Published in final edited form as:
J Hum Behav Soc Environ. 2013 January 1; 23(6): . doi:10.1080/10911359.2013.795068.

Spouse Psychological Well-Being: A Keystone to Military Family Health

Sara Green,
University of Washington, School of Social Work, Seattle, Washington, USA

Paula S. Nurius, and
University of Washington, School of Social Work, Seattle, Washington, USA

Patricia Lester
UCLA Semel Institute for Neuroscience and Human Behavior

Abstract

Understanding predictors of military spouse psychosocial vulnerability informs efforts to assess, identify, and support at-risk spouses and families. In this analysis we test the effects of family stress and strain on military spouse psychological health, using a sample of female civilian spouses (n=161). Regression findings confirm expectations of the significant contribution of family stressors, strain, and resources in explaining variation in spouses' psychological health, controlling for deployment and socioeconomic factors. Identifying the effects of family stress on military spouse psychological health supports the need for family-centered interventions and prevention programs.

Keywords

military family; military spouse; mental health; stress; deployment; social support

Deployment is an obvious area of focus when assessing stress for military families. However, military families contending with parental deployment are also affected by stress resulting from changes and events that are part of general family life (Dimiceli, Steinhardt, & Smith, 2010). The burden of this “pile-up” of stressors (McCubbin & Patterson, 1982a) often falls on the non-deployed parent who is left to tend to the day-to-day needs of the family (Spera, 2009). Many military spouses successfully manage the stress of maintaining a family during deployment (Lester et al., 2011). However, in families facing additional hardships, non-deployed spouses are likely to be more taxed and less resourced, leaving them more vulnerable to the burdens wartime deployment may bring (Allen, Rhoades, Stanley, & Markman, 2011).

In this paper, we integrate multiple aspects of the family ecology that may convey stress in order to better illuminate aspects of psychosocial vulnerability for military spouses, implications of spousal psychological distress for family functioning, and promising points of intervention to address vulnerabilities and needs. We orient our investigation around the premise that military spouses are responsible for maintaining equilibrium and psychosocial health within military families (Lara-Cinisomo et al., 2012; Palmer, 2008). Parents and families are embedded within communities and, in the present case, within systems that play

Address correspondence to Sara Green, University of Washington, School of Social Work, 4101 15th Ave NE, Seattle, WA 98105, USA. srgreen@u.washington.edu.

roles in supporting or eroding family functioning (Bronfenbrenner, 2005). Yet, the non-deployed parent stands at the center of support networks, making that family member's psychological health a critical focal point to assessing and scaffolding military family well-being (Lester et al., 2010; Verdeli et al., 2011). The goal of this paper is to inform efforts to assess, identify, and support vulnerable and at-risk spouses even before psychological functioning reaches clinically significant levels.

Military Spouse Psychological Health

The lives of military spouses are characterized by multiple layers of stress. Sustaining a family in the face of frequent moves, distance from kin networks, the demands of military culture, and the deployment of a spouse requires fortitude, adaptability, and resilience (Palmer, 2008). Military spouses constitute a kind of keystone, the central family member upon which the family and its well-being depend; the supporting element that locks the whole together. Supporting that parent becomes a central concern when discussing efforts that support military families (Gewirtz, Erbes, Polusny, Forgatch, & DeGarmo, 2011).

Family leadership by the non-deployed parent has been identified as critical to family wellness and the maintenance of a “secure family base” during deployment (Byng-Hall, 1995; Riggs & Riggs, 2011). Indeed, research has shown that the psychological well-being of the non-deployed parent or caregiver is an important buffer to the potentially negative effects of parental deployment on children and the family as a whole (e.g., Chandra et al., 2010; Flake, Davis, Johnson, & Middleton, 2009; Lester et al., 2010). Among the range of risk factors for spouse functioning, duration of service member deployment, deployment extensions, economic strain, difficulty accessing support, and spouse's life circumstances have been found to be significantly related to spouse well-being (e.g., see review de Burgh, White, Fear, & Iversen, 2011). Evidence indicates similar or even higher rates of mental health problems among spouses seeking care as among service members returning from combat (Eaton et al., 2008), though spouses reported less stigma and reticence to seek psychological care. When compared to a non-military community sample, military spouses reported higher scores of perceived stress, with higher stress being negatively correlated with mental and physical well-being (Padden, Connors, & Agazio, 2011).

Social support may serve as an important moderator on the impact of life stressors on family well-being through offsetting the erosive impact or strain felt by the spouse (Verdeli et al., 2011). Strong social support has been found to increase the likelihood of spouses' positive adjustment to deployment separation by 24% (Orthner & Rose, 2006), and perceived support by military leadership and cohesion within the military community is predictive of post-deployment adaptation (Pittman, Kerpelman, & McFadyen, 2004) as well as increased desire to remain in military service for both service members and their spouses (Burrell, Durand, & Fortado, 2003).

In sum, military spouses commonly are contending with elevated constellations of stress factors and greater emotional distress relative to their community counterparts. However, strong formal and informal support systems (e.g., family, close friends, faith community, trusted neighbors) may serve to temper the sense of strain and aid problem solving (Orthner & Rose, 2009). Conversely, stressed spouses and families with more limited support resources are likely to struggle in isolation, vulnerable to greater strain and psychological distress (McCubbin, Thompson, & McCubbin, 1996).

Stress Across the Family System

Useful to capturing the implications of multiple life stressors on family functioning has been the concept of stressor “pile-up,” aggregating normative and non-normative changes and

events (McCubbin & Patterson, 1982a). This pile-up notion is consistent with evidence showing that cumulative stress assessment that includes both ongoing stressful life conditions (e.g., economic strain, marginalization) as well as specific salient events or factors (e.g., injuries, family ruptures, frightening events) aids in capturing the overall stress burden and, indirectly, the kind of load that individuals' biological as well as psychosocial systems are bearing (Evans & Kim, 2010). Although there is a general dose-response relationship between stressors and erosion of well-being (i.e., more bad things is worse), there is important variability in how stressors are perceived and, thus, how much is experienced as personally threatening or taxing (Lazarus & Folkman, 1984). Whereas two families may experience comparable circumstances, they may vary in the *strain* they are feeling—the emotional pressure and the need for formal sources of aid beyond family and friends.

These cumulative approaches to family stress contextualize the effects of stressors within multi-domain risk and protective factor frameworks. A family's coping capacity is predicated on the convergence of stressors, how these are appraised, and the resources available within the family unit and the communities and systems to which the family and its members belong (Patterson, 2002). In the current investigation, therefore, we include separate components of stress pile-up that distinguish normative life stressful events that any family might encounter, deployment as a source of stress unique to military families, and a measure of strain to represent variation in how stressors may be differentially taxing families. Relatedly, availability of protective factors can serve to buffer or lessen the impacts of cumulative and acute stressors. At their best, these resources may assist families in not only recovering from hardship, but in developing new skills, increasing cohesion and adaptability, and establishing greater levels of resilience (McCubbin & Patterson, 1982a; Saltzman et al., 2011). Bedrock factors that bear upon most families' lives include their socioeconomic resources as well as their family and community supports, factors that are included in the current investigation.

Finally, parental psychological health and parenting style have been linked with family environment characteristics, and, ultimately with child and adolescent psychological outcomes (Hudson, Dodd, & Bovopoulos, 2011; Luecken, Appelhans, Kraft, & Brown, 2006; Repetti, Taylor, & Seeman, 2002). Cohesion and conflict, especially, have been established as significant markers of the family environment that have implications for child and family health outcomes (Olson, 2000). Mechanisms by which parental functioning impacts child outcomes include child exposure to parents' psychological health (negative affect, cognitions, and behavior) as well as exposure to stressful family experiences and environments (Goodman & Gotlib, 1999; Goodman & Tully, 2006). Although each member contributes to family environments, in current military families, the at-home parent holds the keystone role in establishing and maintaining an environment conducive to meeting the needs of both children and adults. Assessing and meeting that parent's needs, therefore, is a central fortifying pathway toward maintaining an adaptive family environment that serves the health of the family and the well-being and retention of the service member.

Study Aims

The current study aims to extend the knowledge base in two central ways. First, we characterize the stress and resource profiles of military spouses relative to their nonmilitary community counterparts to gain a comparative understanding of their stress-related vulnerabilities and strengths. A second aim is to assess the power of family stressful events as contributors to spouses' psychological health in combination with deployment stress, and to gauge the extent to which social and socioeconomic resources (or lack thereof) as well as family strain lessen or increase the spouses' psychological health. Specifically, we

hypothesize that military spouses who demonstrate higher levels of psychological distress relative to non-military women will also demonstrate higher numbers of stressful events, greater family strain, and, conversely, lower levels of social support and socioeconomic resources compared to those military spouses below community norm cut-offs. We also hypothesize that family stressors and strain will provide unique, additive explanation to spouses' psychological health beyond that explained by deployment and socioeconomics, and that social support will demonstrate significant palliative effects on psychological distress. Finally, we examine the patterns of association between spouses' psychological health and family environment as an indicator of the implications of the non-deployed parents' health in maintaining a resilient family system.

Methods

Procedures

This sample consists of 171 active duty Army and Marine Corps families affected by OEF/OIF deployments from two West coast, highly combat-deployed military installations. Families were recruited via mailings to housing units across the installations and by flyers posted at community-based locations. Recruitment materials described the goals of the study regarding the effects of parental wartime deployment on family life and children as well as criteria for participation. Inclusion criteria consisted of: 1) an active duty parent who was either currently deployed or returned from combat deployment in the last 12 months, 2) at least one parent who was available to participate in the study, and 3) at least one child between the ages of 6 and 12. Exclusion criteria included evidence of psychosis or serious psychological impairment; no one was excluded based on this criteria. Out of the 186 eligible families who responded, 171 (92%) families (163 civilian spouses) completed the study assessments; non-participation being due to scheduling difficulties.

Study interviewers obtained written informed consent from parents and voluntary assent from children, using a standardized recruitment script. Participants were informed that the assessments were confidential except in the case of mandatory reporting limitations. Computer-assisted interviews were conducted in the family's home or at another preferred location. The BA level interviewers received training in study protocols and emergency procedures, including the recognition of distress and providing appropriate referrals. Civilian participants received a $20 gift card incentive for participation. Institutional Review Board (IRB) approval was obtained for study procedures from UCLA, Madigan Army Medical Center, and Naval Medical Center San Diego.

Sample Characteristics

The current examination focuses on civilian spouses of active duty military service members (n=161; two respondents did not complete family measures). Table 1 provides an overview of sample characteristics. Approximately one-third of the families had a currently deployed service member parent, with the number of cumulative months deployed ranging from 1 to 48, with average of 16.8 months. The majority of families were linked to non-commissioned officers, one-third of families were linked to a commissioned officer, and comparatively few were enlisted families. Active duty officers were significantly more represented in the currently deployed group and non-commissioned officers were more prevalent in the recently returned group. All of the spouses were female with a mean age of 33.6. The majority were Caucasian with approximately one-third identifying as racial minorities. Virtually all (98%) the women were married to their partners. Participants had an average of 2.8 children. Participants' age at first becoming a parent ranged from 14 to 36. Approximately a third of the sample first became a parent at age 19 or younger, a third between the ages 20 to 24, and the remainder at age 25 or older. Approximately one-third

had a college degree. Not quite half the sample's family finances allowed them to live comfortably and purchase extras, with the remainder reporting they could cover needs but lacked extras 38%, and about 16% reported struggling to get by.

Measures

Deployment Factors—Deployment factors were assessed through two self-report measures: 1) whether the service member parent was currently deployed or recently returned, and 2) the number of cumulative months that the service member parent had been deployed.

Spouse Socioeconomic Resources—Spouse education and family income were included as socioeconomic characteristics. Education was coded as whether or not the spouse had graduated from college. Income was dichotomized into lower income (struggling to get by or have necessities but no more) and higher (living comfortably, have extras). Spouse's age when first became a parent was also included as an indicator of relative youth at which the parenting role was entered, which often serves to truncate or suspend education and work force opportunities (Hofferth, Reid, & Mott, 2001; Mirowsky & Ross, 2002).

Social Support—The Social Support Index (SSI; McCubbin, Patterson, & Glynn, 1982) is a 17-item inventory of the degree to which the family serves as a source of love and support and one's friendship network and community offer a sense of belonging and esteem (α=.88). The SSI uses a 5-point Likert scale, ranging from strongly disagree to strongly agree. Responses are summed for a total score, ranging in this sample from 22 to 66, with an average of 47.78.

Psychological Health—Psychological health was assessed using the Brief Symptom Inventory (BSI), specifically the Global Severity Index (GSI, α=.92), Depression subscale (α=.83), and Anxiety subscale (α=.74) (Derogatis, 1993). The Global Severity Index (GSI) is a mean-based aggregate of 53 items scored on a Likert-type scale ranging from (0) not at all to (4) extremely. The GSI covers 9 symptom dimensions: depression, anxiety, somatization, hostility, obsession-compulsion, interpersonal sensitivity, phobic anxiety, paranoid ideation, and psychoticism. The GSI provides a sensitive broad-based barometer of symptomatology. Depression and anxiety were also assessed separately as these are the most commonly encountered forms of distress. Although correlated, depression and anxiety often reflect different dimensions of stress-related difficulties which may bear upon implications for coping and support interventions.

Family Stressors—The Family Inventory of Life Events and Changes (FILE; McCubbin, Patterson, & Wilson, 1980) is a 71-item inventory that assesses the total number or pile-up of normative and non-normative family life events (α=.89). Items include life domains such as parenting, family conflict, marital relationship, finances, work-family transitions, and illness and family care. FILE uses weighted scoring, assigning different events higher or lower values depending on the magnitude of strain the event or change may create for a family. The accordingly weighted value for each “yes” response is summed for a total score. Total scores for this sample ranged from 0 to 2,440, with an average of 461.13. To achieve a more interpretable distribution, the square root score was used for FILE, which yields a range of 0 to 49.40 and a mean and standard deviation of 20.10 (7.59).

Family Strain—A shortened (8 item) version of the Family Adaptation Checklist (FAC; McCubbin & Patterson, 1982b) was used to assess family strain. FAC items describing abusive behaviors and suicidality were not included in this study. In order to capture the element of uncontrolled expression of anger in the home, an item assessing incidents of

extreme anger in the family was added to the FAC index. Both the FAC and the added item are part of the McCubbin (1987) FIRA-M assessment tool specifically developed for use with military families. “Yes” responses are summed. The total score for this sample ranged from 0 to 7, with an average of 1.24 (1.37). The checklist focuses on use of treatment services, for physical illness or injury (“visited dispensary/hospital as an outpatient”) and intra- and interpersonal needs (“sought professional help for a marital or family problem”) as well as disruptions in the family system and family member difficulties (“taken steps for marital separation or divorce” and “been in trouble with the military police”) (McCubbin & Patterson, 1982b).

Family Environment—Five Colorado Self-Report Measure of Family Functioning subscales (Bloom, 1985) were used as indicators of the family environment: Cohesion (α=.78, mean=17.82), Expressiveness (α=.75, mean=16.91), Sociability (α=.73, mean=16.51), Conflict (α=.72, mean=7.97), and External Locus of Control (α=.66, mean=8.27). Family environment characteristics serve as indicators of relational resources within the family system (McCubbin et al., 1996; Patterson, 2002). Subscales are based on five items (Conflict subscale had four items) assessing the degree to which families experience each dimension, rated on the basis of a 4-point scale (0= very untrue of our family 1= fairly untrue, 2=fairly true, 3=very true). Subscales are based on sums of the items; with totals for this sample ranging from 5 to 20.

Results

Analysis Plan

In order to characterize the current sample regarding psychological distress as well as family-related stress and resource factors, we used community sample BSI means as thresholds to distinguish military spouses who reported higher or lower levels of psychological distress. This provides a comparative profiling across the study variables of military spouses relative to community norms, as well as assessment of whether mean level differences on family stress and resource characteristics significantly differ for military spouses above and below community BSI thresholds. To examine the utility of family stress and resource variables toward explaining military spouses' psychological health within a multivariate framework we used stepped entry hierarchical regressions across multiple mental health dependent variables (e.g., depression, anxiety, global severity index). We entered predictor sets in the following manner: deployment factors, socioeconomic resources, social support, family stressor events (FILE), and family strain (FAC). This allowed us to assess the unique and cumulative contributions of these respective predictors as they were “stepped” into the model; e.g., changes in R^{2s} and beta coefficients. Regression analyses were conducted using STATA version 12. This is a conservative test of the contribution of stress and strain as each is tested, controlling for the effects of each other as well as all other predictors. Lastly, we assessed the links between spouse psychological health and family functioning by examining correlations among BSI and family environment characteristics.

Sample Characteristics Relative to BSI Community Norms for Adult Females

Spouses in this sample reported higher mean levels of global severity of psychological distress, including symptoms specific to depression and anxiety, relative to levels reported for normative community samples of adult females; specifically, M =. 46 vs. .35 for global severity, M=.49 vs. .36 for depression, and M=.45 vs. .44 for anxiety (Derogatis, 1993; Lester et al., 2010). To assess sample differences in family stress and resource characteristics at the bivariate level as a function of spousal psychological distress, t-tests were conducted on the study variables using community female adult norms as the cut-point

for spouses with higher versus lower psychological distress. As Table 2 shows, there is a consistent pattern of elevated stress and strain and lower levels of resources for spouses with psychological distress above community norms. Relative to resources, this is most apparent with social support and income, but not evident for education or age first became a parent. There are also no differences relative to the service member 's deployment status or total months of deployment.

To further characterize the sample and more fully examine the constellation of socioeconomic resource factors relative to psychological health, we contrasted spouses from each end of the sample regarding reported resources. Spouses (n=25) who had not graduated college, reported poorer household financial situation, and first became a parent at age 24 or younger (mean age 18.7) reported significantly higher psychological distress (Global severity score M=.73 vs. .29; p<.001), family stress (FILE, M=25.4 vs. 17.8; p<.001), and strain (FAC, M=2.5 vs. .80; p<.001), and lower social support (M=40.3 vs. 53.9; p<.001) than spouses (n=34) who had graduated college, reported higher household financial situation, and first became parents at age 25 or older (mean age 28.8). In a comparison of means between those spouses who had graduated college and those who had not, college graduates had statistically significantly higher overall social support (52.19 vs. 45.67; p<. 001) and age at which they first became parents (26.6 vs. 20.6; p<.001), and a lower average score on the BSI global severity index (.34 versus .52; p<.01).

Regression Analysis of Spouse Psychological Distress

Our second study aim was to assess the utility of family stress and resource characteristics in accounting for psychological distress among military spouses. Overall, findings confirm expectations of the unique, significant contribution of family stressors, strain, and resources in explaining variation in spouses' psychological health. Among all predictors, the standardized betas (indicating associations with psychological distress controlling for the contribution of all other predictors) were most robust for FILE and FAC capturing family stressful events and strain, and, to a somewhat lesser degree, social support. In the final regression steps for global severity of psychological distress and anxiety, for example, we see that the contribution of both FILE and FAC to spouse mental health remain significant, above and beyond the effects of all other predictors. Although FAC was not uniquely contributive in the last step to depression, social support did sustain a unique, ameliorative effect. The models for BSI Depression and BSI Anxiety provide useful contrasts to one another. Social support, for example, sustains as an ameliorating factor for depression, but not for anxiety. By contrast, FAC conveys significant, unique explanation of anxiety (whereas it does not for depression). Although lower economic resources was initially contributive net of deployment and other socioeconomic indicators, it did not sustain significance once family stress and social support variables were added. Deployment and other socioeconomic characteristics reflected less robust and consistent patterns of contribution.

Linking Spouse Psychological Distress to Family Environment

Finally, we examined patterns of association between spouses' psychological distress and characteristics of the family environment theorized to bear upon family well-being (Bloom, 1985). Table 4 reflects consistent patterns of spouse psychological symptomology negatively correlated with supportive family characteristics (cohesion, expressiveness, sociability) and positively correlated with conflict among family members and external locus of control.

Discussion

In today's active duty military service, military families face considerable risks to adverse family functioning. Combat deployment and uncertainties regarding the future contexts within which service personnel will be placed creates an overlay of concerns that add to and can sometimes eclipse attention to the day-in and day-out understanding of family stress, support, and the civilian spouse's capacity to anchor the family. Military initiatives are sharpening the lens of attention to families, and particularly spouses, as important investments relative to the psychosocial well-being of the families and, in turn, the health and retention of the service personnel. Although we are in early stages of developing a robust empirical base in this regard, the current findings contribute to this foundation.

The findings from this analysis support the premises that: 1) military families contend with significant family-related stress distinct from unique stress associated with deployment, and 2) that family stress and resources are significantly contributive to maternal psychological health which, in turn, holds implications for psychosocial family health. Of focus in this study were common mutable factors that may serve to erode or support spousal psychological health and that can be targets of supportive interventions to reduce strain and bolster resilience. We first summarize the findings and then consider ways these may inform early identification of stressed families and support interventions.

Bivariate analysis suggests that military spouses both above and below psychological distress levels normative for adult females are comparable regarding deployment and socioeconomic characteristics—indicating that these factors are fairly evenly distributed across the groups. This stands in marked contrast to significant differences in their stressful events, experiential strain, and lessor social supports. However, when the sample is dichotomized by socioeconomic resources (education, finances, age first became a parent), in order to compare those at either end of the spectrum, there are significant differences in reported psychological distress, family stress and strain, and social support. These findings indicate a constellation of risk factors operating in the lives of the most vulnerable and potentially least resourced families. Families contend with normative and destabilizing stressors, including deployment, in contexts of varying levels of experiential strain as well as resources and supports. When serious unanticipated situations arise, families tap into their interpersonal and intrapersonal resources to manage the stressor. If families are already taxed by their stress load, or when circumstances outweigh coping resources and capacities, additional stressors can shift a family into crisis (McCubbin et al., 1996; Patterson, 2002).

Our multivariate regression results illuminate distinctive contributions stemming from the number or pile-up of stressors relative to indicators of wear and tear or strain effects that represent a *breaking through* or overwhelming of familial coping strategies (Patterson, 1988). Although sources of stress such as deployment, lower income, and family life events will obviously be correlated with one another and with subsequent experiential strain, the current findings illustrate that strain effects captured here through FAC carry erosive additive effects that hold implications for determination of needs and intervention planning.

Testing outcomes of depression and anxiety in addition to global assessment of distress, allowed us to contrast manifestations of stress and resource implications. For example, spouses with elevated anxiety may be experiencing greater family strain and disruptions as indicated by the more robust contribution of FAC as well as current deployment status. Moreover, social support did not sustain an ameliorative effect on anxiety after accounting for stress and strain, which stands in contrast to its apparent benefits relative to depression. These findings suggest that the needs of spouses with elevated anxiety are less well met by social support networks compared to depression. Although social support is a broadly

established protective factor relative to psychological functioning, its role in buffering the effects of stress and strain for military spouses has been less investigated (Verdeli et al., 2011). These findings point to the variation in buffering effect that social support plays for different circumstances and situations; with lesser effectiveness, for instance, in contexts of serious problems wherein formal services may be appropriate to meet the needs of the individual or family.

Understood as individual and family-level resources, parents' psychological health and capacity to deal with stressful life events are key to a family's coping capital (McCubbin et al., 1996). The assessed characteristics of family environment provide at least a partial picture of coping capital, such as the relative degree of effective communication, sense of efficacy and close ties. Although temporal sequencing cannot be assured within the study design, the consistent patterns of significant correlations between the BSI scales and these family environment characteristics are consistent with clinical theory and evidence that erosion of maternal psychological health risks cascading effects in the ecology of the family, potentially diluting these intra-familial coping resources with negative impact on both parents and children (Goodman, 2007).

Implications

These finding suggest that the spouses at the greatest risk for psychological distress are also likely to be the ones with the lowest social support. The correspondingly elevated status on FAC indicates that many of them are having contact with health care providers, mental health counselors, chaplains, or other formal service providers. These points of contact thus provide opportunities for increased outreach and routine assessment of family stress and maternal psychological health. Outreach efforts utilizing normative family locations (e.g., PX, childcare facilities, schools) would extend the reach to more isolated and less networked spouses.

Although sometimes co-occurring, the contrast between depression and anxiety helps illuminate different patterns of strain and support associated with these mental health indicators, holding implications for prevention and intervention. For example, among spouses presenting with anxious symptomatology, meeting practical needs and developing intrapersonal resources such as stress management and relaxation skills may be a priority. Spouses who are depressed may be cut off from social networks or have negative beliefs about social gatherings. Education and assistance in strengthening existing resources and developing new connections will likely be important adjuncts to depression treatment, encouraging, for example, opportunities for parents, kids, and families (e.g., summer camps for military children, date nights for parents, family days, parenting workshops) in addition to family and friendship ties. Distressed spouses might not be aware of the services and resources available to them (Allen et al., 2011) and/or be too stressed or overwhelmed to take the action steps needed to utilize services (e.g., childcare that requires preregistration, family or child program that requires submitting an application). Overburdened spouses can benefit from increased problem solving and goal setting skills in order to break down larger goals (e.g., having time for self-care, managing a child's learning challenges) into more manageable steps (Saltzman et al., 2009).

Providers who work with military families can integrate deployment experiences into the context of past and current life stressors (Saltzman et al., 2011). Such efforts help families identify their own stressor pile-up, separate out stressors that are within and outside of their control, and with the helping professional, work to decrease strain and increase coping. States of chronic stress can become “the new normal,” resulting in increased strain and risks to healthy functioning across the family. When one's ability to exert direct control over current conditions is limited, useful stress management tools include education regarding

detrimental effects of chronic stress on physical and mental health, relaxation and calming strategies such as mindfulness meditation, and stress inoculation and coping skills training, acknowledging the power of appraisals (i.e., how one perceives and attributes meaning to events or circumstances).

Family environment, as one theorized pathway predicting child and adolescent well-being (Goodman, 2007), points to the value of working at the family level to increase adaptive characteristics within the family environment. For example, reducing conflict and enhancing cohesion, communication, and emotional expression may serve to bolster non-deployed parent well-being and parenting capacities (Beardslee et al., 2011; Gewirtz et al., 2011; Saltzman et al., 2011). The feeling or quality of these family environment characteristics provide the parent with a kind of barometer for family health and well-being. Teaching parents to evaluate their families' sense of cohesion, expressiveness, and the quality of their communication provides another tool for identifying when the parent or family unit needs greater support.

Notably, age at which spouse first became a parent emerged as an important variable in terms of its relationship with psychological distress and lesser education. These outcomes begin to shed light on the potential consequences of early entry into adulthood and parenting (Hofferth, Reid, & Mott, 2001; Mirowsky & Ross, 2002). Becoming parents at an earlier age may serve as a risk signal to help orient support services. We anticipate that these factors would have amplified explanatory power in samples that were more representative in the proportion of enlisted service members, highlighting challenges with which more socioeconomically vulnerable military families are likely to contend.

Strengths and Limitations

These findings add a family stress framework to our understanding of military spouses and families coping with parental deployment. It is also important to bear in mind limitations of the current study. Recruitment methods resulted in an over-representation of spouses of officers, which tends to inflate factors such as income and potentially under-represent some stress factors (Spera, 2009), and psychological distress (Lester et al., 2010). Thus, levels of stress, strain, and psychological distress reflected here may be underestimates of levels more broadly representative among military spouses, especially those of enlisted service members. Similarly, the self-selected nature of the sample may not have captured the experiences of less engaged, more isolated, or, possibly, more highly distressed spouses. Conversely, it is possible that the study did appeal to more highly distressed participants who may have been seeking assistance or referrals for services. Lastly, although the sample's racial and ethnic diversity is similar to the overall demographics of active duty spouses (Office of the Deputy, 2010), the relatively small sample size resulted in insufficient numbers of participants of specific racial minority groups, precluding our ability to undertake race comparative analyses. Inclusion of a dichotomized race predictor, aggregating participants of color, did not yield significant differences relative to psychological distress nor provide explanatory utility in the regressions. However, research indicating distinctive stress and coping mechanisms associated with racial minority status (e.g., Westhuis, Fafara, & Ouellette, 2006), argues for future examination with larger samples, as well as samples that include greater representation of low income and limited education.

Conclusion

Each branch of the U.S. military has a version of the saying “we recruit service members (soldiers, sailors, marines, etc.), but retain families. ” Inherent to this catchphrase is the understanding that a healthy family unit is integral to service member readiness, retention,

and performance. While there has been abundant research on service members and veterans, there is significantly less knowledge around the family members on the home front. As service members and their families have been faced with unprecedented operational tempo and now prepare for a potential slowing of combat deployments, advancing our understanding of military families remains central to social science and military population research.

Acknowledgments

This research was supported in part by a grant from the National Institute for Child and Human Development (R03 HD049451) and the National Institute on Mental Health grant (5 T32 MH20010) “Mental Health Prevention Research Training Program”.

References

Allen ES, Rhoades GK, Stanley SM, Markman HJ. On the home front: Stress for recently deployed Army couples. Family Process. 2011; 50:235–247. [PubMed: 21564063]

Beardslee W, Lester P, Klosinski L, Saltzman W, Woodward K, Nash W, …Leskin G. Family-centered prevention intervention for military families: Implications for implementation science. Prevention Science. 2011; 12:339–348. [PubMed: 21761154]

Bloom BL. A factor analysis of self-report measures of family functioning. Family Process. 1985; 24:225–239. [PubMed: 4018243]

Bronfenbrenner, U. Making human beings human: Bioecological perspectives on human development. Thousand Oaks, CA: Sage Publications; 2005.

Burrell L, Durand DB, Fortado J. Military community integration and its effect on well-being and retention. Armed Forces&Society. 2003; 30(1):7–24.

Byng-Hall J. Creating a secure family base: Some implications of attachment theory for family therapy. Family Process. 1995; 34:45–58. [PubMed: 7628600]

Chandra A, Lara-Cinisomo S, Jaycox LH, Tanielian T, Burns RM, Ruder T, Han B. Children on the homefront: The experience of children from military families. Pediatrics. 2010; 125:16–25. [PubMed: 19969612]

de Burgh HT, White CJ, Fear NT, Iversen AC. The impact of deployment to Iraq or Afghanistan on partners and wives of military personnel. International Review of Psychiatry. 2011; 23:192–200. [PubMed: 21521089]

Derogatis, LR. BSI Brief symptom inventory: Administration, scoring and procedures manual. 4th. Minneapolis, MN: National Computer Systems; 1993.

Dimiceli EE, Steinhardt MA, Smith SE. Stressful experiences, coping strategies, and predictors of health-related differences among wives of deployed military servicemen. Armed Forces & Society. 2010; 36(2):351–373.

Eaton KM, Hoge CW, Messer SC, Whitt AA, Cabrera OA, McGurk D, et al. Castro CA. Prevalence of mental health problems, treatment need, and barriers to care among primary care-seeking spouses of military service members involved in Iraq and Afghanistan deployments. Military Medicine. 2008; 173:1051–1056. [PubMed: 19055177]

Evans GW, Kim P. Multiple risk exposure as a potential explanatory mechanism for the socioeconomic status-health gradient. Annals of the New York Academy of Sciences. 2010; 1186:174–189. [PubMed: 20201873]

Flake EM, Davis BE, Johnson PL, Middleton LS. The psychosocial effects of deployment on military children. Journal of Developmental & Behavioral Pediatrics. 2009; 30:271. [PubMed: 19606059]

Gewirtz AH, Erbes CR, Polusny MA, Forgatch MS, DeGarmo DS. Helping military families through the deployment process: Strategies to support parenting. Professional Psychology: Research and Practice. 2011; 42(1):56–62.

Goodman SH. Depression in mothers. Annual Review of Clinical Psychology. 2007; 3:107–135.

Goodman SH, Gotlib IH. Risk for pathology in the children of depressed mothers: A developmental model for understanding mechanisms of transmission. Psychological Review. 1999; 106(3):458–490. [PubMed: 10467895]

Goodman, SH.; Tully, E. Depression in women who are mothers: An integrative model of risk for the development of psychopathology in their sons and daughters. In: Keyes, CLM.; Goodman, SH., editors. Women and depression: A handbook for the social, behavioral, and biomedical sciences. New York: Cambridge University Press; 2006. p. 241-82.

Hofferth SL, Reid L, Mott FL. The effects of early childbearing on schooling over time. Family Planning Perspectives. 2001; 33(6):259–267. [PubMed: 11804435]

Hudson JL, Dodd HF, Bovopoulos N. Temperament, family environment, and anxiety in preschool children. Journal of Abnormal Child Psychology. 2011; 39:939–951. [PubMed: 21479669]

Lara-Cinisomo S, Chandra A, Burns RM, Jaycox LH, Tanielian T, Ruder T, Han B. A mixed-method approach to understanding the experiences of non-deployed military caregivers. Maternal & Child Health Journal. 2012; 16:374–384. [PubMed: 21461790]

Lazarus, RS.; Folkman, S. Stress, appraisal, and coping. New York, NY: Springer; 1984.

Lester P, Peterson K, Reeves J, Knauss L, Glover D, Mogil C, Beardslee W. The long war and parental combat deployment: Effects on military children and at-home spouses. Journal of the American Academy of Child and Adolescent Psychiatry. 2010; 49(4)

Lester P, Mogil C, Saltzman W, Woodward K, Nash W, Leskin G, Beardslee W, et al. Families overcoming under stress: Implementing family-centered prevention for military families facing wartime deployments and combat operational stress. Military Medicine. 2011; 176(1):19–25. [PubMed: 21305955]

Luecken LJ, Appelhans BM, Kraft A, Brown A. Never far from home: A cognitive-affective model of the impact of early-life family relationships on physiological stress responses in adulthood. Journal of Social and Personal Relationships. 2006; 23(2):189–203.

McCubbin, HI. Family index of regenerativity and adaptation—military (FIRA-M). In: McCubbin, HI.; Thompson, AI.; McCubbin, MA., editors. (1996), Family assessment: Resiliency, coping and adaptation—Inventories for research and practice. Madison, WI: University of Wisconsin System; 1987. p. 863

McCubbin, HI.; Patterson, J. Family adaptation to crisis. In: McCubbin, HI.; Cauble, AE.; Patterson, JM., editors. Family stress, coping, and social support. Springfield, IL: Charles C. Thomas; 1982a. p. 26-47.

McCubbin, HI.; Patterson, J. Family adaptation checklist. In: McCubbin, HI.; Thompson, AI.; McCubbin, MA., editors. (1996), Family assessment: Resiliency, coping and adaptation—Inventories for research and practice. Madison, WI: University of Wisconsin System; 1982b. p. 863

McCubbin, HI.; Patterson, J.; Glynn, T. Social support index (SSI). In: McCubbin, HI.; Thompson, AI.; McCubbin, MA., editors. (1996), Family assessment: Resiliency, coping and adaptation—Inventories for research and practice. Madison, WI: University of Wisconsin System; 1982. p. 357-390.

McCubbin, HI.; Patterson, J.; Wilson, L. Family inventory of life events and changes (FILE). In: McCubbin, HI.; Thompson, AI., editors. Family assessment for research and practice. Madison, WI: University of Wisconsin System; 1980.

McCubbin, HI.; Thompson, AI.; McCubbin, MA. Family Assessment: Resiliency, coping, and adaptation—Inventories for research and practice. Madison, WI: University of Wisconsin System; 1996.

Mirowsky J, Ross CE. Depression, parenthood, and age at first birth. Social Science & Medicine. 2002; 54:1281–1298. [PubMed: 11989963]

Office of the Deputy Under Secretary of Defense (Military Community and Family Policy), under contract with ICF International. Demographics 2010: Profile of the Military Community. 2010. Retrieved from http://www.militaryhomefront.dod.mil/12038/Project%20Documents/MilitaryHOMEFRONT/Reports/2010_Demographics_Report.pdf

Olson DH. Circumplex model of marital and family systems. Journal of Family Therapy. 2000; 22:144–167.

Orthner, DK.; Rose, R. Army support programs and civilian spouse adjustment to deployments. Washington, DC; Army Research Institute for the Behavioral and Social Sciences; 2006.

Orthner DK, Rose R. Work separation demands and spouse psychological well-being. Family Relations. 2009; 58:392–403.

Padden DL, Connors RA, Agazio JG. Stress, coping, and well-being in military spouses during deployment separation. Western Journal of Nursing Research. 2011; 33:247–267. [PubMed: 20647551]

Palmer C. A theory of risk and resilience factors in military families. Military Psychology. 2008; 20:205–217.

Patterson JM. Families experiencing stress. Family Systems Medicine. 1988; 6(2):202–237.

Patterson JM. Integrating family resilience and family stress theory. Journal of Marriage and Family. 2002; 64(2):349–360.

Pittman JF, Kerpelman JL, McFadyen JM. Internal and external adaptation in Army families: Lessons from Operations Desert Shield and Desert Storm. Family Relations. 2004; 531(3):249–260.

Repetti RL, Taylor SE, Seeman TE. Risky families: Family socialenvironments and the mental and physical health of offspring. Psychological Bulletin. 2002; 128(2):330–366. [PubMed: 11931522]

Riggs SA, Riggs DS. Risk and resilience in military families experiencing deployment: The role of the family attachment network. Journal of Family Psychology. 2011; 25(5):675–687. [PubMed: 21875201]

Saltzman WR, Lester P, Beardslee WR, Layne CM, Woodward K, Nash WP. Mechanisms of risk and resilience in military families: Theoretical and empirical basis of a family-focused resilience enhancement program. Clinical Child and Family Psychology Review. 2011; 14:213–230. [PubMed: 21655938]

Saltzman, WR.; Lester, P.; Pynoos, R.; Mogil, C.; Green, S.; Layne, CM.; Beardsless, WR. FOCUS for military families: Individual family resiliency training manual. 2nd. Unpublished manual, UCLA; 2009.

Spera C. Spouses' ability to cope with deployment and adjust to Air Force family demands: Identification of risk and protective factors. Armed Forces & Society. 2009; 35(2):286–306.

Verdeli H, Baily C, Vousoura W, Belser A, Singla D, Manos G. The case for treating depression in military spouses. Journal of Family Psychology. 2011; 25(4):488–496. [PubMed: 21842994]

Wethuis DJ, Fafara RJ, Ouellette P. Does ethnicity affect the coping of military spouses? Armed Forces and Society. 2006; 32(4):584–603.

Table 1
Female Military Spouse Sample Characteristics

	M	SD
Age	33.58	5.38
Age when first became a parent	22.54	4.72
Cumulative months of deployment	16.81	7.94
	n	(%)
Sex- female	161	(100)
Race/ethnicity		
Caucasian	109	(67.7)
Latina	21	(13.0)
African American	13	(8.1)
Asian	2	(1.2)
Mixed/Other	16	(9.9)
Education		
Some HS or HS diploma	28	(17.4)
Some college/Vocational/AA	81	(50.4)
College graduate	52	(32.3)
Household financial situation		
Struggling, barely paying bills	26	(16.1)
Have necessities, can cover needs	61	(37.9)
Comfortable, can purchase extras	74	(46.0)
Deployment Status		
Currently deployed	52	(32.3)
Recently returned	109	(67.7)
Service member rank		
Enlisted (E1-E4)	14	(8.7)
Noncommissioned officer (E5- E9)	97	(60.3)
Officer (W1-W5, O1-O6)	50	(31.1)

Table 2

Family Stress and Resource Comparisons Between Spouses Above or Below Community Norms for Psychological Distress[a]

	BSI Global Severity		BSI Depression		BSI Anxiety	
	n=83 Below	n=78 Above	N=104 Below	n=57 Above	n=94 Below	n=67 Above
BSI score	.18 (.10)	.76 (.38)***	.16 (.15)	1.07 (.51)***	.13 (.13)	.89 (.35)***
	Mean (SD)		Mean (SD)		Mean (SD)	
Mos. of deployment	16.22 (7.05)	17.44 (8.79)	16.13 (6.84)	18.04 (9.57)	16.03 (6.78)	17.91 (9.27)
	Percent (n)		Percent (n)		Percent (n)	
Currently deployed	50.0% (26)	50.0% (26)	57.7% (30)	42.3% (22)	51.9% (27)	48.1% (25)
Recently returned	52.3% (57)	47.7% (52)	67.9% (74)	32.1% (35)	61.5% (67)	38.5% (42)
	Mean (SD)		Mean (SD)		Mean (SD)	
Age became parent	22.87 (4.81)	22.19 (4.62)	23.07 (4.87)	21.58 (4.30)	22.47 (5.00)	22.64 (4.32)
	Percent (n)		Percent (n)		Percent (n)	
Not college graduate	46.8% (51)	53.2% (58)	61.5% (67)	38.5% (42)	47.7% (62)	43.1% (47)
College graduate	61.5% (32)	38.5% (20)	71.2% (37)	28.8% (15)	61.5% (32)	38.5% (20)
$ Struggling	34.6% (9)	65.4% (17)*	42.3% (11)	57.7% (15)*	50.0% (13)	50.0% (13)
$ Have necessities	47.5% (29)	52.5% (32)*	63.9% (39)	36.1% (22)*	59.0% (36)	41.0% (25)
$ Comfortable	60.8% (45)	39.2% (29)*	73.0% (54)	27.0% (20)*	60.8% (45)	39.2% (29)
	Mean (SD)		Mean (SD)		Mean (SD)	
Social Support	49.60 (8.21)	45.83 (9.61)**	50.2 (8.09)	43.35 (9.20)***	49.52 (8.08)	45.33 (9.88)**
FILE (Stressor events)	16.80 (6.26)	23.60 (7.34)***	17.52 (5.83)	24.79 (8.22)***	17.95 (6.80)	23.11 (7.67)***
FAC (Strain)	0.80 (1.05)	1.71 (1.52)***	0.83 (1.01)	1.99 (1.62)***	0.88 (1.05)	1.73 (1.61)***

*p<05,

** p<01,

*** p<001 for T-tests or&chi^{2}for education and financial situation variables

[a] BSI community norms for non-clinical female adults used as cut-points: Global Severity= 0.35, Depression=0.36, Anxiety=0.44 (Derogatis, 1993).

Table 3

Stepped Regressions Testing the Distinct and Cumulative Contribution of Family Stress and Resource Characteristics to Spousal Psychological Distress

	BSI Global Severity (βs)					BSI Depression (βs)					BSI Anxiety (βs)				
	Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 1**	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 1**	**Step 2**	**Step 3**	**Step 4**	**Step 5**
F	2.35	3.03	4.75	14.81	15.13	3.91	3.20	6.37	12.03	11.64	2.76	1.80	2.73	7.75	7.84
$R^2\Delta$		**.09****	**.06****	**.18*****	**.02***		**.08***	**.11*****	**.14*****	.01		.02	**.03***	**.12*****	**.02***
R^2	.04	.13	.20	.38	.40	.06	.14	.25	.39	.39	.04	.06	.09	.21	.23
Deployment status	.08	.12	.12	.07	.08	.15	**.17***	**.16***	.12	.12	**.17***	**.20***	**.19***	.16^{+}	**.17***
Mos. deployment	.09	.11	.08	.05	.07	**.20***	.13	.09	.06	.07	.10	.07	.04	.02	.04
Higher education		-.12	-.08	-.12	-.12		.04	.09	.06	.06		-.13	-.10	-.13	-.13
Age became Parent		-.03	.02	.05	.05		-.14	-.08	-.05	-.05		.11	.15	**.18***	**.18***
Greater economic resources		**-.24***	-.17	-.07	-.03		**-.23***	-.14	-.05	-.03		-.10	-.05	.03	.07
Social support			**-.29****	**-.15***	-.12			**-.37*****	**-.25****	**-.23****			**-.21***	-.10	-.07
FILE(Stressor events)				**.47*****	**.37*****				**.42*****	**.36*****				**.38*****	**.27*****
FAC(Strain)					**.19***					.11					**.20***

β = standardized betas

$^{+}p \leq .10$,

$^{*}p \leq .05$,

$^{**}p \leq .01$,

$^{***}p \leq .001$

Table 4

Correlations among BSI and Family Environment Characteristics

	Family Environment Characteristics				
BSI	**Cohesion**	**Expressiveness**	**Family Sociability**	**Conflict**	**External Locus of Control**
Global Severity	-.240**	-.183*	-.393**	.443**	.471**
Depression	-.328**	-.204*	-.351**	.407**	.477**
Anxiety	-.146	-.173*	-.263**	.302**	.319**

* $p \leq .05$,

** $p \leq .01$,

*** $p \leq .001$