



Ethnic Variations in the Connection Between Work-Induced Family Separation and Turnover Intent

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ABSTRACT

Despite their numeric presence in the U.S., ethnic minority families remain less than fully visible in research on work-family relationships (Perry-Jenkins, Repetti, & Crouter, 2000). This study examines ethnic differences in relationships between work-induced family separation, conceptualized as a “shock” in the tradition of the Unfolding model of turnover (Lee & Mitchell, 1994) and workers’ intentions to remain with their employer. Analyses of a large sample of military members surveyed during peacetime revealed that family separation was significantly related to intent to leave the military. Job satisfaction, material well-being, and social support mediated the relationship between family separations and turnover intent, partially among ethnic minority groups and fully among Whites. Job satisfaction was the strongest mediator, and was related to turnover more strongly for Whites and Hispanics than other ethnic groups. Satisfaction with support for families was not significantly related to intentions to leave the military, but was significantly and positively related to satisfaction with military jobs.

INTRODUCTION

Ethnic minority families have a strong presence in the United States and are expected to comprise more than 50 percent of the population by the year 2050 (U.S. Census Bureau, 2004). The expanding minority workforce touches all sectors of the U.S. economy, and recruiting and retaining minority workers has become a stated goal and an explicit job responsibility for many human resources professionals. Understanding minority members of the workforce will prepare both employers and families for an increasingly diverse labor market (Reskin, McBrier, & Kmec, 1999). In the current investigation, we study four ethnic groups: non-Hispanic Whites, non-Hispanic African Americans, Hispanics, and a group composed of non-Hispanic Asians, Pacific Islanders, and Native Americans (we use the term “Hispanic” to refer to individuals of Latin American descent regardless of their country of origin).

The outcome of interest in this study is workers’ intent to leave their current employer, a significant predictor of actual turnover (Hom & Griffeth, 1995). Existing research reveals differences in turnover among ethnic groups, but findings are not consistent. For example, Tai, Bame, and Robinson (1998) found that nurses who were members of ethnic minority groups were less likely than Whites to leave their jobs, possibly because they perceived fewer employment alternatives than other nurses. Similarly, Kocher and Thomas (1994) found that Army officers who were members of minority groups were less likely to leave the military than Whites. But Boothkewley, Rosenfeld, and Edwards (1993) found that Hispanic workers working in blue collar jobs were almost twice as likely to leave as non-Hispanic workers (30% vs. 16%), and that less acculturated Hispanics had significantly higher rates of turnover than Whites and more acculturated Hispanics.

The Unfolding model of voluntary turnover conceptualized by Lee, Mitchell, and colleagues (1994, 1999) proposes that workers base their decisions to stay with or leave their employers on comparisons between their values or beliefs and their current jobs. Workers can be impelled to make such comparisons by a “shock” or “jarring event” (Lee, Mitchell, Wise, & Fireman, 1996, p. 6) such as a change in the organization (e.g., new management), unexpected work duties (e.g., an overseas assignment), or a change in family status (e.g., birth of a child). In the aftermath of the shock, to the extent that individuals judge their goals or values to be incompatible with those of the organization, they are at greater risk for dissatisfaction and/or departure. In this study we focus on work-induced family separation, conceptualizing it as a shock with the potential to increase intent to leave. Because such separations by definition involve both work and personal life, we also consider satisfaction related to both domains.

Despite the appeal of the Unfolding model in explaining variation in turnover intent, we found no studies examining ethnic variations in its operation – even though there is good reason to believe that the shock of family separation may play out differently across ethnic groups (Collins, 1994). Ethnic minority cultures in the U.S. have been characterized as sharing a variety of family strengths, including strong values regarding commitments to family members. For example, Asian cultures traditionally emphasize filial piety or obligation to elders (Yeh, 2003). Hispanic cultures often promote familism, an emphasis on family cohesiveness, interdependence, and loyalty (Baca Zinn, 1983). And African American culture traditionally emphasizes mutual

sharing and 'helping out' within and across family units (Bulcroft, Carmody, & Bulcroft, 1996). Based on this collectivist cultural backdrop, work-induced family separation might be more likely to violate cultural values or beliefs and thus more likely to lead to dissatisfaction and turnover for members of minority groups than for members of the nonminority population (McAdoo, 1993).

A challenge when studying ethnic minority families is to find large populations that are both ethnically and economically diverse. Fortunately, members of the U.S. military constitute such a population. After nearly two decades of proactive effort (OUSDPR, 2000), most ethnic minority groups are well-represented throughout the military. For example, in 2003 over 20% of active duty members were African American (vs. 10% in the civilian workforce, Toossi, 2004), 7% were Asian, Native American, or Pacific Islander (vs. 5% in the civilian workforce), and 11% were Hispanic (vs. 11% in the civilian workforce).

The U. S. military is also an excellent organization within which to study relationships between work demands and family life. In 2002, 1.41 million members served on active duty in the United States military, slightly more than the 1.38 million employees of Wal-Mart, the largest U.S. commercial employer (Fortune, 2002; Selected Manpower Statistics, 2002). As in the civilian world, military employees perceive themselves as experiencing greater work demands and more work-related stress than in years past (Keita & Hurrell, 1994). And while the rise of the '24/7' society is a popular topic of discussion in the civilian media, many jobs in the military historically have been 24/7 in nature. Thus, at least in some ways, as goes the military, so may go civilians.

Family separation is a key feature of military life, as it is for many civilian jobs (e.g., sales, long-haul transportation, consulting). For example, in 2001 more than 228,000 – or almost 1 in 2 -- Army families experienced work-induced separation for more than a week and over 85,000 of these families were separated for over 17 weeks (Peterson, 2002). Military jobs separate members from their families for many reasons, including deployment for war or peace-keeping, short-term temporary duty assignments, and regular tours of duty on ships. Separations vary considerably in their frequency, duration, purpose, and the degree to which families know about them in advance.

Consistent with the Unfolding model, existing evidence suggests that family separations constitute a shock. For instance, Pierce (1998) and Turner (1980) both found in longitudinal studies that deployment was one of the best predictors of attrition among female members of the Air Force and Hispanic members of the Navy, respectively. Stewart (2001) found that the frequency and duration of deployment were negatively related to both satisfaction and retention among military members. Our model proposes a relationship between the shock of family separation and intentions to leave the military. We hypothesize that this relationship is mediated by workers' satisfaction with their jobs and support for their families, and the degree to which they feel supported by the military community. Because members of ethnic minority groups are at greater risk of financial hardship than Whites, we also include workers' assessments of their financial status as a potential mediator.

Job-related factors. Not surprisingly, workers' assessments of their jobs – expressed via satisfaction -- are key factors in their inclinations to stay or leave (Hom & Griffeth, 1995; Mor Barak, Nissly, & Levin, 2001; Weiss, MacDermid, Strauss, Kurek, Le, & Robbins, 2001). Empirical links have been found between military members' intentions to leave and their assessments of their jobs overall as well as of particular features, such as characteristics of the job itself (e.g., enjoyment [Rabkin, 2000], pay and promotion opportunities [Harrington, Bean, Pintello, & Mathews, 2001]) or the environment within which the work takes place (e.g., level of manning [Golding et al., 2001], quality of supervision and leadership [Rabkin, 2000]).

Family-related factors. Beyond marital and parental status, family factors are rarely included in civilian studies of turnover intent (Lee & Maurer, 1999). Studies in the military have shown, however, that concerns about family are related to intentions to stay in the military. For example, in a meta-analysis of the relationship between family factors and military retention, Etheridge (1989) found that members' satisfaction with raising their families in the military was a significant predictor of retention. In an Army study, Burnam and colleagues (1992) found that unmet family responsibilities led to reduced levels of retention. Vernez and Zellman (1987) assert that "family factors, broadly defined, are significant in the decision making of many personnel, and may dominate sometimes" (p. 62). Support for families appears to be an important element: In a study of mothers serving in the Navy, the second-most popular reason for staying was health care benefits (Kelley et al., 2001). To the extent that minority cultures emphasize obligations to care for family members, concerns about family may play a stronger role in the turnover decisions of their members.

Social factors. The third mediator refers to the degree to which individuals feel integrated into supportive social networks. Existing research suggests that workers who feel isolated and unsupported are more likely to leave their jobs (Mor Barak, Nissly, & Levin, 2001). Given their often small numbers relative to Whites, minority workers may be especially at risk for feeling this way (Tai, Bame, & Robinson, 1998). Griffith (2002) found that military members with higher levels of social support were less likely to report intent to leave the military. The military community may play a unique social role in buffering military members against decisions to leave. For example, military members who rated their communities more highly and those who used community services were most likely to stay in the military (Simutis, 1994).

Material well-being. Material concerns, such as pay or financial status, are sometimes excluded from studies of turnover (Thie & Fossett, 1999), even though negative relationships between pay and turnover rates have been found in both civilian (Campbell, 1993; Glaser, 1993; Guthrie, 2000; Shaw & Gupta, 2001) and military populations (Barrows, 2002; Carson, 2000; Eisenhower, 1999). For example, in a study of intentions to leave the military (Boesel & Johnson, 1984), financial concerns were related to turnover intentions more strongly than any other factor studied. More recently, Pierce (1998) found that mothers who reported more financial strain were more likely to leave the Air Force than those who did not.

Family separations can pose financial difficulties because of constraints on the home-based parent's work hours, increased needs for child care, increased travel and communications costs, and decreased earnings from second jobs (if applicable). Because members of ethnic minority groups – especially African Americans, Hispanics, and Native Americans -- are more likely than

Whites to experience financial hardship (Hunt, 1996; Proctor & Dalaker, 2002), material well-being may play a larger role in their decisions to continue or leave military service.

HYPOTHESES

In the present study, we focused on work-induced family separation among married military parents as a shock with the potential to influence their inclinations to stay or leave. We studied four assessments by workers as potential mediators of the relationship between family separation and turnover, and we do so among four ethnic groups. Our hypotheses were:

- 1) Family separation is significantly and positively related to intent to leave the military.
- 2) The relationship between family separation and intent to leave is mediated by members' assessments of job satisfaction, and satisfaction with family support, with material well-being, and with social support.
- 3) All hypothesized relationships are stronger among members of ethnic minority groups than among Whites.

METHOD

Source of Data

Data for this study came from the 1999 Active Duty Survey (ADS99) of military members, conducted to assess members' demographic characteristics, satisfaction, retention intentions, financial well-being, experiences with moves and family separations, and use of military quality of life programs. We focused on four ethnic groups, listed here in descending order of their representation in the military population: non-Hispanic Whites, non-Hispanic African Americans, Hispanics, and a group composed of non-Hispanic Asians, Pacific Islanders, and Native Americans. Because of their small numbers ($n=392$), we excluded respondents who reported that they were members of more than one ethnic group. We partially controlled family structure by focusing explicitly on married members with children (regardless of whether or not the children lived with them).

Participants

A total of 66,040 military members on active duty were invited to complete the 1999 survey. The sampling design was stratified to separate members by ethnic group, family structure, and socioeconomic status. Just over half ($n=33,189$, 50%) of the prospective respondents overall returned usable data, 16,470 of whom were married and had children younger than 23; response rates were very high among this group, averaging over 80% across services and paygrades. The data were weighted to be representative of the active duty military population. A total of 2,387 cases (14%) were omitted from analyses due to missing data on one or more variables; no variable was missing data for more than 6% of the cases. The final analysis sample included 14,791 individuals: 10,829 non-Hispanic Whites, 1,987 non-Hispanic African Americans, 1,111 Hispanics, and 864 non-Hispanic Asians, Pacific Islanders, or Native Americans. Demographic characteristics of the four ethnic groups were compared using analysis of variance with Scheffe

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post-test comparisons (for continuous variables) or chi-squared tests (for categorical variables). As the results in Table 1 show, non-Hispanic Whites were better-educated, more highly-paid, and more likely to hold officer rank than members of the other ethnic groups. African Americans were more likely than all other ethnic groups to live in dual-earner households, and to have fewer children living in their households.

Table 1
Demographic Characteristics of Sample by Ethnic Group.

	White	African American	Hispanic	Asian, Pac. Islnd., Nat. Amer.	χ^2 or <i>F</i>
% of Sample	73.2	13.4	7.5	5.8	
% Female¹	9.0	18.4	11.9	10.6	158.25***
Mean Age²	35.7 (6.6) ^a	34.3 (6.3)	33.2 (6.9)	35.6 (6.6) ^a	67.74***
% w/ Working Spouse¹	56.6	73.8	56.8	59.1	209.39***
Mean # of Children²	2.0 ^a	2.0 ^a	1.9 ^a	2.0 ^a	1.37
Mean # of Children in Household²	1.8 ^a	1.6 ^b	1.7 ^{ab}	1.7 ^{ab}	9.98***
Service¹					398.25***
Army	36.2	52.8	45.4	31.9	
Navy	18.8	16.9	19.7	32.8	
Air Force	25.5	16.0	16.3	22.9	
Marines	13.8	12.4	14.8	8.0	
Coast Guard	5.8	1.9	3.9	4.4	
% Officers¹	56.2	31.3	30.7	36.8	850.38***
Years Active Duty²	13.0 ^a	12.0 ^a	9.0	12.0 ^a	42.12***
Education¹					540.36***
No College	9.6	12.9	14.0	10.3	
Some College	29.7	40.9	42.1	35.0	
College Graduate	32.1	34.3	31.7	37.8	
Advanced Degree	28.5	11.8	12.2	16.9	
Family Income¹					529.48***
\$24,000 or less	6.0	8.9	14.2	10.3	
\$24,001-48,000	34.1	48.0	48.3	43.1	
\$48,001-72,000	32.3	25.8	23.5	27.8	
\$72,001 or more	27.6	17.3	14.0	18.8	
% English as 2nd Language¹	1.1	3.0	40.9	33.6	3906.34***

¹ indicates use of χ^2 statistic; ² indicates use of *F* statistic. *** *p* < .001. Means with the same superscript are equal.

Measures

Ethnicity. We assigned each member of the analysis sample to one of four ethnic groups: Hispanic, non-Hispanic White, non-Hispanic African American, and non-Hispanic Asian, Pacific Islander, or Native American. Ethnicity was treated as a grouping variable.

Family separation. The exogenous variable in our analyses was indicated by the duration of separation, and was generated by responses to this question: “In the past 12 months, what was the total length of time you were away from your permanent duty station overnight because of your military duties?” with 6 answer options ranging from *none* to *10-12 months*. Forty nine percent of the sample had been away at least some of the time, but no more than three months. Twenty eight percent of the sample had been away between three and seven months, and 7% of the sample had been away more than seven months. The major reasons for family separation included temporary duty assignments (60%; most individuals who reported this assignments were away 3 months or less of the prior year), education or training (29-37%; most individuals who reported these assignments were away 3 months or less), and peacekeeping duties (17%; most individuals who reported this assignment were away longer than 3 months).

Job satisfaction was assessed using 6 items. Members indicated their satisfaction with the “pace of promotions,” “types of assignments,” “level of manning in your unit,” “personal workload,” “quality of leadership,” and “amount of enjoyment from your job.” Response options ranged from 1=*Very dissatisfied* to 5=*Very satisfied*; Cronbach’s Alpha was .73.

Satisfaction with family supports was assessed via 8 items that asked about the military member’s spouse and family-related services. Members were asked, “How satisfied are you with each of the following? “Amount of personal/family time you have,” “Medical care for your family,” “Dental care for your family,” “Youth activities on base,” “Schools for your children,” “Spouse employment and career opportunities,” “Military family support programs,” and “Acceptable and affordable childcare.” Responses to these questions were on a five-point scale from 1=*Very dissatisfied* to 5=*Very satisfied*. Cronbach’s alpha was .76. Because some of the family well-being items pertained only to parents of children of certain ages (e.g., only respondents with school-aged children could report level of satisfaction with school), many families ($n=9,286$) were missing data for one or more variables. To avoid losing so many respondents, we averaged four items pertaining to satisfaction with services to children and families (satisfaction with youth activities, schools, family support programs, and child care), which restored 8,811 members to the sample, reducing the percent of cases with missing data related to family services to less than 6%.

Material well-being. Bowen et al. (2003) suggest that material well-being be studied as a combination of three interrelated variables: paygrade, family income, and education. Members responded to the question, “What is your total monthly gross (before tax) household income from all sources?” using 11 possible answer choices ranging from *Less than \$1,000 per month* to *More than \$10,000 per month*. The second question, “What is your current paygrade?” had 7 possible answer choices in grouped categories ranging from *E1 - E3* to *O4 - O6*. Finally, we included an indicator of level of education, which had 6 possible responses ranging from 1=*11th grade or less* to 6=*Master’s degree or more*. Cronbach’s alpha was .76.

Social support. One item was used as an indicator of this construct. Members were asked to indicate the degree to which they agreed or disagreed that “The military community is there for me when I need it.” This question used of a five-point answer format ranging from 1=*Strongly disagree* to 5=*Strongly agree*.

Intent to leave was assessed using ten indicators with a Cronbach’s alpha reliability of .78. The item asked respondents, “During the past 6 months, have you done any of the following to explore the possibility of leaving the military?” Members were asked whether or not they had engaged in any of the ten behaviors, including “Thought seriously about leaving the military,” and “Interviewed for a job.” Each response was dichotomously coded 1=*Yes* or 0=*No*.

We conducted a multivariate analysis of variance to compare means of the analysis variables for the four ethnic groups. The omnibus test was statistically significant ($F(81, 14790) = 17.91, p < .001$). Table 2 summarizes the results, which indicated that Hispanic military members experienced significantly fewer days of separation than families in the other groups. Among indicators of job satisfaction, Hispanic members typically reported greater satisfaction than at least two other groups. Among indicators of satisfaction with support for families, Hispanics and African Americans reported higher satisfaction than other groups with medical and dental care, Hispanics and Whites reported the highest satisfaction with child services, and Whites reported the highest satisfaction with spousal employment opportunities. For material well-being, the means for Whites were substantially higher than those for the minority groups. For social support, means for the three minority groups were equal and significantly lower than the mean for Whites. For most indicators of intent to leave, means were equal for either the three minority groups or for all four groups.

Table 3 contains the correlation matrix for each observed variable. All variables were normally distributed with minimal skew and kurtosis.

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Table 2
Means on Measured Indicators by Ethnic Group

Variables	White	African American	Hispanic	Asian, Pac. Islnd., Nat. Amer.	<i>F</i>
Family Separation					
1. Total time away for military duty	2.10 ^a	1.81	1.98 ^a	1.97 ^a	22.49 ***
Job Satisfaction					
2. Pace of your promotions	2.90	2.69 ^a	2.71 ^a	2.65 ^a	30.12 ***
3. Type of assignments received	3.61	3.38 ^a	3.37 ^a	3.34 ^a	51.55 ***
4. Level of manning in unit	2.45 ^a	2.60	2.46 ^a	2.37 ^b	12.66 ***
5. Personal workload	2.99 ^a	3.17	3.01 ^a	2.94 ^a	18.63 ***
6. Quality of leadership	3.08 ^a	3.08 ^a	2.98 ^{ab}	2.90 ^b	7.98 ***
7. Amount of enjoyment at work	3.39 ^a	3.33 ^a	3.33 ^a	3.20	9.80 ***
8. Job security	3.77 ^{ab}	3.74 ^{ab}	3.81 ^a	3.71 ^b	2.85 *
9. Amount of personal/family time	2.64 ^a	2.89	2.67 ^a	2.62 ^a	23.44 ***
Satisfaction with Family Support					
10. Medical care for your family	2.53 ^a	2.99 ^b	2.88 ^b	2.67 ^a	80.24 ***
11. Dental care for your family	2.53 ^a	2.88	2.75	2.60 ^a	45.43 ***
12. Child services	3.10 ^{ab}	3.15 ^a	3.05 ^b	3.04 ^b	5.53 ***
13. Spouse work opportunities	2.99 ^{ab}	3.02 ^a	2.90 ^b	2.89 ^b	5.15 ***
Material Well-Being					
14. Family's total monthly gross income	5.46	4.82 ^a	4.49	4.94 ^a	88.92 ***
15. Member's highest education	4.10	3.46 ^a	3.42 ^a	3.83	118.77 ***
16. Member's paygrade	4.96	4.05 ^a	3.95 ^a	4.29	252.60 ***
Social Support					
17. Military community is there for me when I need it	3.30 ^a	3.25 ^{ab}	3.21 ^{ab}	3.20 ^b	7.25 ***
Intent to Leave					
18. Thought seriously of leaving military	0.58 ^a	0.54 ^{ab}	0.55 ^{ab}	0.52 ^b	7.88 ***
19. Wondered about civilian life	0.58 ^a	0.56 ^a	0.54 ^a	0.56 ^a	3.50 *
20. Discussed leaving with a family or friend	0.70 ^a	0.62 ^b	0.66 ^{ab}	0.64 ^b	22.53 ***
21. Talked of leaving with supervisor	0.28 ^a	0.20 ^b	0.25 ^a	0.24 ^{ab}	20.61 ***
22. Gathered information about college	0.28	0.38 ^a	0.38 ^a	0.36 ^a	39.26 ***
23. Gathered info on civilian job options	0.55 ^a	0.53 ^a	0.55 ^a	0.56 ^a	1.07
24. Attended program on civilian employment	0.12 ^a	0.13 ^a	0.12 ^a	0.13 ^a	0.62
25. Prepared a resume	0.26 ^a	0.24 ^a	0.25 ^a	0.24 ^a	2.18
26. Applied for a job	0.09 ^a	0.08 ^a	0.10 ^a	0.09 ^a	1.28
27. Interviewed for a job	0.07 ^a	0.05 ^a	0.07 ^a	0.06 ^a	3.80 **

* $p < .05$; ** $p < .01$; *** $p < .001$. Means with the same superscript are equal.

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Table 3
Pairwise Correlations among Study Measures

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27						
Family Separation																																	
1. Total time away for military duty	—																																
Job Satisfaction																																	
2. Pace of your promotions	.02	—																															
3. Type of assignments received	-.06	.28	—																														
4. Level of manning in unit	-.11	.16	.21	—																													
5. Personal workload	-.08	.20	.28	.43	—																												
6. Quality of leadership	-.05	.26	.34	.27	.34	—																											
7. Amount of enjoyment at work	-.03	.24	.42	.23	.41	.47	—																										
8. Job security	-.01	.23	.24	.15	.22	.23	.25	—																									
9. Amount of personal/family time	-.24	.16	.27	.34	.57	.26	.31	.17	—																								
Satisfaction with Family Support																																	
10. Medical care for your family	-.10	.14	.12	.19	.19	.18	.11	.20	.20	—																							
11. Dental care for your family	-.08	.15	.12	.18	.16	.14	.11	.17	.18	.66	—																						
12. Child services	-.07	.22	.27	.21	.24	.28	.27	.23	.27	.30	.29	—																					
13. Spouse work opportunities	-.07	.13	.16	.13	.16	.12	.14	.13	.17	.19	.21	.34	—																				
Material Well-Being																																	
14. Family's total monthly gross income	-.04	.11	.18	.04	.03	.08	.12	-.02	.05	-.03	.00	.10	.14	—																			
15. Member's highest education	-.02	.13	.19	.03	-.01	.09	.15	-.08	.04	-.07	-.05	.10	-.01	.45	—																		
16. Member's paygrade	.04	.22	.24	.02	.01	.15	.20	-.07	.04	-.10	-.05	.13	.01	.55	.77	—																	
Social Support																																	
17. Military community is there for me	-.05	.22	.29	.16	.21	.35	.32	.23	.20	.19	.17	.34	.16	.09	.11	.17	—																
Intent to Leave																																	
18. Thought seriously of leaving military	.05	-.13	-.16	-.15	-.19	-.21	-.23	-.13	-.17	-.14	-.12	-.15	-.08	.03	.03	.00	-.20	—															
19. Wondered about civilian life	.03	-.04	-.04	-.05	-.07	-.06	-.09	-.03	-.09	-.05	-.05	-.05	-.05	.01	.04	.04	-.04	.21	—														
20. Discussed leaving with a family or friend	.07	-.10	-.11	-.12	-.14	-.15	-.16	-.10	-.15	-.12	-.11	-.11	-.07	.03	.05	.03	-.14	.55	.30	—													
21. Talked of leaving with supervisor	.01	-.09	-.11	-.08	-.10	-.15	-.15	-.07	-.09	-.09	-.09	-.09	-.04	.03	-.01	-.03	-.12	.45	.20	.37	—												
22. Gathered information about college	.03	-.09	-.11	-.07	-.05	-.11	-.11	-.06	-.06	-.05	-.05	-.10	-.05	-.09	-.09	-.14	-.11	.22	.18	.20	.18	—											
23. Gathered info on civilian job options	.06	-.13	-.12	-.12	-.12	-.15	-.15	-.11	-.11	-.12	-.12	-.11	-.08	-.01	.01	-.03	-.15	.43	.21	.43	.33	.27	—										
24. Attended program on civilian employment	-.02	-.08	-.06	-.06	-.06	-.08	-.08	-.05	-.04	-.06	-.06	-.04	-.03	.04	.02	.01	-.06	.23	.10	.18	.29	.17	.25	—									
25. Prepared a resume	.03	-.12	-.09	-.10	-.11	-.14	-.12	-.11	-.08	-.11	-.10	-.10	-.07	.03	.09	.04	-.14	.33	.08	.28	.33	.19	.39	.35	—								
26. Applied for a job	-.01	-.08	-.08	-.05	-.05	-.09	-.09	-.07	-.03	-.05	-.06	-.06	-.03	.00	.01	-.03	-.10	.21	.07	.16	.29	.10	.23	.30	.42	—							
27. Interviewed for a job	.00	-.07	-.06	-.05	-.05	-.08	-.07	-.06	-.04	-.05	-.05	-.05	-.02	.03	.03	.00	-.08	.19	.06	.14	.25	.08	.20	.27	.35	.66	—						
	M	2.03	2.83	3.55	2.47	3.01	3.06	3.36	3.77	2.68	2.63	2.60	3.10	2.99	5.28	3.94	4.72	3.28	.57	0.57	0.68	0.27	0.31	0.55	0.12	0.26	0.09	0.07					
	SD	1.43	1.17	1.04	1.06	1.05	1.14	1.08	0.87	1.20	1.30	1.30	0.81	1.06	2.39	1.67	1.75	0.95	0.50	0.49	0.46	0.44	0.46	0.50	0.33	0.44	0.28	0.25					

Analyses and Results

We used multiple group structural equation modeling (via LISREL 8.54) to examine the operation of our conceptual model in each ethnic group (Jöreskog & Sörbom, 1993, 2003; Richards & Bowen, 1993). We used multi-group models to test the moderating effect of ethnicity on each relationship in the model. Our analyses assessed not only the fit of the overall model to the data for each group, but also compared each individual path across groups.

Analyses proceeded in three steps. Following procedures recommended by Anderson and Gerbing (1988) we first used factor analyses to establish the measurement model comprising the factor loadings linking observed indicators to the underlying or latent constructs they were purported to measure. Second, we assessed the fit of the hypothesized 'structural model,' or the path coefficients linking the latent constructs; these analyses tested the first two hypotheses of the study. Third, we conducted analyses to determine which of the structural pathways differed among ethnic groups; these analyses tested hypothesis three.

Measurement Model

We conducted exploratory common factor analyses with a varimax rotation (using SPSS 12.0 software). Examination of factors with eigenvalues greater than 1 and items with loadings greater than .30 revealed that the items loaded onto 6 factors which corresponded to the constructs in our model, although with some items loading on multiple factors.

Next, using LISREL 8.54 software (Jöreskog & Sörbom, 2003), we ran confirmatory factor analyses separately for each of the four ethnic groups. Model fit was assessed using the χ^2 statistic, the Goodness of Fit Index ($GFI \geq .90$), Comparative Fit Index ($CFI \geq .90$), Normed Fit Index ($NFI \geq .90$), and the Root Mean Squared Error of Approximation ($RMSEA \leq .05$) which are recommended for use with large samples (Bryne, 1998). Following standard practice, the loading for one indicator on each factor was fixed to 1.0 to set a common metric across indicators. Based on examination of the modification indices, three pairs of error terms were allowed to covary in the model for each ethnic group: two indicators of intent to leave, two indicators of satisfaction with family supports, and two indicators of job satisfaction.

Our next step was to run the measurement model simultaneously on all four ethnic groups in a multigroup analysis, constraining factor loadings to be equal across the groups. The results are shown in Line 1 of Table 4. We then re-ran the analysis, this time leaving loadings free to vary across the groups. Because these two tests were nested, the change in chi-squared and the change in degrees of freedom constitute a significance test of whether the freed model improved the fit of the model to the data (see columns in Table 4 headed by $\Delta\chi^2$, p , and Δdf). In this instance, the improvement in fit was statistically significant, indicating that the freed measurement model – in which factor loadings differed across ethnic groups -- fit the data significantly better than the model in which factor loadings were constrained to be equal.

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Table 4
Results of Models Tested

Models Tested	χ^2	df	$\Delta\chi^2$	p	Δdf	GFI	CFI	NFI	RMSEA
Measurement Models									
1. Measurement model with ethnic groups set equal	12410.72	1439				0.92	0.94	0.93	0.046
2. Measurement model with ethnic groups free to vary	11535.40	1283	875.32	***	162	0.93	0.94	0.94	0.046
3. Path job satis. to v2 ^a set equal across groups	11535.83	1286	0.43		3	0.93	0.94	0.94	0.046
4. Path job satis. to v8 set equal across groups	11536.24	1289	0.41		3	0.93	0.94	0.94	0.046
5. Path family supp. to v11 set equal across groups	11543.34	1292	7.10		3	0.93	0.94	0.94	0.046
6. Path intent to leave to v18 set equal across groups	11545.47	1295	2.13		3	0.93	0.94	0.94	0.046
7. Path intent to leave to v19 set equal across groups	11548.35	1298	2.88		3	0.93	0.94	0.94	0.046
8. Path intent to leave to v20 set equal across groups	11549.94	1301	1.59		3	0.93	0.94	0.94	0.046
9. Path intent to leave to v22 set equal across groups	11554.68	1304	4.74		3	0.93	0.94	0.94	0.046
10. Path intent to leave to v24 set equal across groups	11557.02	1307	2.34		3	0.93	0.94	0.94	0.046
11. Path intent to leave to v25 set equal across groups	11558.23	1310	1.21		3	0.93	0.94	0.94	0.046
12. Path intent to leave to v26 set equal across groups	11559.26	1313	1.03		3	0.93	0.94	0.94	0.046
13. Path intent to leave to v27 set equal across groups	11564.29	1316	5.03		3	0.93	0.94	0.94	0.046
14. Path job satis. to v4 set equal across minorities	11564.97	1318	0.68		2	0.93	0.94	0.94	0.046
15. Path job satis. to v5 set equal across minorities	11566.87	1320	1.90		2	0.93	0.94	0.94	0.046
16. Path job satis. to v9 set equal across minorities	11568.36	1322	1.49		2	0.93	0.94	0.94	0.046
17. Path family supp. to v13 set equal across minorities	11568.81	1324	0.45		2	0.93	0.94	0.94	0.046
18. Path mat'l well-being to v14 set equal across minorities	11573.28	1326	4.47		2	0.93	0.94	0.94	0.046
19. Path mat'l well-being to v15 set equal across minorities	11574.15	1328	0.87		2	0.93	0.94	0.94	0.046
20. Path intent to leave to v21 set equal across minorities	11579.34	1330	5.19		2	0.93	0.94	0.94	0.046
21. Measurement model #20 and structural set equal	19508.99	1336	7929.65	***	5	0.89	0.90	0.90	0.053
22. Measurement model #20 and structural set free	19418.63	1309	90.36	***	26	0.89	0.90	0.90	0.062
23. Add path from job satis. to social supp.	15250.65	1305	4167.98	***	4	0.93	0.94	0.94	0.053
24. Add path from job satis. to family supp.	12396.84	1301	2853.81	***	4	0.93	0.94	0.94	0.048
25. Add path from mat'l well-being to job satisfaction	11817.65	1297	579.19	***	4	0.93	0.94	0.94	0.047
26. Add path from social supp. to family supp.	11565.91	1293	251.74	***	4	0.93	0.94	0.94	0.046
27. Remove path from family supp. to intent to leave	11570.15	1297	4.24		4	0.93	0.94	0.94	0.046
28. Path sep'n to job satis. set equal across groups	11574.86	1300	4.71		3	0.93	0.94	0.94	0.046
29. Path sep'n to social supp. set equal across groups	11579.46	1303	4.60		3	0.93	0.94	0.94	0.046
30. Path job satis. to social supp. set equal across groups	11580.38	1306	0.92		3	0.93	0.94	0.94	0.046
31. Path social supp. to intent to leave equal across groups	11581.24	1309	0.86		3	0.93	0.94	0.94	0.046
32. Path sep'n to family supp. set equal across minorities	11584.05	1311	2.81		2	0.93	0.94	0.94	0.046
33. Path sep'n to mat'l well-being equal across minorities	11585.03	1313	0.98		2	0.93	0.94	0.94	0.046
34. Path sep'n to intent to leave set equal across minorities	11585.24	1315	0.21		2	0.93	0.94	0.94	0.046
35. Path family supp. to social supp. equal across minorities	11589.30	1317	4.06		2	0.93	0.94	0.94	0.046
36. Path job satis. to family supp. set equal across minorities	11591.08	1319	1.78		2	0.93	0.94	0.94	0.046

GFI=Goodness of Fit Index; CFI=Comparative Fit Index; NFI=Normed Fit Index; RMSEA=Root Mean Squared Error of Approximation. *** $p < .001$. ^a Corresponds to variable numbers in Tables 2 and 5.

The relatively better fit of the freed model as a whole did not indicate that every factor loading differed across all ethnic groups, however (Bryne, 1998). As a result, we tested a series of nested models where one loading at a time was constrained to be equal across the four ethnic groups. In these instances, the change in chi-squared indicated whether constraining the given path significantly worsened the fit of the model. These tests were conducted in order of their appearance in the model shown in Figure 1, from the exogenous variable to the mediators to the outcome. Whenever the result of a change in chi-square test was not statistically significant, the loading in question was constrained to be equal for all subsequent analyses. Table 4 contains the results for every retained model. A total of 21 models were tested, one for each observed indicator except for two that were the sole indicators of their respective latent constructs (loadings for these indicators were set to 1.0). Based on these analyses, eleven of the twenty-one loadings were found to be equal across all ethnic groups (see lines 3 to 13 in Table 4).

For the remaining loadings, we ran a series of analyses constraining the coefficients for the three minority groups to be equal but allowing them to differ from those for Whites (Table 4, Lines 14 to 20). The sequence of tests was the same as in the previous series. These results showed that loadings were equal across minority groups for seven of the ten paths tested; the remaining loadings were left free to vary across groups. Thus, the final measurement model (depicted in Table 5) included eleven loadings that were equal across all groups, seven that were equal among minority groups, three paths that were left free to vary, and six paths that had been set equal *a priori* to establish a common metric.

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Table 5
Standardized Factor Loadings for the Measurement Model Broken Out by Ethnicity

Variables	White Model	African American Model	Hispanic Model	Asian Model
Family Separation				
1. Total time away for military duty	<i>1.00</i>	<i>1.00</i>	<i>1.00</i>	<i>1.00</i>
Job Satisfaction				
2. Pace of your promotions	0.42	0.42	0.42	0.42
3. Type of assignments received	0.57	0.62	0.63	0.51
4. Level of manning in unit	0.41	0.50	0.50	0.50
5. Personal workload	0.55	0.62	0.62	0.62
6. Quality of leadership	0.45	0.58	0.50	0.53
7. Amount of enjoyment at work	0.63	0.63	0.63	0.63
8. Job security	<i>0.67</i>	<i>0.67</i>	<i>0.67</i>	<i>0.67</i>
9. Amount of personal/family time	0.38	0.43	0.43	0.43
Satisfaction with Family Support				
10. Medical care for your family	<i>0.43</i>	<i>0.43</i>	<i>0.43</i>	<i>0.43</i>
11. Dental care for your family	0.41	0.41	0.41	0.41
12. Child services	0.71	0.83	0.83	0.69
13. Spouse work opportunities	0.42	0.51	0.51	0.51
Material Well-Being				
14. Family's total monthly gross income	0.57	0.49	0.49	0.49
15. Member's highest education	0.81	0.67	0.67	0.67
16. Member's paygrade	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>	<i>0.99</i>
Social Support				
17. Military community is there when I need it.	1.00	1.00	1.00	1.00
18. Thought seriously of leaving military	0.66	0.66	0.66	0.66
19. Wondered about civilian life	0.32	0.32	0.32	0.32
20. Discussed leaving with a family or friend	0.60	0.60	0.60	0.60
21. Talked of leaving with supervisor	0.63	0.51	0.51	0.51
22. Gathered information about college	<i>0.37</i>	<i>0.37</i>	<i>0.37</i>	<i>0.37</i>
23. Gathered info on civilian job options	<i>0.65</i>	<i>0.65</i>	<i>0.65</i>	<i>0.65</i>
24. Attended program on civilian employment	0.43	0.43	0.43	0.43
25. Prepared a resume	0.55	0.55	0.55	0.55
26. Applied for a job	0.37	0.37	0.37	0.37
27. Interviewed for a job	0.32	0.32	0.32	0.32

Note: Bold indicates differences in factor loadings across ethnicity; italics indicate factor loadings set equal *a priori* to establish a common metric across indicators. Variables 4, 7, & 13 varied across ethnic groups; variables 5, 6, 10, 14, 15, 16, and 23 differed for Whites and members of minority groups.

Structural Model

To test the structural model, we added paths for relationships among the latent constructs to the already-developed measurement model. We began by testing a baseline model where the structural coefficients were constrained equal across the four ethnic groups (Table 4, Line 21). We compared the fit of the baseline model to a freed model where the structural coefficients were allowed to vary across ethnic groups. As Line 22 in Table 4 shows, the freed model produced a significant improvement in chi-squared.

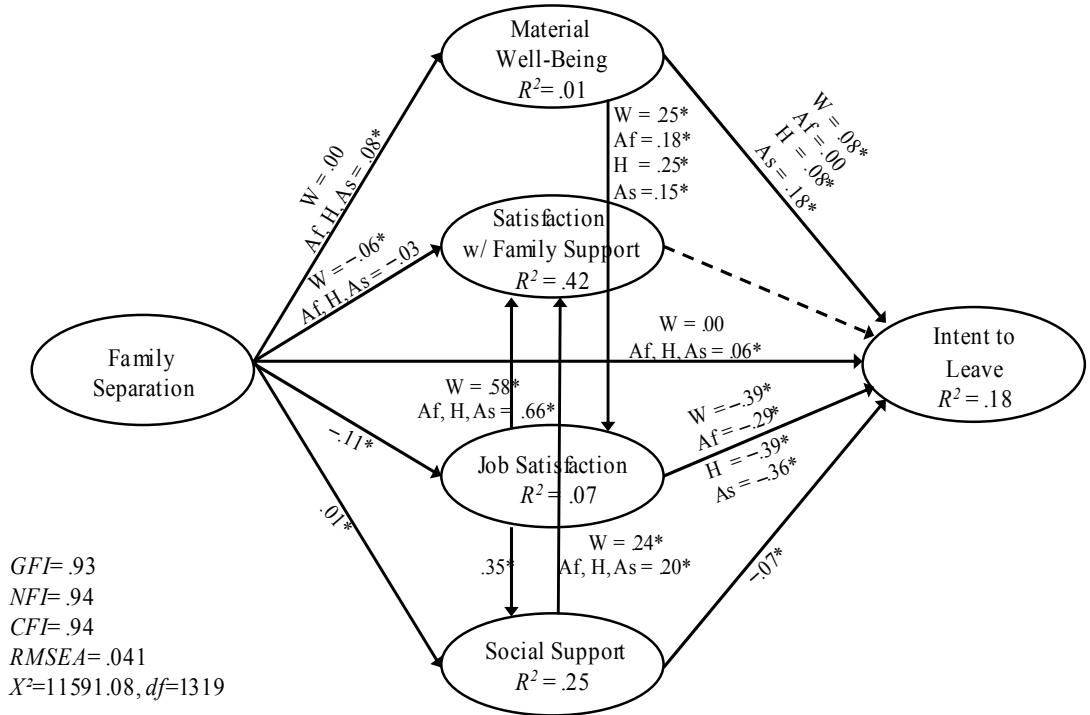
We examined the LISREL modification indices to ensure that our model included all appropriate paths. The modification indices for each ethnic group suggested that the hypothesized mediating variables were interrelated, and so we added paths reflecting these relationships. The paths were added one by one, at each stage testing for improvements in fit and re-checking modification indices. Four paths produced significant improvements in χ^2 and were added to the structural model (Table 4, Lines 23 to 26): from job satisfaction to social support and satisfaction with family supports, from social support to satisfaction with family supports, and from material well-being to job satisfaction.

As a final check on the appropriateness of the hypothesized paths in the model, we removed each path in the model one at a time, conducting change in chi-square tests at each stage (analyses available upon request). The removal of one path – satisfaction with family supports to intentions to leave – produced no significant decrement in fit for any ethnic group and that path was excluded from further analyses (Table 4, Line 27).

As with the measurement model, the relatively better fit of the freed structural model did not indicate that every factor loading differed across all ethnic groups. As before, we compared each path across ethnic groups, again working from the exogenous variable of family separation through the model to the outcome variable of intent to leave (analyses available upon request). In these analyses, a nonsignificant change in chi-squared indicated that the pathway in question did not differ significantly across ethnic groups. Four paths in the structural model were equal across ethnic groups: family separation to social support and job satisfaction, job satisfaction to social support, and social support to intent to leave (Table 4, Lines 28 to 31).

Next, we set the remaining paths to be equal across the three minority groups, one path at a time. Five paths conformed to this constraint: the paths from family separation to family supports, material well-being, and intent to leave, from social supports to satisfaction with family supports, and from job satisfaction to satisfaction with family supports (see Table 4, Lines 32 to 36). The remaining three paths were left free to vary among ethnic groups: from material well-being to job satisfaction and intent to leave, and from job satisfaction to intent to leave. The final structural model (see Table 4, Line 36) is depicted in Figure 1.

Figure 1
Final model with standardized parameter estimates and R^2 s.



Note: Multiple coefficients shown for a single pathway differ significantly from one another.

* $p < .05$. W=White, Af=African American, H=Hispanic, As=Asian, Pacific Islander, Native American.

We ran one last analysis to test the hypothesis of mediation. According to Baron and Kenny (1986), the presence of a mediator could only be concluded if there is a significant relationship between family separation and intent to leave that weakens when the hypothesized mediating variables are included in the model. The analyses of the structural model established that all but one of the mediating variables were related both to family separation and to intent to leave, but provided no information about whether the relationship between family separation and intent to leave was stronger when the mediating variables were not taken into account. To test this possibility, we ran an analysis that included the full measurement model and a structural model comprising only one direct path from family separation to intent to leave, which was allowed to vary across the four ethnic groups. Fit statistics for this model were $\chi^2 (1331, n = 14791) = 13045.64, p < .001$; goodness of fit = .92 and Root Mean Square Error of Approximation = .049. For all ethnic groups, the relationship between family separation and intent to leave was stronger when the mediating factors were excluded (.05 vs. .00 for Whites; .10 vs. .06 for Blacks; .08 vs. .06 for Hispanics; and .13 vs. .06 for Asians). Thus, the relationship was fully mediated for Whites and partially mediated for each minority group.

DISCUSSION

Based on Lee and Mitchell's Unfolding model of employee turnover (1994; Lee et al., 1999), this study focused on variations among ethnic groups in the relationship between the shock of family separation and members' intent to leave the military. Our first hypothesis was that family separation would be significantly and positively related to intent to leave. The hypothesis was supported for all groups, although the relationship was weak. Members who had experienced longer family separations were more likely to intend to leave the military.

The second hypothesis was that the positive relationship between family separation and intent to leave would be mediated by members' assessments of material well-being, satisfaction with family support, job satisfaction, and social support. Our findings supported the hypothesis by revealing that the relationship between separations and turnover intent was partially mediated in minority groups and fully mediated among Whites. This is consistent with our expectation, based on their collectivist cultural backdrop, that separations constitute a more powerful violation of values among members of ethnic minority groups than among Whites (Baca Zinn, 1983; Bulcroft, Carmody, & Bulcroft, 1996; McAdoo, 1993; Yeh, 2003). Significant mediators included material well-being, job satisfaction and social support, but not satisfaction with family support. The inclusion of mediators substantially increased the explanatory power of the model, indicating that military members' attitudes were as or more important than family separations in explorations of leaving the military.

The final hypothesis was that relationships among variables in the model would be stronger among members of ethnic minority groups than among Whites. Fully consistent

with this prediction, members of minority groups who experienced longer separations were more likely than Whites to report intending to leave the military. Members of minority groups also perceived more material benefits resulting from family separation than Whites, and were more likely than Whites to report satisfaction with family supports when they also were satisfied with their jobs.

Partially consistent with the predicted pattern, material well-being appeared to do more to enhance job satisfaction, and job satisfaction to reduce intent to leave among Whites and Hispanics than among African and Asian Americans. Asian American military members appeared more likely than other ethnic groups to move toward leaving the military as material well-being rose, although all ethnic groups except African Americans did so to some extent.

Contradicting our hypothesis of ethnic differences, four paths were the same for all groups. Regardless of ethnicity, members who experienced more days of separation were less satisfied with their jobs and perceived less support from the military community (although the latter coefficient was very small). Members who perceived less support felt less satisfied with their jobs and were more likely to intend to leave military service.

In direct opposition to our predictions, satisfaction with family support was more vulnerable to both separation and social support among Whites than members of minority groups. This may have been caused by our focus on satisfaction with services for families. If Whites have higher expectations or place higher priority on services than members of minority groups, it stands to reason that their satisfaction would be more vulnerable to shocks that disrupt them.

Implications for the Unfolding Model

The Unfolding model proposes several pathways toward leaving an employer, most of which are precipitated by a shock. Shocks are hypothesized to be both positive and negative (Lee, Mitchell, Wise, & Fireman, 1996), and this was evident in our findings. While separations were associated with *reductions* in job satisfaction and satisfaction with family support, they were related to *improvements* in material well-being -- but only for members of ethnic minority groups. The training, deployments, and other duties that cause family separations can improve material well-being by bringing additional income and career advancement opportunities, and these might be especially important for members of minority groups who are concentrated at lower paygrades and levels of education.

In this study, the shock of separation alone was significantly related to intent to leave, but workers' attitudes mattered more, especially for differences among ethnic groups. Family separations were negatively related to job satisfaction for all groups, but ethnic differences emerged in the relationship between job satisfaction and intent to leave. Consistent with most existing research on organizational commitment, military members who were more satisfied with their jobs were less likely to intend to leave (Weiss, MacDermid, Strauss, Kurek, Le, & Robbins, 2001), but this pattern was strongest among Hispanics, Whites, and Asian Americans. According to the most recent *Statistical*

Abstract of the United States, African Americans have the highest unemployment rate of all ethnic groups (Table 603, U.S. Census Bureau, 2004), suggesting weak prospects in the civilian workforce that might explain why intent to leave was less responsive to job satisfaction among African Americans than other groups.

We included perceptions of social support and support for families in our model because we hypothesized that intent to leave would be more responsive to these attitudes among minority groups than Whites. Instead of ethnic differences in the relationships between intent to leave and support, we found differences in the relationships among the mediating variables. Particularly among minority groups, members were more likely to be satisfied with support for families when they were satisfied with their jobs. Particularly among whites, members were more likely to be satisfied with support for families if they were perceived themselves as having social support from the military community. Stated another way, satisfaction with family support was more strongly linked to job satisfaction among members of minority groups and to social support among Whites. Our data do not make it possible to determine whether this ethnic difference is the result of different values (i.e., social support from the military community is more salient or important to Whites) or different opportunities (i.e., social support from the military community is more available to Whites). Nonetheless, these findings suggest that there are complexities yet to be explored in the types of dissatisfaction that lead to turnover in the Unfolding model.

Like separation, material well-being played a dual role. Not surprisingly, it appeared to reduce intent to leave by increasing job satisfaction. This was particularly the case among Whites and Hispanics. Material well-being also appeared to directly *elevate* intent to leave among all groups except African Americans – particularly Asian Americans. Members with higher pay and more education were more likely to intend to leave, unless they were African American. (Recall from above that African Americans may have poorer employment prospects than other groups outside of the military.)

The direct path from material well-being to intent, not mediated by job satisfaction, is consistent with path #1 in the Unfolding model, whereby a shock activates a pre-existing script or plan for departure. Military members may be an especially instructive group in which to study scripts because few of them are offered the opportunity or choose to remain in the military until the end of their working lives – many, perhaps even most members are thus likely to have developed at least the beginnings of a script. Further study could reveal the circumstances that propel workers to fully develop scripts and/or put them into action, perhaps making it more possible for organizations to detect and address early warning signs of turnover intent.

Limitations

Findings of this study are limited by several factors. First, all data were based on self-reports of military members, leading to concerns about shared method variance. This is primarily a problem with three subjective evaluations: job satisfaction, social support, and satisfaction with family support. Measures of the other variables were based on more objective information such as the frequency of deployment, income, or actual steps taken

toward leaving a job. Detailed tests of the measurement model did establish separate factors for all key constructs.

A second limitation is the lack of precise information about ethnic differences. Ethnicity is only a crude proxy for substantive differences in values or goals. More explicit measures would permit precise tests of the degree to which family separation violates relevant cultural images, such as the primacy of family life, adherence to traditional cultural values, and career goals. Such data might explain, for example, why satisfaction with family support was more vulnerable to separations among Whites than among minority groups.

All data were cross-sectional, making it impossible to be completely confident about the direction of paths in the model, particularly the relationships among the mediating variables. Reversing the direction of the paths between the mediators had little effect on the fit of the model or the strength of path coefficients. While it is clear that job satisfaction, social support, and satisfaction with family support are inter-related, longitudinal research is needed to more precisely delineate their causal connections.

It is difficult to know the degree to which the results of this study apply to civilian workers, even though all of the separations occurred during peacetime. Because family separations are a normal and common element of military experience, it is possible that their effects on families are weaker in the military than among civilians. Separations also could have a stronger effect in the military because they are very frequent and often prolonged.

Leadership Lessons Inside and Outside the Military

Turnover is a perennial preoccupation of almost all work organizations. In the U.S. military, this preoccupation is now especially intense in light of the Iraq war, which has required unexpectedly long and unpredictably dangerous separations. Longitudinal data are especially needed for accurate observations of the sequence of perceptions, judgments, and decisions that lead to turnover. Wartime separations may prove especially instructive because they are likely to constitute stronger shocks – they are longer, less predictable, more dangerous, and can arise with very little notice.

In the civilian workforce, globalization has increased job demands, requiring longer hours, more irregular schedules, and more travel. At the same time, intellectual capital is rising in importance, increasing the value of retention. And diversity is a priority in many firms (Collins, 1988). Given the inevitability of shocks, understanding ethnic diversity in values, beliefs, and responses to shocks may help employers to establish more effective ways to prevent turnover.

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