

Work Separation Demands and Spouse Psychological Well-Being

Using family resilience and ecological theories, we examine the relationship between partner work-required travel separations and spouse psychological well-being. The study examines the role of work-organization-provided supports for families and of informal support networks, including marital satisfaction, as factors that can reduce the risks for indicators of poor well-being. The data come from a probability sample survey of 8,056 female spouses of U.S. Army personnel, with considerable variation in the amount of travel-related separations. Findings indicate risks for poor psychological well-being are greater for spouses who experience more frequent work-related separations. Findings also indicate that both work organization support and informal support network connections are significant protective factors for spouses experiencing these separations.

Work demands and stresses are generally acknowledged today to have impacts on the quality of life of families and the psychological well-being of family members. The most common language used in professional writing to refer to this phenomenon is “spillover” or “crossover,” an observation that stresses in one part of life are very likely to create stresses on other parts of one’s life (cf. Voydanoff,

2007; Westman & Etzion, 2006). This spillover between work and family stress can be, and often is, bidirectional, but research tends to confirm that the most common pattern of transference is from work stress and demands to family and personal well-being (cf. Eby, Casper, Lockwood, Bordeaux, & Brinley, 2003; Voydanoff, 2005b).

Although this transference of work-related stress is common in many types of jobs or careers, some employment patterns are more likely to engender poor personal well-being and increased family stress. The jobs most associated with these negative outcomes include those with irregular work schedules (Davis, Goodman, Pirretti, & Almeida, 2008), rotating and off scheduled shift work (He, Zhao, & Archbold, 2002), work schedules that conflict with marital partners (White & Keith, 1990), excessively long work weeks (Voydanoff, 2005b), and jobs that require long periods of separation from family members (Orthner & Rose, 2003; Zvonkovic, Solomon, Humble, & Manoogian, 2005). All of these patterns have been shown to negatively impact family members, but periods of work-related separations are of special concern because they tend to create ongoing challenges associated with separations and reunions that can create role confusion in both the separating family member and members of their household. It is the potential stress from “comings and goings” as well as the family and personal role realignments that must be accommodated on a regular basis, that can be especially challenging for these families.

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Among those who are married or in committed relationships, the separated worker leaves behind a partner who must make ongoing adjustments to being in an intimate relationship for a period of time and then transitioning into an independent person or household head for another period of time. During the time of separation, there is likely to be a sense of what Boss calls, "ambiguous loss" (Boss, 2000). The partner left behind is in a relationship, but the separated partner is gone and unable to perform his or her roles and responsibilities or provide the emotional support and encouragement that is expected in an intimate relationship. This leaves the household-based partner with a feeling of loss, or even abandonment, that can create emotional difficulties or poor mental health-related symptoms (Boss, 2006). As these periods of separation in some jobs can be common, and reunions and separations both anticipated and concerning, there is also an increased risk for ambiguity and confusion in terms of their role in the relationship and a sense of loneliness in being apart from their partner.

There are a number of jobs that typically have these kinds of work-related periods of regular or episodic separations. Most common are the employees in industry sales positions whose jobs require them to travel for most of the week away from their homes and families. The growth of multinational industries has increased these travel patterns from regional to international travel requirements. Other jobs with frequent separations include those who work on off-shore oil platforms, airline pilots and crew members, deep sea fishermen, long-distance truckers and rail workers, expatriate workers living much of their time in other countries, and military affiliated personnel. Among military personnel, the public perception is that these people are most often gone to distant countries in times of war. But the reality is that military workers have many different types of jobs, including some that require episodic and long periods of separation whereas others require less frequent periods of separation and typically regular work schedules (Orthner & Rose, 2006).

The purpose of this paper is to explore the effects of work-related separations on the risks for poor psychological well-being among household-based spouses. The research is based on a risk and resilience theoretical perspective in which two types of protective factors improve psychological well-being among spouses at

high risk for poor well-being because of work separation risks. These protective factors are: (a) work organization support, including formal services and supervisor support, and (b) informal support through access to close interpersonal relationships. The data come from probability sample surveys of spouses of Army personnel who have not recently experienced combat deployments but who have experienced normal periods of work-related separations for different lengths of time.

Work Demands and Psychological Well-Being

The risks for significant personal and family stress from partner work demands are widely recognized. Much of the research on the spillover from work to family has tended to focus on the effects of work demands and scheduling on the quality of family relationships. This research has demonstrated that increased work demands or difficult work schedules are associated with family outcomes such as increased family instability and divorce (Perry-Jenkins, Repetti, & Crouter, 2000), conflict and violence (Johnson, Todd, & Subramanian, 2005), family role ambiguity and time together (Zvonkovic et al., 2005), lower marital quality and happiness (Roberts & Levinson, 2001), and weaker relationships with children (Crouter, Bumpas, Head, & McHale, 2001). These family-related outcomes have an indirect effect on the psychological well-being of the household-based partner, but there are direct effects on this partner's mental health symptoms as well.

Partner work demands can make the personal adjustments of their spouse or partner very difficult. Voydanoff comments, "A stressful appraisal occurs when individuals perceive that the demands of the environment exceed their resources, thereby endangering their well-being" (Voydanoff, 2005a, p. 491). When partner work demands are indeed perceived as excessive, this is likely to be associated with higher rates of depression (Cohen, Kamarck, & Mermelstein, 1983), loneliness and irritability (Barnett & Hyde, 2001), burnout and loss of personal sense of control (Westman & Etzion, 2006), and physical symptoms such as sleeplessness and greater use of medical treatments (Bellavia & Frone, 2005). These symptoms reflect the transfer of external stress and family role ambiguity to internal coping

resources and perceptions that life has become more unpredictable and challenging.

Partner work travel and periods of separation provide even more potential for personal mental health disruptions. Boss (2006) characterized some of the consequences of partner absence as being similar to posttraumatic stress disorder (PTSD) in that the ambiguous loss or presence of the partner creates conditions of significant personal and relational reorganization on a recurring basis. This lack of stability in the relationship manifests symptoms of confusion and disorganization that can be personally disabling to either or both partners. Studies of veterans returning from the Middle East conflicts support this observation in that the most significant increases in military member mental health symptoms over the first 6 months were not in PTSD but relationship-related disorders as these veterans attempted to transition back into their work and family lives (Milliken, Auchterlonie, & Hoge, 2007). Separation and travel-related problems have also been reported by spouses married to employees of private sector employers. These problems include personal mood problems and lack of energy (Voydanoff, 2005b), depression (Glass & Fujimoto, 1994), and feelings of lack of control over one's life (Batt & Valcour, 2003).

Sources of Resilience in Work-Related Separations

Although these work demand and separation risk factors are potentially very significant for the nonseparated or household-based spouse or partner, there are potential sources of support that can promote personal and family resilience. Resilience, in this context, is defined as the ability of the person or system to sustain higher levels of functioning or adjustment under conditions of actual or eminent risk (Fraser, 2004). Resilience occurs when conditions operate to protect the person from either experiencing the risk or help the person operating under the risk to proactively adapt to the risk situation. These protective factors serve as "assets" that can be called upon to help overcome the risk conditions to which the person may be exposed (Orthner & Rose, 2007). Assets, in this sense, are an accumulated set of conditions that together help the individual or family manage the stresses that can accompany a difficult circumstance. Following the principles of ecological systems theory (Bronfenbrenner, 1989; Moen, Elder, &

Luscher, 1995), the protective factors that are most likely to help a spouse or partner adapt successfully to a separation experience are those that are part of the network systems within which the spouse or partner operates or part of the organizational system that connects the worker to his or her spouse or partner. The *primary support system* is likely to come from their immediate informal network of close relationships to the partner, friends, or other close community connections. These relationships, to the extent that they occur, offer intrinsic support to the person and serve as a form of social capital that can be relied on during times of challenge (Putnam, 2000). The *secondary support system* may come from the partner's work organization through which a supportive set of services or positive organizational climate may help make the work-related separations or demands more amenable. These more instrumental support assets can also be accumulated to provide a network of human and social capital that can help ameliorate the stresses often associated with work separations (Zvonkovic et al., 2005).

Informal support and psychological well-being. Informal support systems have been consistently shown to be of significant importance to sustaining good psychological well-being. People who are embedded in positive close relationships are much more likely to report fewer health-related problems, higher self-esteem, and better personal adjustment to stressors than those in weak informal support networks (Sinokki et al., 2009). Close relationships with friends, neighbors, and family members provide supportive assets that can be marshaled in times of need or stress (Voydanoff, 2005b). These assets provide emotional gratification and meaningful activities that can help to overcome the isolation that work demands or separations may foster. The most important of these close network relationships is the marital partner or the strength of the marriage itself. Having a strong marriage has been particularly noteworthy in helping to buffer stresses from work and other external stressors. Holt-Lundsted, Birmingham, and Jones (2008) found that higher marital quality was associated with lower stress, less depression, lower blood pressure, and higher satisfaction with life. The stress buffering power of friendships has been demonstrated as well, with those having close friends much more able to carry out challenging family responsibilities with fewer depressive symptoms

and other negative mental health consequences (Cannuscio et al., 2004).

Formal work support and psychological well-being. The work organization system of support, although a secondary source of support for family members, has been given considerable attention in organizational science, given the emerging role of enlightened self-interest on the part of corporations and industries that want to reduce worker turnover and to increase productivity (Batt & Valcour, 2003; Orthner & Pittman, 1986). Indeed, many corporations vie for the title of being “family friendly” in order to attract, retain, and motivate their employees. Research generally supports this approach in that work organizations with more supportive supervisory climates are found to have higher morale (Pittman & Orthner, 1988), lower turnover (Fernandez, 1986), greater family support (Bowen, 1998; Pittman & Orthner, 1988), reduced emotional exhaustion (Thompson, Kirk, & Brown, 2005), and fewer work-family conflicts (Nasuridin & Hsia, 2008). For spouse psychological well-being, these supportive organizational climates can also foster positive adjustments to work demands. A supportive work culture has been found to reduce family member stress (Voydanoff, 2005a) and emotional exhaustion (Thompson et al.) and increase psychosocial coping strategies (Pittman, Kerpelman, & McFadyen, 2004) and personal energy levels (Bowen, 1998). In the context of ecological theory, these exosystem supports are a potentially powerful set of resources that can enable informal systems of support and encourage personal adjustment.

On the basis of this discussion and the theoretical perspectives reviewed, the following research questions are examined in this research:

1. Are spouses whose partners are absent more frequently because of work demands more likely to exhibit psychological well-being related problems than those who are absent less frequently?
2. Is work organization support and access to formal support assets associated with higher psychological well-being among spouses experiencing different levels of cumulative work separations?
3. Is informal support from a close social support network associated with higher psychological well-being among spouses

experiencing different levels of cumulative work separations?

METHOD

Sample

The data for this study were collected by the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences as part of their periodic monitoring of the well-being of Army personnel and families. The data from this 5th Survey of Army Families (SAF) were collected from a stratified probability sample of all spouses between September 2004 and January 2005. Three forms of the survey were distributed, with Form 1 sent to spouses whose military member was currently separated to a distant location; Form 2 was sent to spouses whose military member had recently returned from a separation; and Form 3 was sent to the remaining spouses. The sampling frame from the survey included approximately 59,000 civilian spouses of Army military personnel on active duty at that time. Completed and usable surveys were received from 24,793 spouses for a response rate of 43%. The analyzed sample came from a sample of 8,056 female spouses responding to Form 3 (because they comprised only 3% of the reporting sample, male spouses were excluded from the analysis). This sample is similar to non-military spouses in that their husbands have jobs that may require some travel, but they are not being separated for long periods because of military operations. Eleven percent of respondents were Black, 12% were Hispanic, 9% were other non-White races, and 68% were White (refer to Table 1). The mean spouse age was 34 years and 3 months ($SD = 7$ years 11 months).

Measures

Spouse psychological well-being variable. The dependent variable, spouse psychological well-being, is a continuous indicator developed using a two-step process. First, six SAF survey items were identified that indicated the level of personal well-being at the time of the survey. These six Likert-type items were coded in a positive direction indicating increasing levels of well-being with increases in the raw item score, and then summed. The identified items (labeled with descriptions indicating positive well-being) were: (a) personally satisfied; (b)

Table 1. *Univariates/Sample Properties*

Continuous Measures	Mean	Standard Deviation
Adjustment (DV)	17.61	4.25
Months away (last 36 months)	8.11	7.17
Spouse age	34.23	7.88
Use of formal supports	0.35	0.20
Binary Measures	Proportion (%)	
Black	0.11	
Hispanic	0.12	
Other non-White race/ethnicity	0.09	
Comfort with work human resources	0.68	
Comfort with work health system	0.78	
Organization family support	0.41	
Work supervisor support	0.43	
Satisfied marriage	0.85	
Informal support group	0.30	
Close community	0.49	
Close friend	0.83	
Willing to turn to religious leader for help	0.56	

little problem with day-to-day stresses; (c) little problem getting along when spouse is away; (d) no emotional or nervous problems in last 6 months; (e) managed own health well; and (f) handled loneliness well in last 12 months. In the second step, these items were summed to create a *psychological well-being* scale ranging from 0 to 23.

The raw items ranged numerically from 0 to 3 or 0 to 4: problem with day-to-day stresses and getting along while spouse away both ranged from very serious to not at all (five responses); personal satisfaction ranged from very dissatisfied to very satisfied (four responses); how well managed own health and loneliness both ranged from very poorly to very well (five responses); and emotional problems ranged from very great to not at all (five responses). The internal reliability consistency coefficient for the scale was .81. The mean score on mental health adjustment (refer to Table 1) was 17.6 ($SD = 4.25$).

Work separation risk indicator. Work separation risk was determined using an item that identified the number of work-related months the organization member spouse was away during the 36 months prior to completing the survey (refer to Table 1; mean = 8.1 months, $SD = 7.17$ months). Exploratory analyses showed that it was highly skewed to the right (skewness = 1.09) and had a modest nonlinear association with adjustment. Therefore, we tested both a nonlinear version of time (including both the linear term and a quadratic term in the regression analysis) and a polychotomous version that stratified time separated into the following four categories: 0–1 months separation in the past 36 months (reference condition and 20% of the sample), 2–5 months separation in the past 36 months (28%), 6–12 months separation in 36 months (28%) and 13 or more months separated in the past 36 months (24%). Exploratory analyses demonstrated that the form of the risk variable had minimal effect on the model. Consequently, only the model containing the linear form of the time variable is reported.

Covariates. Covariates controlling for spouse's race/ethnicity and age were entered. Race and ethnicity were controlled for using indicator variables for Black, Hispanic, and other non-White race/ethnicity, with White as the common reference group. Spouse's age was coded as a continuous variable centered at the observed mean. The choice of spouse's age as a covariate was made because of the high intercorrelation between spouse age, years of marriage, and ages of children. The most universal characteristic for all spouses was their age.

Independent variables. Two sets of independent variables were entered. The first set, labeled *formal support assets*, included single items reflecting the level of comfort with the spouse's work human resource organizations, comfort with the work-provided health care system, perceived family support by the spouse's work organization, and direct supervisor support from the spouse's work organization. The raw variables were all Likert-type response continuums from strongly agree to strongly disagree or very satisfied to very dissatisfied. These Likert responses were not purported to represent measures of an underlying latent construct and were therefore understood to be ordinal measures. To keep the model

parsimonious, all ordinal measures were reduced to nominal, coded as binary variables with a score of 1 (capturing those who reported strongly agree/agree or very satisfied/satisfied) indicating a positive orientation. Thus, these formal support “assets” served as a form of instrumental social capital (Orthner, Jones-Sanpei, & Williamson, 2004). The last formal support variable was a composite variable representing the actual use in the past 2 years of 11 formal support services provided by the husband’s work organization. The range of services reviewed included health and mental health support services, recreation and fitness programs, financial assistance, and classes of different types. This variable was coded to represent the number of services used by the respondents.

The second set of independent variables, labeled *informal support assets*, included variables that could serve as personal or social network support assets to the spouse. The items included a measure of the satisfaction level of the marriage, participation in an active informal support group, belief that she lived in a “close community that cared for military families,” having a close friend she could talk to when needed, and her willingness to turn to a religious leader for counsel. These were all coded as binary variables with a score of 1 indicating a positive “asset” or informal social capital orientation (Orthner et al., 2004). Satisfaction of marriage was measured on an 11-point continuum from very satisfied (=1) to very dissatisfied (=11). This Likert item does not purport to measure an underlying latent construct and consequently was treated as an ordinal variable, rather than a continuous variable. Like the other Likert items, it was reduced to a binary measure. The measure was divided symmetrically into three sections representing satisfaction (1–4), neutrality (5–7) and dissatisfaction (8–11). Scores of 4 or less, representing satisfaction, were coded in binary form as a 1 to indicate the presence of an asset. Beliefs about communities and turning to a friend or religious leader for help were originally scaled from strongly agree (=2) to strongly disagree (=6). Strongly agree and agree were coded in binary form as a 1, indicating that the condition serves as an asset. Use of an informal support group was also considered an asset. In situations where an informal support group was not available, the spouse was assigned a value of zero, indicating the asset was not present.

Analysis Strategy

Bivariate. Correlation coefficients were calculated for the 10 independent variables using SAS version 9.1. With one exception, all correlations between independent variables were positive; the lone exception was between *satisfied marriage* and *use of formal support services*. Most of the correlations between the independent variables were .20 or lower, with a few exceptions that were above this level. None of the variables were correlated above .51, indicating that issues of collinearity between the variables was not a serious issue with the data.

Multivariate regression. Ordinary least squares (OLS) were used to estimate the relationship between formal and informal supports and spouse mental health adjustment, controlling for risk and demographics. Proc Genmod in SAS version 9.1 was used to estimate these models.

Weighting and missing data. Because of missing data on several variables, these analyses were conducted on data that had been imputed using multiple imputation (Schafer, 1997). An imputation model consisting of 50 variables, including 20 analysis variables and 30 auxiliary variables—those used only in the imputation model to help reduce bias—was developed using a three-step process (Graham, 2009; Rose & Fraser, 2008). We conducted 15 imputations, creating 15 versions of the data, each having a different simulation of the missing values (Graham, Olchowski, & Gilreath, 2007). The simulated values of the dependent variables were then discarded (retaining only the simulated independent variables, risk variable, and covariates; von Hippel, 2007). All simulations were then subjected to OLS and combined according to rules that account for the uncertainty of the randomly drawn values (Rubin, 1987). SAS Proc MI was used to conduct the imputation, and a SAS Proc MIAnalyze implemented the rules.

RESULTS

Separation risk, measured by the number of months separated because of work demands in the past 36 months, was significantly associated with lower spouse psychological well-being ($\beta = -.04$; $p < .001$) (see Table 2). This finding indicated that spouses experience a decline

Table 2. OLS Regression Results

	β	se(β)	t Value	Significance
Intercept	11.37	0.17	68.63	***
Months away (last 36 months)	-0.04	0.01	-7.28	***
Black	0.48	0.15	3.25	**
Hispanic	-0.27	0.14	-1.95	
Other non-White race/ethnicity	-0.07	0.16	-0.48	
Spouse age	0.06	0.01	9.82	***
Comfort with work human resources	1.31	0.11	12.26	***
Comfort with work health system	1.29	0.12	11.00	***
Organization family support	0.63	0.11	5.97	***
Work supervisor support	0.50	0.11	4.53	***
Use of formal support services	-0.16	0.02	-8.17	***
Satisfied marriage	3.25	0.12	26.53	***
Informal support group	-0.04	0.10	-0.39	
Close community	0.80	0.11	7.39	***
Close friend	0.73	0.12	6.07	***
Willing to turn to religious leader for help	0.32	0.09	3.52	***

Note: OLS = Ordinary least squares.

$R^2 = .27$

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

in psychological well-being of .04 units per month of separation. Although not contributing a substantively meaningful decline in psychological well-being for spouses experiencing only a few months of separation or a noticeable difference in psychological well-being when comparing spouses separated by only a few months, the predicted decline for spouses experiencing longer separations was substantial. For example, for spouses experiencing more than 12 months of separation their well-being fell by half of a point. With one-quarter of spouses experiencing separations of more than 12 of the past 36 months, this represents a substantial deficit. Spouses experiencing very long periods of separation—18 months or more in the past 36 months, constituting 12% of the sample—experienced a decline of three-quarters of a point on the psychological well-being scale.

Black spouses had higher levels of well-being ($\beta = .48$; $p < .01$) than White spouses (after accounting for formal and informal supports; when these supports are not included, the association is not significant). Older spouses also exhibited higher levels of adjustment ($\beta = .06$; $p < .001$). Separation risk explained 1.4% of the variance in the model. After accounting for the variance explained by separation risk, demographics explained an additional 3.3% of variance.

Four of the formal support assets were significantly and positively associated with spouse psychological well-being: comfort with work human resources ($\beta = .06$; $p < .001$), comfort with work health system ($\beta = 1.31$; $p < .001$), organizational family support ($\beta = .63$; $p < .001$), and work supervisor support ($\beta = .50$; $p < .001$). Use of formal support services, which is greater among spouses experiencing work separation-related problems, was associated with lower levels of spouse mental health adjustment ($\beta = -0.16$; $p < .001$). Formal supports explained 13% of variance in mental health adjustment after accounting for the portion explained by separation risk and demographics.

Four of the informal support assets were significantly and positively associated with spouse psychological well-being: having a satisfied marriage ($\beta = 3.25$; $p < .001$), living in a close community ($\beta = .80$; $p < .001$), having close friends ($\beta = .73$; $p < .001$), and willingness to turn to a religious leader for help ($\beta = .32$; $p < .001$). Use of a work organization provided informal support group, however, was not significantly associated with adjustment. Again, this type of support group may more likely appeal to spouses experiencing problems with separation adjustment, thereby yielding a negative association. The unique contribution that informal supports make to

explained variance, after accounting for risk, demographics, and formal supports, was 9%.

Changing the form of the psychological well-being dependent variable or time variable did not substantially alter the findings. A logistic regression on a binary version of psychological well-being produced log-odds having the same sign and levels of significance across all covariates. Entering risk as a polychotomous indicator (2–5 months away, 6–12 months away, and 13 or more months away, as compared to 0–1 months away) or entering a quadratic term for time to capture nonlinearity, produced no changes in the signs or significance levels of the formal and informal support variables and only modest differences in the magnitudes of the coefficients. In a model testing a quadratic effect for time separated (not shown), the quadratic term was significant. Further, the sign of the quadratic term was positive, indicating that the negative effect of time on adjustment went down as time away increased. However, the model was not otherwise substantively different from the linear model.

DISCUSSION

The findings from this study confirm the hypothesis that spouses (in this case wives) whose partners are required to travel and are separated for longer periods of time from their families exhibit more negative psychological well-being related symptoms than those who have husbands who are separated less often. This has been an understudied area of mental health research (Bellavia & Frone, 2005a), but previous investigations have suggested that these kinds of partner work demands may contribute to the diminished mental health of some married women (cf. Voydanoff, 2005). The findings in this study indicate, however, that the effects of work-related separations on psychological well-being are quite modest and that many spouses are able to adapt to these separations quite well, especially when they are connected to work organizations and social networks that are supportive.

This research confirms that indicators of poor personal well-being are less likely to appear if the husband's work organization provides a supportive climate for employee families in which human resources, health and mental health care, and caring supervisor support are operating. When these conditions are present, the

spouse adjusts better to separations and manages her life without significant psychological well-being related problems. In contrast to these findings, however, the actual use of organizational support services indicates somewhat higher risks for poor personal well-being. The direction of causality cannot be tested here with cross-sectional data, but it is likely that spouses who are separated more often use these services in response to emotional or health-related problems, making the availability and use of these services still very important to their abilities to resolve crises but not necessarily preventative in their functioning.

The importance of having strong close informal relationships with the marital partner, friends, and community members is also confirmed in this research. The findings indicate that those spouses who have strong informal support networks are very likely to adapt well to work-related separations, especially when the marital relationship is strong. Of all the predictors of psychological well-being considered in this research, the contribution of the marital relationship was the strongest factor. Thus, although support from both formal and informal networks is very important, as ecological theory suggests (Bronfenbrenner, 1989), it is the most proximal relationships that make the greatest contribution to personal well-being. Support from the work organization very significantly contributes to this sense of well-being and should be encouraged as a vital component of an employee family support system.

The findings from this research support the risk and resilience theoretical perspectives reviewed earlier (Fraser, 2004). Spouses with more protective assets operating in their lives are the ones who appear to manage the stresses and risks associated with family separations quite well. Work separations are not easy for any family, but the consequences of social isolation, low marital quality, and poor work organization support are likely to result in the greater use of formal support services and more symptoms of poor mental health, even among those who use those services.

These findings also encourage the greater promotion of strong informal support networks and a positive family supportive work climate on the part of organizations whose workers must travel away from home for extended periods of time. Some organizations are already recognizing the value of these efforts by

providing more family support benefits for their employees, largely in the form of child care, health care, or classes that encourage healthy behaviors or skills that strengthen their personnel and families. To the extent that these benefits are communicated well to the employees and their families, it is likely that the organizational climate benefits that are reflected in this research can be realized, especially if the direct supervisors are also supportive of families and help the families feel that they are important to the organization.

Still, organizations can benefit their employees and their families even further if they encourage their people to build and sustain strong networks of relationships. For example, this study indicates that having a high quality marriage relationship is by far the strongest contributor to spouse psychological well-being under conditions of work-related separations. The power of the marital relationship to protect spouses against risks for poor adjustment should encourage employers to help their employees build and sustain strong marriages. This is largely the rationale that the U.S. armed forces are using to establish marriage strengthening programs throughout all their service branches (Carroll, Robinson, Orthner, Matthews, & Rotabi, 2008). All military services now have marriage programs as part of their deployment support strategies, a factor that has been suggested as being partly responsible for the lack of any increase in the divorce rate among Army and Marine Corps personnel since 2001, despite the extended separations caused by the conflicts in the Persian Gulf (Karney & Crown, 2007). Recent reviews of military support programs indicates that these efforts are expanding and new marriage and family support programs are being implemented among both active duty and reserve organizations (Huebner, Mancini, Bowen, & Orthner, 2009).

Work organizations can also strengthen their families through making it possible for spouses to form and sustain friend and community connections. Voydanoff's (2007) recent work on the relationship between work, family, and community points to the potentially close intersection between these interrelated systems of support. Bowen, Mancini, Martin, Ware, and Nelson (2003) also noted that work organizations can benefit their employees, reduce costly turnover, and increase productivity by turning more of their efforts toward

supportive community building strategies that strengthen the informal support systems of their people. Zvonkovic et al. (2005) made a similar call to work organizations and local communities with local long-distance trucking and fishing industries that require extensive periods of work separations to build support networks and community services targeted toward these families. These efforts, when successful, serve to support primary prevention and thus reduce the higher costs associated with the use of health and mental health-benefit systems. Thus, there appears to be both direct and indirect mental health benefits to work organizations when they support both a family supportive work climate and foster informal support networks that their employees can utilize on an ongoing basis.

Despite the strengths of this study, these findings must be understood within the context of the limitations of this research. The data are cross-sectional and thus do not allow assurance of the direction of causality. The research questions posed in this study presume that spouses experiencing more separations are more likely to express psychological well-being problems, but it is also possible the workers with family members who are more stressed may volunteer for jobs that require more travel. In the case of military members, however, this is unlikely because the types of jobs that create opportunities for travel-related separations are less subject to volunteering. Likewise, spouses with poor mental health may be less apt to see their husbands' work organization as supportive, are more isolated from friends, and tend to characterize their marriages as being less satisfactory. The association between psychological well-being indicators and support from work organizations and informal support networks has been confirmed in this study, but longitudinal research is needed to confirm the direction of these causal relationships.

Another limitation of this research is the exclusive use of military personal and spouses to test these hypotheses. On the positive side, the size of the sample and the significant variation in the amount of travel-related separations in these families allowed a more careful analysis of the relationships between the variables reviewed in this study. The military services have become more enlightened in providing family supportive services, however, and this may not be as common in other work or corporate settings. The work separation demand patterns in the military

are more similar to those of expatriate workers, long-distance truckers, and some other employees of firms that require their people to be gone for long periods of time from their families. The data here suggest that modest work separation periods only slightly increase spousal risks for poor psychological well-being, but whether these risks are similar to those of employees of other organizations will require additional research and replications in other organizational settings. It is also possible that military spouses become part of a culture in which separations are quite common and even valued as a part of creating more independence for spouses and families. This too deserves further consideration in research.

In conclusion, the present research indicates that work demands can be stressful for spouses and families, but that building work-based support systems for families and strengthening the marriages and personal support networks of employee spouses may substantially help family members reduce personal well-being challenges. Additional research is needed to confirm these findings, but the evidence here is strong enough to encourage employers who require substantial travel and family separations to consider creating a work organization climate that is family supportive and to promote marriage and friendship support networks for the spouses of their traveling employees. For organizations that work with employers or provide human resource or mental health support services, there are likely benefits of training supervisors to be more sensitive to the family needs of their workers and providing relationship skills training to both married workers and their spouses. These efforts are likely to pay off in less use of mental health services and potentially lower costs for medical care.

NOTE

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REFERENCES

- Barnett, R. C., & Hyde, J. S. (2001). Women, men, work and family. *American Psychologist, 56*, 781–796.
- Batt, R., & Valcour, P. M. (2003). Human resource practices as predictors of work-family outcomes and employee turnover. *Industrial Relations, 42*, 189–220.
- Bellavia, G., & Frone, M. R. (2005). Work-family conflict. In J. Barling, E. K. Kelloway, & M. R. Frone (Eds.), *Handbook of work stress* (pp. 113–147). Thousand Oaks, CA: Sage.
- Boss, P. (2000). *Ambiguous loss: Learning to live with unresolved grief*. Cambridge: Harvard University Press.
- Boss, P. (2006). *Loss, trauma and resilience: Therapeutic work with ambiguous loss*. New York: W. W. Norton.
- Bowen, G. L. (1998). Effects of leader support in the work unit on the relationship between work spillover and family adaptation. *Journal of Family and Economic Issues, 19*, 25–52.
- Bowen, G. L., Mancini, J. A., Martin, J. A., Ware, W. B., & Nelson, J. P. (2003). Promoting the adaptation of military families: An empirical test of a community practice model. *Family Relations, 52*, 33–52.
- Bronfenbrenner, U. (1989). Ecological systems theory. *Annals of Child Development, 6*, 187–249.
- Cannuscio, C. C., Colditz, G. A., Rimm, E. B., Berkman, L. F., Jones, C. P., & Kawachi, I. (2004). Employment status, social ties, and caregivers' mental health. *Social Science & Medicine, 58*, 1247–1256.
- Carroll, B. A., Robinson, L. C., Orthner, D. K., Matthews, W., & Rotabi, K. (2008). Essential life skills for military families: Mobilizing cooperative extension in North Carolina. *Journal of Family and Consumer Sciences, 100*, 52–57.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385–396.
- Crouter, A. C., Bumpas, M. F., Head, M. R., & McHale, S. M. (2001). Implications of overwork and overload for the quality of men's marriages. *Journal of Marriage and Family, 63*, 404–417.
- Davis, K. D., Goodman, W. B., Pirretti, A. E., & Almeida, D. M. (2008). Nonstandard work schedules, perceived family well-being, and daily stressors. *Journal of Marriage and Family, 70*, 991–1003.
- Eby, L. T., Casper, W. J., Lockwood, A., Bordeaux, C., & Brinley, A. (2003). Work and family research in IO/OB: Content analysis and review of the literature (1980 – 2002). *Journal of Vocational Behavior, 66*, 124–197.
- Fernandez, J. P. (1986). *Child care and corporate productivity*. Lexington, MA: Lexington Books.
- Fraser, M. W. (Ed.). (2004). *Risk and resilience in childhood*. Washington, DC: NASW Press.
- Glass, J., & Fujimoto, T. (1994). Housework, paid work, and depression among husbands and wives.

- Journal of Health and Social Behavior*, 35, 179–191.
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 1–28.
- Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are really needed? Some practical clarifications of multiple imputation theory. *Prevention Science*, 8, 206–213.
- He, N., Zhao, J., & Archbold, C. A. (2002). Gender and police stress: The convergent and divergent impact of work environment, work-family conflict, and stress coping mechanisms of female and male police officers. *Policing: An International Journal of Police Strategies & Management*, 25, 687–708.
- Holt-Lundsted, J., Birmingham, W., & Jones, B. Q. (2008). Is there something unique about marriage? The relative impact of marital status, relationship quality, and network social support on ambulatory blood pressure and mental health. *Journal of Behavioral Medicine*, 35, 239–244.
- Huebner, A. J., Mancini, J. M., Bowen, G. L., & Orthner, D. K. (2009). Shadowed by war: Building community capacity to support military families. *Family Relations*, 58, 216–228.
- Johnson, L. B., Todd, M., & Subramanian, G. (2005). Violence in police families: Work-family spillover. *Journal of Family Violence*, 20, 3–12.
- Karney, B. R., & Crown, J. S. (2007). *Families under stress: An assessment of data, theory, and research on marriage and divorce in the military*. Santa Monica, CA: Rand Corporation.
- Milliken, C. S., Auchterlonie, J. L., & Hoge, C. W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association*, 298, 2141–2148.
- Moen, P., Elder, G. H., & Luscher, K. (Eds.). (1995). *Examining lives in context*. Washington, DC: American Psychological Association.
- Nasurdin, A. M., & Hsia, K. L. (2008). The influence of support at work and home on work-family conflict: Does gender make a difference? *Research and Practice in Human Resource Management*, 16, 18–38.
- Orthner, D. K., Jones-Sanpei, H., & Williamson, S. (2004). The resilience and strengths of low-income families. *Family Relations*, 53, 148–158.
- Orthner, D. K., & Pittman, J. (1986). Work and family commitments: An assessment of linkages. *Journal of Marriage and the Family*, 48, 573–581.
- Orthner, D.K., & Rose, R. (2003). Dealing with the effects of absence: Deployment and adjustment to separation among military families. *Journal of Family and Consumer Sciences*, 95, 33–37.
- Orthner, D.K., & Rose, R. (2006). *Army support programs and civilian spouse adjustment to deployments*. Washington, DC: Army Research Institute for the Behavioral and Social Sciences.
- Orthner, D. K., & Rose, R. (2007). *Family readiness group involvement and adjustment among Army civilian spouses*. Washington, DC: Army Research Institute for the Behavioral and Social Sciences.
- Perry-Jenkins, M., Repitti, R. L., & Crouter, A. (2000). Work and family in the 1990's. *Journal of Marriage and the Family*, 62, 981–998.
- Pittman, J. F., Kerpelman, J. L., & McFadyen, J. M. (2004). Internal and external adaptation in Army families: Lessons from operations desert shield and desert storm. *Family Relations*, 53, 249–260.
- Pittman, J. F., & Orthner, D. K. (1988). Predictors of spouse support for the work commitments of husbands. *Journal of Marriage and the Family*, 50, 335–348.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.
- Roberts, N. A., & Levinson, R. W. (2001). The remains of the workday: Impact of job stress and exhaustion on marital interaction in police couples. *Journal of Marriage and Family*, 63, 1052–1067.
- Rose, R. A. & Fraser, M. W. (2008). A simplified framework for using multiple imputation in social work research. *Social Work Research*, 32, 171–178.
- Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.
- Schafer, J. L. (1997). *Analysis of incomplete multivariate data*. Boca Raton, FL: Chapman Hall/CRC.
- Sinokki, M., Hinkka, K., Ahola, K., Koskinen, S., Kivimäki, M., Honkonen, T., Puukka, P., Klaukka, T., Lönnquist, J., & Virtanen, M. (2009). The association of social support at work and in private life with mental health and antidepressant use: The Health 2000 study. *Journal of Affective Disorders*, 112, 36–45.
- Thompson, B. M., Kirk, A., & Brown, D. F. (2005). Work based support, emotional exhaustion, and spillover of work stress to the family environment: A study of policewomen. *Stress and Health: Journal of the International Society for the Investigation of Stress*, 21, 199–207.
- von Hippel, P. T. (2007). Regression with missing Ys: An improved strategy for analyzing multiply imputed data. *Sociological Methodology*, 37, 83–117.
- Voydanoff, P. (2005a). Consequences of boundary-spanning demands and resources for work-to-family conflict and perceived stress. *Journal of Occupational Health Psychology*, 10, 491–503.
- Voydanoff, P. (2005b). Work demands and work-to-family and family-to-work conflict: Direct and indirect relationships. *Journal of Family Issues*, 26, 707–726.

- Voydanoff, P. (2007). *Work, family, and community: Exploring interconnections*. Mahwah, NJ: Lawrence Erlbaum.
- Westman, M., & Etzion, D. (2006). Crossover of stress, strain and resources from one spouse to another, *Journal of Organizational Behavior*, *16*, 169–181.
- White, L., & Keith, B. (1990). The effect of shift work on the quality and stability of marital relations. *Journal of Marriage and the Family*, *52*, 453–462.
- Zvonkovic, A. M., Solomon, C. R., Humble, A. M., & Manoogian, M. (2005). Family work and relationships: Lessons from families of men whose jobs require travel. *Family Relations*, *54*, 411–422.