person"	3.79 (2.20)	5.17 (2.06)	8.15 ^{***}	17.4	40.8
Effects on the children	4.49 (2.26)	4.93 (2.17)	2.85 **	23.5	35.9

Fam Process. Author manuscript; available in PMC 2014 October 27.

n range from 241 (effects on

* p <.05 ** p <.01 p <.001 (all two tailed).

Table 2

Correlates of stress regarding deployment

	Husband	Wife
Stressor		
Husband combat exposure ^a	.28**	.27**
Resources		
Status		
Husband rank ^a	12*	10
Husband income ^a	14*	12*
Economic strain	.23**	.24**
Years of education	06	05
Military Experience		
Military family	.02	.12
Husband year joined service ^a	.04	06
Support		
Connection with other Army families	.08	00
Need more support	.33**	.30**
Can get support	13*	15*
Marital Quality		
Marital satisfaction	27**	31**
Spillover	.37**	.25**
Talk about Army	20**	21**
Negative communication	.25**	.30**
Children		
Number of children	.05	.05
Child externalizing	.05	.21**
Child internalizing	.05	.16*
Perceptions		
Army adjustment	20**	17**
Army concern	05	22**
Army value	04	07
Mission value	26**	23**

 a Husband report on these variables used to predict both husband and wife stress; all other variables use own report on the variable to predict own stress.

Note: Percent of variance accounted for is estimated by squaring the value of the correlation coefficient. Ns for each correlation ranged from 213 to 299.

Table 3

Simultaneous regression of variables predicting own stress

	Husbands	Wives
	β	β
Husband combat exposure ^a	.25 ***	.17*
Husband rank ^a	.20*	05
Husband income ^a	16	.00
Economic strain	.18**	.07
Need more support	.12	.16
Can get support	10	.01
Marital satisfaction	04	09
Spillover	.24 **	.02
Talk about Army	08	.13
Negative communication	04	.24*
Child externalizing	09	.12
Child internalizing	.08	.06
Army adjustment	.02	.04
Army concern	.05	10
Mission value	19**	18*
	F= 5.32***	F=4.45***
	$R^2 = .31$	$R^2 = .30$

Note. N = 196 for each male regression, 163 for female regression.

 a Husband report on these variables used to predict both husband and wife stress; all other variables use own report on the variable to predict own stress.

*** p < .001 (all two tailed)