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Research Report 1490

Families and Readiness: An Examination of the 1985 DoD Survey of Enlisted Personnel

AD-A203 166

Rebecca M. Pliske



Personnel Utilization Technical Area
Manpower and Personnel Research Laboratory



U.S. Army
Research Institute for the Behavioral and Social Sciences

August 1988

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UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188		
1a. REPORT SECURITY CLASSIFICATION Unclassified			1b. RESTRICTIVE MARKINGS ---			
2a. SECURITY CLASSIFICATION AUTHORITY ---			3. DISTRIBUTION / AVAILABILITY OF REPORT Approved for public release; distribution unlimited.			
2b. DECLASSIFICATION / DOWNGRADING SCHEDULE ---						
4. PERFORMING ORGANIZATION REPORT NUMBER(S) ---			5. MONITORING ORGANIZATION REPORT NUMBER(S) ---			
6a. NAME OF PERFORMING ORGANIZATION U.S. Army Research Institute		6b. OFFICE SYMBOL (if applicable) PERI-RP	7a. NAME OF MONITORING ORGANIZATION ---			
6c. ADDRESS (City, State, and ZIP Code) 5001 Eisenhower Avenue Alexandria, VA 22333-5600			7b. ADDRESS (City, State, and ZIP Code) ---			
8a. NAME OF FUNDING / SPONSORING ORGANIZATION ---		8b. OFFICE SYMBOL (if applicable) ---	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER ---			
8c. ADDRESS (City, State, and ZIP Code) ---			10. SOURCE OF FUNDING NUMBERS			
			PROGRAM ELEMENT NO. 63731A	PROJECT NO. A792	TASK NO. 2.4.2	WORK UNIT ACCESSION NO. 242.H.3
11. TITLE (Include Security Classification) Families and Readiness: An Examination of the 1985 DOD Survey of Enlisted Personnel						
12. PERSONAL AUTHOR(S) Pliske, Rebecca M.						
13a. TYPE OF REPORT Final		13b. TIME COVERED FROM 1/87 TO 7/88		14. DATE OF REPORT (Year, Month, Day) 1988, August	15. PAGE COUNT 40	
16. SUPPLEMENTARY NOTATION ---						
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Personnel readiness, Performance (Human), Attitude tests, (SQT) ← Army families			
FIELD	GROUP	SUB-GROUP				
19. ABSTRACT (Continue on reverse if necessary and identify by block number) → The existing literature on military families and readiness was reviewed, along with related literature from civilian population studies. Data from the 1985 DOD Survey of Enlisted Personnel were matched to Army records containing Skill Qualification Test (SQT) scores used to measure job performance. The results suggest that dependent care arrangements are a problem for a substantial minority of Army personnel in both short- and long-term situations (no-notice alerts and unit deployments). Although dependent care problems are of particular concern to single and dual military parents, parents married to civilian spouses also have dependent care problems. Analyses of SQT scores indicate that marital status is not significantly related to job performance; however, the presence of one or more children has a small positive relationship to job performance. Recommendations for future research are discussed. Keywords						
20. DISTRIBUTION / AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION Unclassified			
22a. NAME OF RESPONSIBLE INDIVIDUAL Rebecca M. Pliske			22b. TELEPHONE (Include Area Code) (202) 274-8867		22c. OFFICE SYMBOL PERI-RP	

DD Form 1473, JUN 86

Previous editions are obsolete.

SECURITY CLASSIFICATION OF THIS PAGE

UNCLASSIFIED

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Accession For	
NTIS CRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



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Department of the Army

August 1988

Army Project Number
2Q263731A792

Manpower and Personnel

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FOREWORD

The Personnel Utilization Technical Area of the U.S. Army Research Institute (ARI) for the Behavioral and Social Sciences performs research on the factors that influence the retention and readiness of Army personnel. Increasingly, the Army's perspective on personnel issues reflects the awareness that soldiers are family members as well as members of the military community. This report focuses on the issue of families and readiness. Does a soldier's family status affect his or her readiness?

This research was funded under program element 2Q263731 A792, under work unit 2.4.2.H.3 in FY 87. The research sponsor for this effort was the Community and Family Support Center (CFSC). An earlier draft of this paper was forwarded to and approved by personnel at CFSC. Their comments indicated that this report will be useful in the development of programs and policies for Army families.



EDGAR M. JOHNSON
Technical Director

FAMILIES AND READINESS: AN EXAMINATION OF THE 1985 DOD SURVEY
OF ENLISTED PERSONNEL

EXECUTIVE SUMMARY

Requirement:

To examine the relationship between families and readiness.

Procedure:

The existing literature on military families and readiness was reviewed, along with related literature from civilian population studies. Data from the 1985 DOD Survey of Enlisted Personnel were matched to Army records containing Skill Qualification Test (SQT) scores used to measure job performance. These data were analyzed using cross-tabulation, analysis of variance, and multiple regression analyses.

Findings:

The results suggest that dependent care arrangements are a problem for a substantial minority of Army personnel in both short-term and long-term situations such as no-notice alerts and unit deployments. Although dependent care problems are of particular concern to single and dual military parents, parents married to civilian spouses also have dependent care problems. Results also indicate that many soldiers and their families could be better prepared for deployment. The majority of soldiers surveyed did not have a written will, nor had they granted anyone power of attorney. Analyses of SQT scores indicate that marital status is not significantly related to job performance; however, the presence of one or more children has a small positive relationship to job performance. That is, soldiers with one or more children have somewhat higher SQT scores than soldiers without children.

Utilization of Findings:

These results will be useful for the development of Army family programs and policies.

FAMILIES AND READINESS: AN EXAMINATION OF THE 1985 DOD SURVEY
OF ENLISTED PERSONNEL

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FAMILIES AND READINESS: AN EXAMINATION OF
THE 1985 DOD SURVEY OF ENLISTED PERSONNEL

INTRODUCTION

The Army has become increasingly responsive to the family needs of its members in recent years. This commitment to its families is clearly articulated in the Army Chief of Staff's 1983 White Paper, The Army Family, which states the current Army philosophy that "A partnership exists between the Army and Army Families."¹ The Army recognizes that it has a moral obligation to its soldiers and their families. It also believes there is a positive relationship between soldier commitment (the willingness to train, deploy and fight) and force readiness. To the extent that Army support of families increases soldier commitment, it will also increase force readiness, which is the Army's ultimate goal.

There is a general assumption among those working with military families that families affect force readiness. There is, however, little empirical data to support this assumption. The exception to this statement is the research that has repeatedly demonstrated that spouse support of a military career is a critical factor in the soldier's retention decision (e.g., Bowen, 1986; Jones and Butler, 1980). Because personnel strength is an important component of force readiness, it can be argued that families affect readiness because they affect the retention of qualified soldiers.

One of the purposes of this paper was to review the literature that does exist on families and readiness. In addition to the readiness research conducted with military populations, relevant civilian research dealing with related topics was also reviewed. The final section of this paper examines data from the 1985 DoD Survey of Enlisted Personnel that address the issue of families and readiness. Before we begin the literature review, readiness will be defined.

Defining Readiness

The Army measures the combat readiness of its units by considering three factors: personnel, equipment, and training. Personnel readiness is further divided into three elements: personnel strength, the job qualifications of those assigned, and the proportion of the leadership positions that are currently filled. Equipment readiness is determined by the availability of authorized equipment and the operational status of that equipment. Training readiness is determined by the unit commander's judgment of how many weeks of training he thinks his unit would need to be fully operational (Sorely, 1980).

Given this conceptualization of readiness, families are most likely to impact personnel readiness. However, the traditional Army measures are not

¹This is a relatively new philosophy. Army regulations, with exceptions, forbade the peacetime enlistment or reenlistment of men with wives and minor children until 1942 (CSA, 1983 White Paper).

designed to capture the less tangible aspects of force readiness that are most likely to be affected by families. These factors include unit morale, commitment, cohesion, availability for deployment, combat effectiveness, and quality of leadership.

In addition to measures of unit readiness, it is also possible to measure individual soldier readiness. These measures encompass both the soldier's ability and willingness to carry out his or her assigned duties. Individual readiness would thus include measures of soldier performance, physical and mental health, discipline, preparedness for deployment, and willingness to fight. Many of these factors are difficult to quantify in a reliable manner. However, it is these factors that are most likely to be affected by the soldier's family.

Changes in Family Structure May Affect Readiness

Most American families no longer fit the stereotypical family of years past when the father worked outside the home and the mother stayed home with the children. Now, over half of all women with children under 18 work outside the home. There has also been a large increase in the number of single parent households as a result of high divorce rates. These changes in the American family in the civilian population are also found in the military; there has been a large increase in the number of dual career and single parent military families in recent years. There has also been a large increase in the proportion of military wives in the labor force (Grossman, 1981).

Landrum (1980) discusses the effects the changing military family may have on force readiness. She states that some military families are now placing their own needs above the mission and that spouses are less willing to make the sacrifices they made in earlier years. She also points out that whereas in the past pregnancy was primarily a concern of the junior enlisted women, the current trend towards delaying childbearing suggests that in the future more senior NCOs and officers will be among the pregnant soldiers. Landrum states that members have begun to perceive their military affiliation less as a profession or calling, and more as an occupation. "The problem of the competing claims of mission and family affects readiness directly, since a key factor in readiness is personnel availability" (p.79).

Similarly, Wood (1982) discusses the "civilianization" of junior officers and their families in the Air Force. Wood found that in the past decade Air Force families have become increasingly involved in the civilian sector and less involved in the military organization. This is due in part to the fact that the majority of Air Force wives now work in the civilian sector and that the majority of Air Force families prefer to live off base (see Orthner, 1980). This "civilianization" of military families may impact readiness. For example, Wood (1982) reports that officers choose to live far from the base so they are less available for unscheduled duty calls.

Concern of commanders about the readiness of single and dual military parents led to the only major study to date that specifically addresses the readiness of different types of Army families, a 1982 study completed by the General Accounting Office (GAO). The GAO examined existing Army data on single

and dual military parents and concluded that these data were not adequate for determination of Army policy. Therefore, the GAO surveyed the first line supervisors of soldiers in 30 active duty units to determine the availability of single and dual military parents in the event of a national emergency and to evaluate their attendance and performance during peace time.

In general, the results of the GAO study indicate that most single and dual military parents attend and perform work in "at least a satisfactory" manner. Furthermore, most of these parents would be available and punctual in the event of war or national emergency. The authors of the study also point out that almost all the single and dual military parents included in the study were high school diploma graduates scoring in the upper categories on military entrance examinations, and that 25% of them were in military occupation specialties (MOS) that are difficult to fill (i.e., that had enlistment and/or reenlistment bonuses associated with them). The GAO report concludes that policies excluding single and/or dual military parents from service or from deployable positions was not warranted. Instead, poor performance and/or attendance of single and dual military parents should be handled on a case by case basis.

Teplitzky, Hedlund and Nogami (1986) examined the performance of single parents in the Army. They conducted indepth interviews with 27 single parents to obtain a better understanding of the diversity of personal, family and work situations single parents encounter in the Army. Teplitzky et al. also interviewed the supervisors of the 27 single parents in their sample. The supervisors generally rated the single parents quite positively; most of the sample received "above average" or "at the very top" ratings of performance. Surprisingly few problems were reported with these single parents being late for work, needing extra time off, or not being deployable. Although the conclusions of this study cannot be generalized due to the small sample size, it does provide a very optimistic view of the readiness of the Army single parent.

Devilbiss and Perrucci (1982) examined the effects of role multiplicity on Army personnel in a survey of 787 male and female officers and enlisted personnel. Role multiplicity refers to the soldier's perception of the number of roles he or she enacts. It includes both military and non-military roles (i.e., family and community roles). In addition to role multiplicity, role conflict, role ambiguity, and role strain were also measured. Role strain was measured by multiple self-report items assessing life dissatisfaction, job dissatisfaction, and poor job performance.

The results from Devilbiss and Perrucci's survey indicate that self-reported job performance was positively related to soldiers having multiple non-military roles. That is, good job performance increased as the number of role responsibilities increased. Their findings also indicated that as role multiplicity increased so did reported job/family conflict. However, there were also positive relationships between role multiplicity and job and life satisfaction measures. It is important to note that 54% of the married men and 35% of the married women in this sample reported having no non-military roles. The authors speculate that "this may reflect the extreme salience of the occupational role responsibilities for both men and women in the military institution" (p. 7).

Orthner and Pittman (1986) tested the assumption made by military family advocates that by supporting military families, the military is improving the commitment of their soldiers. Specifically, Orthner and Pittman tested an empirical model of the linkages between organizational support for family and job commitment of Air Force personnel. Their operationalization of the construct of job commitment included self report measures of job morale, job performance and intent to pursue a military career. Data were collected by a mail-out survey and the sample included 751 married Air Force members (an 80% response rate). The data were analyzed using the LISREL procedure (Joreskog & Sorbom, 1983). Results indicate that when an organization (the Air Force in this case) is perceived as supportive of families, the employees experience greater support from their families for their commitment to their jobs, and the employees tend to be more committed to their jobs.

Although there is very little empirical literature that directly addressed the issue of how families affect the various components of readiness, the literature that does exist is quite positive. Obviously, much more extensive research needs to be conducted in this area to provide military policy makers with the information they need. We will now examine several different lines of research conducted with civilian populations that are relevant to the study of families and readiness.

The Interrelationship Between Work and Nonwork Activities

Over the years, family research and organizational research has generally been conducted by separate disciplines. Family research was primarily conducted by family sociologists and clinical/social psychologists, whereas organizational research was primarily conducted by industrial/organizational psychologists and business/management researchers. According to Kanter (1977) this may be due in part to the "myth of separate worlds" that compartmentalizes the family and work into totally separate institutions.

More recently, research has indicated that there are relationships between work and family; what is not at all clear is the exact nature of these relationships. This literature is plagued by both conceptual and methodological problems. It is well beyond the scope of this report to review this literature (for a more complete review see Teplitzky, 1988); only selected studies that appear to be particularly relevant to the relationship between families and readiness will be reported here.

Unfortunately, research that directly addresses the effect of family factors on job performance per se does not exist. However, four lines of research were identified that provide some insight into the potential effects that family factors may have on job performance. First, the literature on the relationship between job satisfaction and life (i.e., non-work) satisfaction will be briefly summarized. Next the research on work/family conflicts will be presented. Work/family conflicts are hypothesized to produce stress or result from stress, thus selected articles on stress and performance will be discussed. The final section of the literature review deals with absenteeism in the work place.

Life/job satisfaction. The interrelationship between life and job satisfaction has been the focus of several recent literature reviews (Kabanoff, 1980; Near, Rice, & Hunt, 1980). Job satisfaction itself has been a heavily researched area over the past few decades; although it is generally accepted that there is a positive relationship between job satisfaction and life satisfaction, it is not clear how these concepts are related causally. The nature of the relationship between life and job satisfaction has generally been tested under three rival hypotheses called the spillover model, the compensation model, and the segmentation model.

The spillover model proposes that satisfaction in one part of a worker's life positively affects satisfaction in other parts. Thus, the worker who is happy on the job will tend to take this happy attitude home to his or her family. Similarly, this hypothesis holds that when an employee is dissatisfied with his or her job, that dissatisfaction will also be carried home from the office. Although most research has focused on spillover from work to family, the spillover model is nondirectional suggesting that attitudes and feelings generated at home can spill over into work life. Thus, an employee with a happy home life could experience an increase in job satisfaction; or a happy employee may experience an increase in family satisfaction.

The compensation model proposes there is a negative relationship between work and nonwork. That is, the employee with an unfulfilling job will attempt to compensate by seeking out challenging nonwork activities. Conversely, the employee with an unfulfilling family life will seek fulfillment at work. Thus, this model predicts that job and life satisfaction measures will be negatively correlated.

The third model discussed in the literature is called the segmentation model. This model predicts no correlation between measures of job and life satisfaction. It contends that the worlds of work and nonwork are totally separate psychologically to the employee.

Unfortunately, the large literature that has examined this important relationship between life and job satisfaction is filled with inconsistent results (Nice, et al., 1980). Part of the inconsistency may be due to a conceptual problem in that most previous research has failed to consider the possibility that an interactive relationship may exist between life and job satisfaction. For example, an employee who is satisfied with life outside of work brings a positive attitude to work which affects his or her job satisfaction which in turn affects his or her overall life satisfaction. Recent work by Schmitt and Bedeian (1982) supports this interactive or reciprocal relationship between life and job satisfaction.

Schmitt and Bedeian (1982) surveyed 873 civil service workers in the state of Michigan. They measured both job and life satisfaction as well as marital status, self-esteem and locus of control. The data were analyzed using both two-stage least squares (James & Singh, 1978) and the analysis of linear structural equations using LISREL (Joreskog & Sorbom, 1978). The results of both types of analyses support a reciprocal relationship between job and life satisfaction.

Work/family conflict. Another line of research relevant to families and readiness is that which has examined work/family conflicts. In a recent national survey of U.S. workers, 34% of the respondents reported that their job and family interfered with each other (Pleck, Staines, & Lang, 1980). There was no significant difference between the percent of employed husbands (34%) and employed wives (37%) who reported this conflict. This is somewhat surprising given the current stereotype that it is the working mother (not father) who experiences the conflict between her work and family roles.

Greenhaus and Beutell (1985) review the potential sources of conflict between an employee's work and family roles. They define work/family conflict as "a form of interrole conflict in which the role pressures from the work and family domains are mutually incompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role" (p.77). Their model proposes that work/family conflict is intensified when the work and family roles are central to the person's self-concept. The work/family conflict can also be intensified when there are strong negative sanctions for noncompliance with role demand. They identify three major forms of work/family conflict: time-based conflict, strain-based conflict, and behavior-based conflict.

Time-based conflicts occur because multiple roles may compete for a person's time. Work/family conflict can arise as a result of employees having to work an excessive number of hours. It can also result from having inflexible work schedules that limit employees' ability to accommodate the demands of family roles. Work/family conflict has also been associated with the amount and frequency of overtime and the presence of shiftwork (Pleck et al., 1980).

In addition to the work-related sources of time-based conflicts (e.g., overtime, inflexible hours, etc.), Greenhaus and Beutell discuss family-related sources of time-based conflicts. For example, Herman and Gyllstrom (1977) found that married persons experienced more work/family conflict than unmarried persons. Other research (e.g., Pleck, et al., 1980) has shown that parents of younger children experience more conflict than parents of older children (who are perhaps more self-sufficient).

The second type of work/family conflict discussed by Greenhaus and Beutell (1985) is strain-based conflict. They propose that this type of conflict results when strain in one role affects performance in another role. Although they cite some related literature to support this general concept of strain-based conflict, they do not cite any research that has shown family strain directly affecting job performance.

Greenhaus and Beutell present a final type of work/family conflict which they label behavior-based conflict. This type of conflict occurs when specific patterns of "in-role" behavior are incompatible with expectations regarding behavior in another role. For example, Schein (1973) has suggested that the male, managerial stereotype is of a self-reliant, aggressive person. However, these may not be the behavior patterns needed by a manager's family. Greenhaus and Beutell state that there is no empirical literature that directly addresses behavior-based conflict.

The Greenhaus and Beutell (1985) model proposes that work/family conflict is intensified when the work and family roles are important or salient to the person's self-concept. Frone and Rice (1987) demonstrate some empirical support for this hypothesis. They surveyed 141 nonteaching professionals at a major public university. Their questionnaire included measures of job involvement, spouse involvement, and parental involvement, as well as job/spouse conflict and job/parent conflict. Results indicate that job involvement was positively related to job/spouse conflict for those individuals high in spouse involvement, but was not related for those low in spouse involvement. Interestingly, job involvement was positively related to job/parent conflict regardless of the individual's score on the parental involvement measure. These results, which must be validated with additional samples of other types of employees, lead to an interesting interpretation: that the demands of the parental role may be more difficult to ignore or escape than other roles. This would suggest that working parents are very likely to experience some degree of job/parent conflict.

Jones and Butler (1980) examine the effects of work/family conflict with a sample of 181 married sailors aboard four deployed U.S. Navy ships. Their questionnaire included measures of job-role conflict and ambiguity, goal attainment facilitation, role strain, and family/work role incompatibility. Their results indicate that family/work incompatibility was strongly related to overall satisfaction with the Navy, job involvement and intention to reenlist.

Stress and performance. Role theory predicts that the experience of role conflict is stressful. Although much has been written about the effects of stress on various aspects of human behavior, most of this research has focused on the effects stress has on health (e.g, heart disease, blood pressure, etc.). Relatively little is known about how stress effects job performance per se.

Ivancevich (1986) examined the effect of life events, daily hassles, and daily uplifts on job performance, absenteeism, and general health symptoms. Life events refer to significant changes that may occur in one's life such as death of spouse, getting fired from work, or adding a new family member. Hassles and uplifts are daily occurrences that may affect one's well-being. Hassles include feeling lonely, being concerned about job security, and having too many things to do. Uplifts include relaxing with friends, sharing something, and having enough time to do what you want. Questionnaires were administered to a sample of 185 hourly assembly line employees. Worker performance was evaluated by supervisors. Voluntary absenteeism frequency was obtained from company personnel files. Results indicated that uplifts frequency and intensity was positively related to both job performance and negatively related to absenteeism; hassles frequency and intensity was positively related to general health symptoms and absenteeism. Ivancevich concludes that major life events do not have an independent effect on general health symptoms, absenteeism, and job performance beyond that produced by daily hassles and uplifts.

Motowidlo, Packard, & Manning (1986) tested a model of occupational stress that proposes that stress leads to affective states such as anxiety, hostility, and depression and thus to decrements in job performance. Their model also proposes that stress is caused by specific events that occur at work.

Individual characteristics such as work experience, fear of negative evaluation, and Type A behavior pattern (hard working, persistent, extremely involved in one's work) also affect the degree of stress experienced by the individual.

Motowidlo, et al. tested their model with a sample of 171 nurses. Job performance was measured by having supervisors and co-workers complete questionnaires in which they were asked to rate the performance of the nurses in the sample. The nurses filled out a questionnaire that measured years of nursing experience, Type A behavior pattern, and fear of negative evaluation; this questionnaire also contained questions about the subjective experience of stress at work and questions measuring affect. The nurses also rated the frequency and intensity of a list of 45 stressful job events identified in an earlier study also conducted with nurses.

Path analyses of the data collected by Motowidlo, et al. generally supported their model. Job conditions and individual characteristics (job experience, fear of negative evaluation, and Type A behavior pattern) appear to affect the workers' perceptions of stress. Stress is associated with three affective states: anxiety, hostility, and depression. Of the three affective variables studied, depression alone had a negative effect on job performance. Hostility had no significant effect on job performance and anxiety had a significant positive effect on one aspect of job performance (i.e., warmth toward other nurses).

Although the model proposed by Motowidlo, et al. does not include family factors, it could be expanded in future research efforts. The critical finding in the Motowidlo et al. study is that stress was shown to have a variety of impacts on job performance--positive, negative or neutral--depending on the affective state produced by stress. Other research has demonstrated that work/family conflicts may produce stress. For example, Cooke and Rousseau (1984) examined the effects of family roles and work-role expectations on psychological and physical strain (i.e., stress) of the employee. They interviewed 200 teachers to obtain measures of work-role expectations (i.e., have to work overtime?), family role (i.e., was the teacher married? have children?), perceived work overload, work/nonwork interrole conflict, job dissatisfaction, life dissatisfaction, and physical strain (i.e., symptoms of nervousness, tiredness, etc.).

Cooke and Rousseau's results are consistent with other research that has indicated employees with spouses and children experience more job/family role conflict. Cooke and Rousseau also found that parents experience more work overload than childless teachers. Interestingly, they also found a positive effect of family roles: the presence of a spouse and children was related to physical well-being. "Parents tend to experience symptoms of strain less frequently than nonparents, and married teachers less frequently than those who are single" (Cooke & Rousseau, 1984, p. 258).

Absenteeism. A critical component of readiness is whether or not soldiers report for duty. The phenomenon of employee absenteeism is also an important issue to civilian employers. Steers and Rhodes (1978) estimated the annual cost of absenteeism in the U.S. is between \$8.5 and \$26.4 billion to the

civilian economy. Steers and Rhodes reviewed 104 empirical studies and present a process model of employee attendance in work organizations.

The model proposed by Steers and Rhodes (1978) suggests that work attendance is directly influenced by two primary factors: a) an employee's motivation to attend, and b) an employee's ability to attend. Motivation to attend work is influenced by job satisfaction and various internal (e.g., work ethic, organizational commitment) and external pressures (e.g., economic/market conditions, incentive/reward system) to attend. Ability to attend work is affected by the employee's health, his or her family responsibilities, and transportation problems. Thus, their model attempts to explain both voluntary and involuntary absenteeism. The literature reviewed by Steers and Rhodes was consistent with their model.

Brooke and Price (1986) expanded the model of employee attendance proposed by Steer and Rhodes (1978) and applied it to the study of absenteeism with a sample of employees at a medical center. Brookes and Price obtained longitudinal, self-report measures of absenteeism, as well as the other variables in their model, from two surveys administered at a three month interval. Using the LISREL procedure (Joreskog & Sorbom, 1983) to evaluate their causal model, they found significant net effects on absenteeism of kinship responsibility (defined in terms of marital status and the presence of children and other dependents), organizational permissiveness (or the organization's tolerance for absenteeism), and alcohol involvement. In support of Steers and Rhodes' (1978) model, job satisfaction was found to be a significant mediating variable.

One of the arguments for employee-sponsored child care is that it will have a significant effect on reducing employee absenteeism. Miller (1984) reviewed the literature to evaluate the evidence supporting claims that employee-sponsored child care improves employee work behaviors. Miller concludes: "Despite enthusiasm by some chief executive officers, public relations officials and child care advocates, assertions that employer-sponsored child care increases worker's productivity or job satisfaction are not supported by credible research" (p. 277). It is important to note however, that this conclusion is based on lack of credible research not credible research indicating there are no effects.

A recent study completed by Fernandez (1986) with 5,000 corporate employees with children specifically addressed the issue of child care and corporate productivity. He found that 67% of the employees reported that child care problems result in unproductive use of employees' time. "Instances of missed days at work, tardiness, leaving work early, and dealing with family issues during work hours were highly positively correlated with employees' difficulties coping with child care and handling dual family/work roles" (p. 15).

Summary of literature. This limited review of the civilian literature highlights some relevant findings for the study of families and readiness. Empirical evidence demonstrates there is an interrelationship between job and life satisfaction (e.g., Schmitt & Bedian, 1982). There is also a growing body of literature documenting that various types of conflict result from employees

having multiple roles (e.g., Greenhaus & Beutell, 1985). Thus, we should not assume that individuals are able to keep their work and family roles and responsibilities separated into independent compartments.

Research also indicates that family roles can simultaneously increase and reduce stress in employees (Cooke & Rousseau, 1984) and that stress can affect performance (Motowidlo, et al., 1986). These results considered together suggest that families may affect job performance by either increasing or reducing the amount of stress experienced by the employee. Finally, the research on work attendance suggests that we must consider both the employee's motivation to come to work as well as his or her ability to come to work. Family concerns may affect these components in different ways. For example, the single parent who is the sole economic supporter for her child may be extremely motivated to attend, but may not be able to attend when the child is ill. There is some empirical evidence (Brooke and Price, 1986) that increases in "kinship responsibility" increases absenteeism. The issue of whether or not employee-sponsored day care reduces absenteeism requires additional research before any conclusions can be drawn.

Many of the outcome variables that have been addressed by civilian research are relevant to the study of readiness. Job satisfaction may affect the willingness and/or ability of a soldier to carry out his or her duties. Inter-role conflict may result in stress that may adversely affect the soldier's job performance. Inter-role conflict may also affect the soldier's willingness and/or ability to deploy. Absenteeism is a critical component of readiness; absent soldiers are not available for training during peace time nor for deployment in times of national emergency. In the next section of this report, data from the 1985 DoD Survey of Enlisted Personnel are examined for relationships between family factors and readiness.

The 1985 DoD Survey of Enlisted Personnel

The 1985 DoD Survey of Officer and Enlisted Personnel was conducted for the Office of the Assistant Secretary of Defense, Force Management and Personnel by the Defense Manpower Data Center (DMDC, 1986). Approximately 19,000 active-duty officers and 70,000 active-duty enlisted personnel from all four services responded to the survey. The questionnaire included questions about the soldier's background, economic status, family composition, retention plans, and preparedness. This report will only present analyses on Army enlisted personnel.

The purpose of the 1985 DoD survey was to provide information for policy makers on a wide variety of issues. Thus, the survey was not specifically designed to access the relationship between families and readiness. However, there are several questions included in the survey that access soldiers' perceptions of morale and individual preparedness. There are also questions that allow us to identify the family composition of the soldier as well as other important background variables such as rank and sex. In addition, we have supplemented the survey data with data from Army records to obtain an indicator of job performance.

METHOD

Sources of Data

The data for the analyses reported herein are based on a sample of 12,806 active-duty Army enlisted personnel who participated in the 1985 DoD Survey of Officer and Enlisted Personnel. The population for the 1985 DoD Survey included all officer and enlisted personnel in all four services on active duty on 30 September 1984. The sample was stratified by service and within each service the enlisted sample was stratified by length of service and sex. Soldiers with less than four months of service were excluded from the population. A random sample of soldiers was selected from within each stratum. Because of the disproportionate sampling and different response rates from the different subgroups, weighted data provide the best estimates for the entire population of Army enlisted personnel; therefore the results reported in this paper are based on the weighted data.

A total of 19,220 enlisted Army personnel responded to the 1985 DoD Survey. This represents a response rate of 59.1%. The survey data from these respondents were matched to Army files² containing Armed Forces Qualification Test (AFQT) scores and Skill Qualification Test (SQT) scores for the 1985 enlisted population of the Army. Matching records were found for 12,806 soldiers. Matches were not expected for all survey respondents because SQTs are not given to all enlisted personnel. SQTs are only administered to soldiers who have been in the service for at least 12 months and soldiers below the rank of E8. Furthermore, SQTs are not given at all for soldiers in particular MOS (e.g., medics). Analyses that did not include SQT scores were completed on the entire sample of Army enlisted soldiers responding to the 1985 DoD Survey and compared to the results obtained from the subsample of Army enlisted soldiers for whom SQT scores were available. The pattern of results was very similar for both samples, therefore only the analyses of the "SQT" sample will be reported. The sample demographics for the soldiers included in the following analyses are shown in Table 1.

²The data were originally from the Army Enlisted Master File (EMF) for 1985. Researchers at ARI had previously abstracted the AFQT and SQT scores from the EMF and produced a cleaned and edited file. This subset of the EMF was matched to the DoD survey records.

TABLE 1

Demographic description of sample (N=12,806).

<u>SEX</u>		<u>RACE</u>		<u>TERM OF SERVICE</u>	
Male	62.8	White	50.0	1st	28.0
Female	37.2	Black	36.3	2nd	35.1
	<u>100.0%</u>	Hispanic	9.0	3rd	23.4
		Other	4.7	4th	13.5
			<u>100.0%</u>		<u>100.0%</u>

<u>FAMILY STATUS</u>		<u>AGE</u>		<u>NUMBER OF DEPENDENTS</u>	
Single	27.2	17-19	4.2	0	40.9
Single parent	6.6	20-24	32.4	1	24.6
Dual military	6.5	25-29	32.5	2	20.4
Dual military parent	9.6	30-34	19.0	3	9.0
Married	12.0	35-39	9.9	4	3.4
Married parent	38.1	40+	2.0	5+	1.7
	<u>100.0%</u>		<u>100.0%</u>		<u>100.0%</u>

<u>LOCATION</u>		<u>AFQT CATEGORY</u>		<u>SQT SCORE</u>	
CONUS	54.7	I and II	26.8	75-100%	61.8
Alaska	1.2	IIIA	17.3	50-74%	35.4
Hawaii	3.2	IIIB	29.5	25-49%	2.7
OCONUS	40.9	IVA	12.9	0-24%	.1
	<u>100.0%</u>	IVB and V	13.5		<u>100.0%</u>
			<u>100.0%</u>		

RESULTS

Deployability

Deployability is one aspect of readiness that family factors are likely to affect. An unmarried soldier without children has few, if any, family responsibilities and is therefore more likely to be able to respond quickly when needed. Several questions in the 1985 DoD Survey relate to this issue. Soldiers were asked to indicate the main obstacle to their responding in the following situations: a change in work schedule, a no-notice alert, and a no-notice unit deployment. Respondents were asked to choose one of the following responses for each situation:

- (1) Am already responding very quickly
- (2) Dependent care considerations
- (3) Personal health problem other than pregnancy
- (4) Pregnancy
- (5) Family health problem
- (6) Second job
- (7) Transportation arrangements
- (8) Difficult to reach by telephone during off-duty hours
- (9) Distance to duty station
- (10) Attending school during off-duty hours
- (11) Other reason

The soldiers' responses to the survey questions concerning obstacles to responding are summarized by three demographic variables (i.e., sex, rank and family status) in Tables 2, 3, and 4. Pearson chi-square tests were conducted to determine whether the relationship between the survey question and the demographic variable was significant. Given the large sample size, it is not surprising that all relationships examined proved to be statistically significant. It is important to note that the chi-square statistic does not inform the reader as to the exact form of the relationship between the two variables; that is, it indicates that there is a reliable difference between the groups (e.g., male and females) in their overall pattern of responding to the survey item, but it does not imply that the groups differ for each and every response category of the survey question (e.g., dependent care obstacles, school obstacles, etc.).³

The data in Table 2 indicate that most soldiers are already responding quickly, that is they have no obstacles to responding to changes in work schedule. However, of those soldiers who do have an obstacle to responding, dependent care arrangements are the most frequently identified obstacle.

³ Because sex is confounded with family type (a much higher proportion of women are in dual military marriages than men), log linear analyses were conducted to determine whether there is a significant main effect of sex. These analyses indicated significant sex differences ($p < .01$), significant family type differences ($p < .01$) and a significant sex by family type interaction ($p < .01$) for these questions.

TABLE 2

Percent of respondents indicating they had obstacles to responding to changes in work schedule.

	OBSTACLE						
	<u>None⁺</u>	<u>Dependent Care</u>	<u>School</u>	<u>Trans- portation</u>	<u>Pregnancy</u>	<u>Distance From Post</u>	<u>Other</u>
<u>Sex*</u>							
Male	59.0	8.9	7.2	3.9	.8	3.8	16.4
Female	51.2	15.8	8.9	5.6	3.7	2.8	12.0
<u>Rank*</u>							
JR Enlisted	56.6	8.5	7.3	4.7	1.3	3.5	19.1
SR Enlisted	60.2	10.8	7.5	3.3	.8	4.0	13.4
<u>Family Status*</u>							
Single							
(no children)	65.8	.9	8.1	3.4	.3	2.4	19.1
Single Parent	58.9	14.2	5.1	2.1	1.6	2.7	15.4
Dual Military							
(no children)	49.4	3.2	10.5	7.7	8.0	7.8	13.4
Dual Military							
Parent	42.3	34.2	5.0	3.7	2.1	3.4	9.3
Married							
(no children)	49.5	13.3	6.9	5.1	2.4	5.4	17.4
Married Parent	56.0	14.4	7.1	4.2	.8	4.2	13.3

⁺ Actual response read "already responding very quickly".

* Chi-square significant at $p < .01$.

This is true for both male and female soldiers and for both junior and senior enlisted personnel. The second most frequently indicated obstacle is attending school during off-duty hours. Not surprisingly, when the data are examined by family status, those soldiers with children are more likely to report dependent care arrangements as an obstacle to responding. It appears that dual military parents are more likely to report dependent care arrangements as an obstacle to responding than are single parents and parents married to civilian spouses.

Table 3 presents the data for obstacles to responding to no-notice alerts. Once again, most soldiers indicate that they have no obstacles to responding, but of those that do have an obstacle, the obstacle most frequently reported is dependent care arrangements. Other frequently mentioned obstacles include transportation problems and distance from post. These data suggest that dual military parents have more difficulty with dependent care arrangements in response to a no-notice alert than single parents and parents married to civilian spouses. It is also interesting to note the relatively large percentage of dual military respondents who currently have no children that report pregnancy as an obstacle to responding to no-notice alerts.

Table 4 presents the data for obstacles to responding to no-notice unit deployment. Although the majority of soldiers indicate that they have no obstacles to responding, this percentage falls below 50% for several significant subgroups [e.g, female soldiers (47.8%), married soldiers without children (47.7%), and dual military parents (39.9%)]. Once again, the most frequently mentioned obstacle to responding is dependent care arrangements. Note the relatively large per cent of married soldiers without children who report dependent care as an obstacle to responding to a no-notice unit deployment. Perhaps these soldiers considered spouses as "dependents" when responding to this item. Also note the large percentage of dual military parents (42.9%) who indicated that dependent care arrangements are an obstacle to responding to a no-notice unit deployment.

In a related set of questions, soldiers with dependents were asked whether their dependent care arrangements were "realistically workable" for each of the following situations: a short-term situation such as a mobility exercise, a long-term situation such as a unit deployment, and an evacuation due to conflict or wartime situation. Note that dependents were defined as "anyone related to you by blood, marriage, or adoption, and who depends on you for over half of their support," however respondents were specifically instructed to exclude spouses as "dependents" for this set of questions. The results from these questions are tabulated in Tables 5, 6, and 7.

The data in Table 5 indicate that most soldiers believe their dependent care arrangements to be workable for short-term emergencies such as a mobility exercise. Senior enlisted soldiers were more likely to indicate their dependent care plans were workable than were junior enlisted. Dual military parents and parents married to civilians were more likely to indicate that their dependent care plans were workable than were single parents.

TABLE 3

Percent of respondents indicating they had obstacles to responding to no-notice alerts

	OBSTACLE						
	<u>None⁺</u>	<u>Dependent Care</u>	<u>School</u>	<u>Trans- portation</u>	<u>Pregnancy</u>	<u>Distance From Post</u>	<u>Other</u>
<u>Sex*</u>							
Male	69.2	6.0	2.1	3.1	.3	3.9	15.4
Female	58.4	14.0	3.0	3.5	2.6	4.1	14.4
<u>Rank*</u>							
JR Enlisted	66.8	5.8	2.3	3.9	.7	2.9	17.6
SR Enlisted	69.7	7.8	2.0	2.3	.2	5.1	12.9
<u>Family Status*</u>							
Single (no children)	75.2	.7	2.6	2.2	.2	1.8	17.3
Single Parent	65.8	11.9	1.8	2.2	.8	1.7	15.8
Dual Military (no children)	59.6	2.0	2.7	7.5	4.9	6.5	16.8
Dual Military Parent	49.1	32.2	1.6	2.6	1.2	4.3	9.0
Married (no children)	60.3	7.6	2.2	4.2	.8	5.4	19.5
Married Parent	66.5	10.0	1.9	3.3	.3	5.4	12.6

+ Actual response read "already responding very quickly".

* Chi-square significant at $p < .01$.

TABLE 4

Percent of respondents indicating they had obstacles to responding to no-notice unit deployment

	OBSTACLE						
	<u>None⁺</u>	<u>Dependent Care</u>	<u>School</u>	<u>Trans- portation</u>	<u>Pregnancy</u>	<u>Distance From Post</u>	<u>Other</u>
<u>Sex*</u>							
Male	60.6	12.8	2.3	2.4	.7	2.7	18.5
Female	47.8	19.6	3.3	2.9	4.0	2.5	19.9
<u>Rank*</u>							
JR Enlisted	59.7	10.8	2.6	2.9	1.1	2.2	20.7
SR Enlisted	59.0	16.6	2.2	2.1	.8	3.3	16.0
<u>Family Status*</u>							
Single (no children)	71.2	.7	3.2	1.8	.3	1.4	21.4
Single Parent	60.9	16.8	1.5	1.0	.5	1.4	17.9
Dual Military (no children)	48.8	4.1	2.8	3.8	8.5	6.8	25.2
Dual Military Parent	39.9	42.9	1.1	1.3	1.8	2.2	10.8
Married (no children)	47.7	20.4	1.4	3.7	1.5	3.9	21.4
Married Parent	54.7	21.1	2.2	2.7	.9	3.4	15.0

⁺ Actual response read "already responding very quickly".

* Chi-square significant at $p < .01$.

TABLE 5

Percent of respondents indicating they have realistic dependent care arrangements for a short-term emergency

	<u>Yes</u>	<u>Probably</u>	<u>No</u>
<u>Sex*</u>			
Male	62.8	27.3	9.9
Female	65.4	24.6	10.0
<u>Rank*</u>			
JR Enlisted	51.5	33.8	14.7
SR Enlisted	68.4	23.9	7.7
<u>Family Status*</u>			
Single Parent	58.3	21.9	19.8
Dual Military Parent	64.4	25.7	9.9
Married Parent	64.6	27.7	7.7

* Chi-square significant at $p < .01$.

Responses to the question about dependent care arrangements for long-term situations such as a unit deployment are shown in Table 6. The pattern of responses is quite similar to that shown in Table 5 for short-term emergencies. Once again most soldiers indicate that their dependent care arrangements are realistically workable; senior enlisted soldiers were more likely to indicate their dependent care plans were workable than junior enlisted; and single parents are more likely to indicate that their dependent care plans are not workable (i.e., they respond "no") than other parents. Overall, more soldiers indicate their dependent arrangements are not realistically workable for long-term situations (Table 6) than for short-term situations (Table 5).

The data presented in Table 7 indicate that most soldiers believe their dependent arrangements are realistically workable for evacuation due to conflict or wartime situations. The pattern of results are quite similar to those presented for the short-term and long-term situations presented in Tables 5 and 6. Once again, junior enlisted personnel and single parents are most likely to indicate that their dependent arrangements are not workable.

The results of these two sets of questions concerning families and readiness are somewhat contradictory for dual military and single parents. The responses to the first set of questions concerning obstacles to responding (Tables 2, 3, and 4) indicate dual military parents have more dependent care problems than single parents. The responses to the second set of questions that specifically ask whether parents think their dependent arrangements are workable for different situations (Tables 5, 6, and 7) indicate that single parents have the most dependent care problems. These differences may simply reflect differences in soldiers' definitions of "dependents" for the two sets of questions.

It is also possible that single parents and dual military parents have different types of dependent care problems. For example, single parents may have fewer difficulties with last minute changes to their work schedules than dual military parents because single parents have established a flexible child care provider, whereas dual military parents may tend to rely on the other spouse. Dual military couples may have more alternatives for longterm situations than the single parent because there are typically two sets of grandparents that may be able to help. More research is needed to clarify the exact nature of the childcare problems faced by all military parents.

Preparedness

Another aspect of force readiness is whether the soldier's family is prepared in case the soldier is deployed. Three questions in the 1985 DoD Survey address this issue. Soldiers were asked if they had a written will, if they had a life insurance policy, and if they had granted a power of attorney. If the soldier has completed these actions, he or she may be less likely to worry about their family's ability to cope with family matters in case of deployment and may be more likely to concentrate on the unit's mission. The responses to the questions concerning preparedness for deployment are shown in Table 8.

TABLE 6

Percent of respondents indicating they have realistic dependent care arrangements for long-term situations

	<u>Yes</u>	<u>Probably</u>	<u>No</u>
<u>Sex*</u>			
Male	49.4	32.7	17.9
Female	53.7	27.0	19.3
<u>Rank*</u>			
JR Enlisted	41.8	33.5	24.8
SR Enlisted	53.5	31.6	14.9
<u>Family Status*</u>			
Single Parent	51.3	25.1	23.6
Dual Military Parent	51.4	28.7	19.9
Married Parent	49.9	33.8	16.3

* Chi-square significant at $p < .01$.

TABLE 7

Percent of respondents indicating they have realistic dependent care arrangements for evacuation

	<u>Yes</u>	<u>Probably</u>	<u>No</u>
<u>Sex*</u>			
Male	48.2	33.0	18.8
Female	58.1	24.6	17.3
<u>Rank*</u>			
JR Enlisted	42.9	34.6	22.5
SR Enlisted	52.0	31.2	16.8
<u>Family Status*</u>			
Single Parent	51.6	23.7	24.7
Dual Military Parent	55.9	26.7	17.4
Married Parent	48.7	34.1	17.2

* Chi-square significant at $p < .01$.

TABLE 8

Percent of respondents indicating they do not have a written will,
power of attorney and/or life insurance

	<u>Written Will¹</u>	<u>Power of Attorney²</u>	<u>Life Insurance³</u>
<u>Sex</u>			
Male	76.3	63.1	4.2
Female	80.2	67.4	4.6
<u>Rank</u>			
JR Enlisted	86.3	71.4	9.0
SR Enlisted	65.4	54.2	2.1
<u>Family Status</u>			
Single			
(no children)	88.3	83.7	9.6
Single Parent	72.6	73.1	5.7
Dual Military			
(no children)	82.4	70.7	2.5
Dual Military			
Parent	69.5	52.6	3.0
Married			
(no children)	78.7	54.9	5.0
Married Parent	66.2	47.6	3.2

1 Percent of respondents indicating "no" or "don't know" to the question "do you have a written will?"

2 Percent of respondents indicating "no" or "don't know" to the question "does anyone currently hold your power of attorney?"

3 Percent of respondents indicating "no" or "don't know" to the question "do you have life insurance?"

The percentages listed in Table 8 are the percent of soldiers who indicated either "no" or "don't know" when asked whether they have a written will, power of attorney, and life insurance. Surprisingly, the majority of soldiers do not have written wills and have not granted power of attorney. Most soldiers do have life insurance. Soldiers with children are somewhat more likely to have a written will and to have granted power of attorney than soldiers without children. Parents married to civilians appeared to be more prepared for deployment than other types of soldiers.

Soldier Morale

The 1985 DoD Survey included two questions related to soldier morale, which is an important aspect of force readiness. One question assessed unit morale by asking soldiers to describe the morale of the military personnel at their current location. Soldiers indicated their response on a seven-point scale with the end points labeled "morale is very low" (1) and "morale is very high" (7). A second question assessed individual morale by asking soldiers to rate how satisfied they were with the military way of life "taking all things together." Soldiers indicated their response on a seven-point scale with the end points labeled "very dissatisfied" (1) and "very satisfied" (7). Responses to these two questions were analyzed using analysis of variance with sex, rank and family status as independent variables. The means from these analyses are shown in Table 9.

The results of the analysis of the unit morale question indicate that males report higher levels of morale at their current location than do female soldiers [$F(1,11099)=188.97, p<.000$]. Furthermore, senior enlisted soldiers report higher levels of morale at their current location than junior enlisted soldiers [$F(1,11099)=291.98, p<.000$]. When responses are examined by family status, significant differences were also found, $F(5,11099)=41.19, p<.000$. It appears that parents married to civilian spouses report significantly higher levels of unit morale. No significant interactions were found for the unit morale measure.

The results of the analysis of the individual satisfaction question indicate there are significant main effects for rank [$F(1,12047)=740.91, p<.000$] and family status [$F(5,12047)=56.99, p<.000$]. Senior enlisted soldiers report higher levels of overall satisfaction with the Army than junior enlisted soldiers; and single soldiers without children report the lowest satisfaction with the Army. There is no significant main effect of sex, but there are significant sex by rank [$F(1,1)=35.96, p<.000$] and sex by family status interactions [$F(1,5)=11.86, p<.000$]. Although junior enlisted soldiers are less satisfied than senior enlisted soldiers, this difference is larger for male soldiers than for female soldiers. Interestingly, single females are more satisfied than single males, but males married to civilians are more satisfied than females married to civilians.

Table 9

Mean responses to questions on unit morale and individual satisfaction.

	<u>Unit morale</u>	<u>Individual Satisfaction</u>		
		<u>All</u>	<u>Male</u>	<u>Female</u>
Sex				
Male	3.47			
Female	3.06			
Rank				
Jr. Enlisted	3.00	3.99	3.88	4.17
Sr. Enlisted	3.51	4.79	4.81	4.76
Family Status				
Single (no children)	3.14	4.13	3.98	4.37
Single parent	3.15	4.62	4.48	4.68
Dual military (no children)	3.02	4.43	4.63	4.39
Dual military parent	3.18	4.68	4.60	4.69
Married (no children)	3.26	4.48	4.42	4.61
Married parent	3.57	4.71	4.73	4.55

Job Performance

Individual soldier performance is another important aspect of readiness. Skill Qualification Tests (SQTs) have traditionally been used as proxy measures of job performance for purposes of personnel decisions. SQTs are administered to soldiers in the majority of enlisted MOS. Recent research conducted as part of the Army's Project A, "Improving the Selection, Classification and Utilization of Army Enlisted Personnel" indicates that SQT scores correlate highly with independently derived measures of job performance (Arabian and Mason, 1986). For the purposes of this study, SQT scores were obtained from Army records to determine whether there is any relationship between family factors and job performance.

The data in Table 10 present SQT scores categorized into four ranges of percentiles crossed by family status. These results suggest that dual military couples and parents married to civilian spouses are more likely to have SQT scores in the highest category (75-100%) than are other soldiers. However, this result must be interpreted with a great deal of caution because of the many other factors that are not taken into account in this table. For example, SQT scores are likely to be affected by years in service, MOS, and other non-family factors.

TABLE 10
Skill Qualification Test (SQT) Scores
by family status

<u>Family Status*</u>	<u>SQT Percentile</u>			
	<u>75-100%</u>	<u>50-74%</u>	<u>25-49%</u>	<u>0-24%</u>
Single				
(no children)	57.9	39.0	2.8	.3 ⁺
Single Parent	56.0	39.1	4.7	.2
Dual Military				
(no children)	61.7	34.7	3.6	.0
Dual Military				
Parent	65.6	31.7	2.7	.0
Married				
(no children)	59.3	38.2	2.3	.2
Married Parent	63.1	34.9	1.9	.1

+ Rows sum to 100.0%

* Chi-square significant at $p < .01$

One variable known to influence SQT scores, is the general ability level of the soldier. The Armed Forces Qualification Test (AFQT) score provides a measure of general "trainability." Table 11 presents AFQT scores for this sample of soldiers by their family status. Interestingly, single soldiers and dual military soldiers without children have the largest percentage of scores in the highest AFQT category (I&II). Once again, this result is difficult to interpret because of the many factors, besides family status, that are known to be related to AFQT scores. For example, many high quality (i.e., AFQT categories I--IIIA) soldiers join the Army to take advantage of incentives such as the Army College Fund. These soldiers tend to leave after they have completed their first term; they are also unlikely to be married and/or have children. This could explain the higher AFQT scores for single soldiers.

TABLE 11

Armed Forces Qualification Test (AFQT) Scores
by family status

<u>Family Status*</u>	<u>AFQT Category</u>				
	<u>I & II</u>	<u>IIIA</u>	<u>IIIB</u>	<u>IVA</u>	<u>IVB&Below</u>
Single					
(no children)	30.8	16.8	31.7	13.4	7.3 ⁺
Single Parent	22.2	14.9	33.7	15.7	13.5
Dual Military					
(no children)	32.3	16.2	28.8	11.6	11.1
Dual Military					
Parent	25.0	18.8	29.9	12.3	14.0
Married					
(no children)	25.4	17.1	30.8	13.7	13.0
Married Parent	24.2	15.9	30.1	13.8	16.0

⁺ Rows sum to 100.0%

* Chi-square significant at $p < .01$

To obtain a better understanding of the relative effect family status has on job performance as measured by SQT scores, a step-wise multiple regression analysis was conducted. The following predictor variables were included in the analysis: AFQT, rank, sex, age, race, marital status, accompanied by one or more children, overall satisfaction with the Army, and nine dummy variables that represented different MOS clusters (combat, electronics, crafts, communication, medical, mechanics, supply, administrative, technical). The results of this analysis are shown in Table 12.

The results of this analysis indicate that soldiers' AFQT scores and MOS are good predictors of SQT performance. Seven of the MOS cluster dummy variables entered into the regression equation. In addition to these variables, several demographic variables contributed small, but statistically significant, effects. It appears that male soldiers tend to have higher SQT scores than female soldiers, senior enlisted soldiers have higher SQT scores than the junior enlisted soldiers, younger soldiers have higher SQT scores than older soldiers, and white soldiers have higher SQT scores than nonwhite soldiers.

Of particular interest to the focus of this report, soldiers accompanied by one or more children tended to have higher SQT scores than soldiers who were not accompanied by any children. However, marital status did not significantly predict SQT scores when the other variables were taken into account. Soldiers' rating of their overall satisfaction with the Army was positively related to SQT performance. This is an important finding because soldiers' overall satisfaction with the Army may be related to how well they think the Army supports their family.

Table 12

Summary of stepwise regression of SQT scores

<u>Variable entered</u>	<u>R²</u>	<u>Beta weight</u>	<u>Prob. > F</u>
AFQT	.093	.258	.000
Mechanical MOS	.144	-.218	.000
Rank	.166	.210	.000
Combat MOS	.180	.087	.000
Crafts MOS	.189	-.105	.000
Race	.196	.097	.000
Age	.200	-.114	.000
Satisfaction	.204	.055	.000
Communications MOS	.206	-.050	.000
Medical MOS	.208	.048	.000
Child(ren)	.209	.033	.000
Electronics MOS	.210	.023	.006
Sex	.210	-.025	.003
Technical MOS	.211	-.023	.005

SUMMARY AND CONCLUSIONS

Responses from the 1985 DoD Survey of Enlisted Personnel were analyzed to examine the issue of families and readiness. Although the 1985 DoD Survey was not specifically designed to look at the family and readiness issue, several relevant questions were included in the survey. Many of these questions addressed the issue of dependent care. The results suggest that dependent care arrangements are a problem for a substantial minority of Army personnel for both short-term and long-term situations such as no-notice alerts and unit deployments. Although dependent care problems are of particular concern to single parents and dual military parents, parents married to civilian spouses also have dependent care problems.

Results also indicated that many soldiers and their families could be more prepared for the possibility of deployment. The majority of soldiers surveyed did not have a written will, nor had they granted anyone power of attorney. Most soldiers indicated that they do have life insurance.

Although the cross-tabulation of SQT scores for soldiers who completed the 1985 DoD Survey by family status indicated there were significant difference between soldiers with different family situations (i.e., single, dual military, etc.), marital status was not found to be a significant predictor of SQT performance in the multiple regression analysis. However, whether or not the soldier was accompanied by one or more children was positively related to SQT performance. Furthermore, soldiers' overall satisfaction with the Army was also positively related to SQT performance.

The data presented in this report offer an interesting first look at the issue of family factors and readiness. However, additional research is needed. The relationship between families and readiness is complex and will be best understood using analytical techniques such as path analysis and/or structural equations (e.g., LISREL). These techniques would allow the researcher to assess the indirect as well as direct effects that family factors have on readiness.

In addition to using analytical techniques such as LISREL, future research should also explore the use of non-linear logit or probit analyses to look at alternative dependent measures of readiness. For example, although SQT scores are measured on a continuous scale (0-100), the vast majority of soldiers score above 50 per cent. It may be more useful to conceptualize SQT scores as a pass/fail criterion and then use a non-linear model to test for relevant predictors. The use of non-linear models could also be applied to the 1985 DoD Survey questions on obstacles to responding and workable dependent care arrangements that were examined using chi-square analyses in the present report.

Future analyses should also utilize the spouse data obtained by the 1985 DoD Survey of Military Spouses. By linking the responses of soldiers and their spouses it would possible to access whether spouses' attitudes towards the Army affect soldier readiness.

Additional research specifically designed to address the issue of families and readiness needs to be conducted. This research should obtain a wide variety of readiness measures to more fully explore the relationship between families and readiness. For example, supervisor ratings of soldier performance and information regarding soldier attendance and use of leave time are needed in addition to SQT scores and self-report items on dependent care arrangements. Additional predictor variables also need to be examined. For example, we need to consider which stage of the family life cycle the soldier is at, whether or not the soldier's family is command sponsored, whether civilian spouses work outside the home, and many other factors. Future research must also address the question of whether or not the Army can provide programs to alleviate some of the family problems that affect force readiness.

REFERENCES

- Arabian, J. M., & Mason, J. K. (1986). Relationship of SOT scores to Project A measures. Paper presented at the annual meetings of the Military Testing Association, Mystic, CT.
- Bowen, G. L. (1986). Spouse support and the retention intentions of Air Force members: A basis for program development. Evaluation and Program Planning, 9, 209-220.
- Brooke, P. P., & Price, J. L. (1986). The determinants of employee absenteeism: An estimation of a causal model. Paper presented at the annual meetings of the Academy of Management.
- Chief of Staff, U.S. Army (1983). White Paper 1983: The Army Family. Washington, DC: Department of the Army.
- Cooke, R. A., & Rousseau, D. M. (1984). Stress and strain from family roles and work-role expectations. Journal of Applied Psychology, 69, 252-260.
- Defense Manpower Data Center (DMDC) (1986). Description of officers and enlisted personnel in the U.S. Armed Forces. Arlington, VA: Defense Manpower Data Center.
- Devilbiss, M. C., & Perrucci, C. C. (1982). Effects of role multiplicity on U.S. Army personnel. Journal of Political and Military Sociology, 10, 1-13.
- Fernandez, J. P. (1986). Child care and corporate productivity: Resolving family/work conflicts. Lexington, MA: Lexington Books.
- Frone, M. R., & Rice, R. W. (1987). Work-family conflict: The effect of job and family involvement. Journal of Occupational Behavior, 8, 45-53.
- Greenhaus, J. H., & Beutell, N. H. (1985). Sources of conflict between work and family roles. Academy of Management Review, 10, 76-88.
- Grossman, A. S. (1981). The employment situation for military wives. Monthly Labor Review, 104(2), 60-64.
- Herman, J. B., & Gyllstrom, K. K. (1977). Working men and women: Inter- and intra-role conflict. Psychology of Women Quarterly, 1, 319-333.
- Ivancevich, J. M. (1986). Life events and hassles as predictors of health symptoms, job performance, and absenteeism. Journal of Occupational Behavior, 7, 39-51.
- James, L. R., & Singh, B. K. (1978). An introduction to the logic, assumptions, and basic analytic procedures of two-stage least squares. Psychological Bulletin, 85, 1104-1122.

- Jones, A. P., & Butler, M. C. (1980). A role transition approach to the stresses of organizationally induced family role disruption. Journal of Marriage and the Family, 367-376.
- Joreskog, K. G., & Sorbom, D. (1983). LISREL: Analysis of linear structural relationships by the method of maximum likelihood. Chicago: National Educational Resources.
- Kabanoff, B. (1980). Work and nonwork: A review of models, methods, and findings. Psychological Bulletin, 88, 60-77.
- Kanter, R. M. (1977). Work and family in the United States. Beverly Hills, CA: Sage.
- Landrum, C. S. (1980). The changing military family: Impacts on readiness. Parameters, X(3), 78-85.
- Miller, T. J. (1984). The effect of employer-sponsored child care on employee absenteeism, turnover, productivity, recruitment, or job satisfaction: What is claimed and what is known. Personnel Psychology, 37, 277-289.
- Motowidlo, S. J., Packard, J. S., & Manning, M. R. (1986). Occupational stress: Its causes and consequences for job performance. Journal of Applied Psychology, 71, 618-629.
- Near, J. P., Rice, R. W., & Hunt, R. G. (1980). The relationship between work and nonwork domains: A review of empirical research. Academy of Management Review, 5, 415-429.
- Orthner, D. (1980). Families in blue: Implications of a study of married and single parent families in the U.S. Air Force (USAF Contract F3360-79-C-0423). Greensboro, NC: Family Research and Analysis.
- Orthner, D., & Pittman, J. F. (1986). Family contributions to work commitment. Journal of Marriage and the Family, 48, 573-581.
- Pleck, J. H., Staines, G. I., & Lang, I. (1980). Conflicts between work and family life. Monthly Labor Review, 103, 29-32.
- Schmitt, N., & Bedeian, A. G. (1982). A comparison of LISREL and two-stage least squares analysis of a hypothesized life-job satisfaction reciprocal relationship. Journal of Applied Psychology, 67, 806-817.
- Schein, V. E. (1973). The relationship between sex role stereotypes and requisite management characteristics. Journal of Applied Psychology, 57, 95-100.
- Sorely, L. (1980). Prevailing criteria: A critique. In S. Sarkesian (Ed.), Combat effectiveness. Beverly Hills, CA: Sage, pp. 57-93.

- Steers, R. M., & Rhodes, S. R. (1978). Major influences on employee attendance: A process model. Journal of Applied Psychology, 63, 391-407.
- Teplitzky, M. L. (1988). The effects of work on families (PUTA WP 87-15). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Teplitzky, M. L., Hedlund, M., & Nogami, G. (1986). Case studies of officer and enlisted single parents in the Army: Performance, retention and quality of life (ARI Technical Report 749). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences. (AD A190 581)
- U.S. General Accounting Office (1982). Report to the Secretary of the Army: Army needs better data to develop policies for sole and inservice parents (GAO/FPCK-82-50). Washington, DC: U.S. Government Printing Office.
- Wood, F. R. (1982). U.S. Air Force junior officers: Changing personal identity and commitment. Doctoral dissertation, Northwestern University. (University Microfilms No. 82-26, 049)