

Predictors of Job Satisfaction Among Active Duty and Reserve/Guard Personnel in the U.S. Military

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In this study, we examined psychological, demographic, and physical predictors of job satisfaction among military personnel across the Armed Forces. Data were collected from 24,881 members of the Active Duty and Reserve/Guard components. Overall, military job satisfaction was higher among Reserve/Guard personnel than among those on Active Duty. Separate regression models for the 2 components revealed generally similar predictors of job satisfaction. The 2 strongest predictors were the perception of a relatively high level of job pressure experienced by military personnel and the belief that the biggest problem in one's life was the result of job-related issues (such as a supervisor) rather than nonjob issues (such as health or family). Findings suggest areas in which the military can intervene to increase the satisfaction of personnel and presumably their likelihood of remaining in the military. Because considerable job pressure may be inherent in the nature of the military mission, attention should be given to ensuring that personnel learn and use effective coping skills to manage stressors.

Because it is critical that the U.S. military operate seamlessly, it is important to minimize the time and costs associated with training new personnel and to capitalize on the experience of seasoned personnel. Attrition in the military is both common and costly. About 30% to 35% of enlisted personnel separate before completing their first term of service, and the estimated cost of recruiting, training, and screening for basic skills is \$20,000 per person (Clark et al., 1999). Retention of skilled military personnel is therefore a major concern and a top priority for the U.S. Department of Defense (DoD; General Accounting Office [GAO], 2001). Re-

search has shown that military personnel who report greater job satisfaction are more likely to stay or indicate an intention to stay in the military (Becker & Billings, 1993; Kocher & Thomas, 1994; Lakhani, 1991; Prevosto, 2001). By understanding the predictors of job satisfaction, it may be possible to take steps to encourage completion of full tours of duty and even reenlistment, thereby increasing the number of experienced personnel in the armed forces and reducing the need for new recruits. In this article, we use data from a comprehensive assessment of health and wellness issues among the Active Duty and Reserve/Guard components of the Armed Forces to examine selected predictors of job satisfaction among military personnel. This study was designed to address individual factors related to job satisfaction that could be readily identified and addressed in a targeted intervention. It is not intended to be a comprehensive study of all factors that can predict job satisfaction. We focus on psychological, demographic, and physical predictors but omit consideration of organizational, societal, and dispositional variables (cf. Alpass, Long, Chamberlain, & MacDonald, 1997; Harpaz, 1983).

Much prior research on health-related issues in the military has focused on men and on the Active-Duty Services. This study uses one of the first and most comprehensive health-related data sets for personnel from all segments of the military. Using these data permits us to undertake a study of job satisfaction among military men and women that incorporates findings across all segments of the military. This knowledge is likely to become increasingly important as the U.S. military relies more on the Reserve/Guard component to work with the Active-Duty component in meeting national defense and peacekeeping needs.

JOB SATISFACTION IN THE MILITARY

In this article, we examine a variety of predictors of job satisfaction. First, we examine several potential stressors as predictors in our model, including the number of life problems and pleasant life changes experienced in the past year, the cause of the biggest problem in the respondents' lives, and overall job pressure. Because physical health and fitness play a major role in readiness and the execution of most military jobs, personnel are expected to maintain high levels of health and fitness. We examine whether each of these factors plays a role in predicting job satisfaction. Finally, we assess whether job satisfaction is higher among some demographic or service groups than others.

Job Satisfaction

Because of its importance to individuals' well-being, job satisfaction has been extensively studied since the 1930s. Job dissatisfaction has been linked to numerous negative outcomes. At the individual level, a person not satisfied with his or her job

may experience frustration, aggression, psychological withdrawal, poor physical health, shortened life span, mental health problems, and lower overall life satisfaction (Harpaz, 1983). The effects of job satisfaction are also felt at the organization level in which lower job satisfaction is linked to higher turnover, more absenteeism, a higher volume of grievances, and decreased job performance (Harpaz, 1983). Numerous theories and models regarding the nature of job satisfaction and its implications for individuals and organizations have been postulated, with views ranging from simplistic to complicated. The theories can be grouped into two types: content theories, which search for individual characteristics and experiences that control behavior, and process theories, which have as their objective an explanation of how behavior is initiated, directed, maintained, and terminated (Harpaz, 1983). This study was motivated by Vroom's (1964) expectancy theory, a content theory built around the premise that job outcomes have the ability to create satisfaction or dissatisfaction. Whether the outcome is perceived positively or negatively depends mainly on the attractiveness of particular outcomes to which possible alternative performance levels might lead and the individual's expectation that an act will be followed by a particular outcome. Our measure of job satisfaction gauges how well the reality of the respondent's military job fits his or her expectations. We also examine how personal characteristics and experiences predict job satisfaction or dissatisfaction.

In general, military personnel report lower levels of job satisfaction than do civilians (Blair & Phillips, 1983; Bowers, 1976; Fredland & Little, 1983; Woodruff & Conway, 1990). Job satisfaction in the military may be somewhat unique due to the inherent stressors and compensation associated with the work environment. Although a number of studies have examined the long-term effects of combat exposure (Reaves, Callen, & Maxwell, 1993; Vincent, Chamberlain, & Long, 1994) and transitional adjustments out of the military (Gade, Lakhani, & Kimmel, 1991), few have investigated the effects of routine stressors associated with military jobs or the comparative work experiences of Active Duty and Reserve/Guard personnel.

Stress and the Military

Numerous studies have demonstrated that higher levels of job stress are related to lower levels of job satisfaction (e.g., Cummins, 1990; Landsbergis, 1988). Military personnel and their families face a unique combination of stressors including frequent life changes (such as moves), the potential for deployment, the possibility that the military member of the family will be killed or injured on duty, geographic isolation from extended family, relatively low pay, young age (compared with the general population), and a high incidence of young children in the home (Black, 1993). In addition, the role of peacekeeper may pose stressors that differ from those associated with a traditional combat or combat-support soldier (Litz, Orsillo, Friedman, Ehlich, & Batres, 1997; Orsillo, Roemer, Litz, Ehlich, & Friedman,

1998). We examined whether the number of positive and negative life changes in the past year, the source (job or nonjob) of the biggest problem in the respondent's life, overall life satisfaction, and job pressure predict job satisfaction among these personnel. We hypothesized that personnel who reported higher levels of stressors (life changes and job pressure) would report lower levels of job satisfaction. Other experiences that may not meet expectations are having one's greatest problem associated with work and being dissatisfied with life as a whole. These experiences also should lead to lower job satisfaction.

Physical Health and Fitness

Because the military environment is one in which personnel must maintain high levels of physical health and fitness to ensure readiness, an individual's level of health and fitness may play a role in job satisfaction among military personnel. Those with lower levels of health and fitness may perceive this as a shortcoming in a military occupation. Being unable to meet the physical demands of the military role is contrary to personnel's expectations, and we expected it to be associated with lower job satisfaction.

Demographic Predictors of Job Satisfaction

Job satisfaction may be influenced by many factors, including demographic characteristics. Although it is important to consider the influence of personal characteristics on military job satisfaction (Fredland & Little, 1983), few studies have examined or controlled for the effects of demographic variables (Brush, Moch, & Pooyan, 1987). In this study, we examined the relation of several demographic characteristics to job satisfaction.

Although inconclusive results have been found for several demographic characteristics including sex (Gruneberg, 1979; Weaver, 1980), income (Agho, Mueller, & Price, 1993; Glisson & Durick, 1988), and education (Agho et al., 1993; Oldham & Hackman, 1981), other demographic variables have demonstrated more stable findings. Older age, for example, has been shown to be associated with greater job satisfaction (e.g., Agho et al., 1993; Blegen, 1993; Brush et al., 1987). Explanations for this finding include differential job expectations, the "wearing down" of expectations as people age, and increased job opportunities for older workers (Wright & Hamilton, 1978). We hypothesized that older personnel would be more satisfied in their military job than younger personnel.

Several studies have found that job satisfaction is higher among Whites than among Blacks (Jones, James, Bruni, & Sells, 1977; Weaver, 1980). This finding has been attributed to different work conditions across races (Tuch & Martin, 1991). We hypothesized that these race-related findings also would be true in the military population.

Another personal characteristic with potential relevance to military job satisfaction is officer or enlisted status. Because officer status reflects a career commitment to the military, we hypothesized that officers would report higher job satisfaction than enlisted personnel.

We also examined service component (Active Duty vs. Reserve/Guard) differences in job satisfaction. To our knowledge, differences in job satisfaction among the services have not been examined. A major strength of this study is the inclusion of both Reserve/Guard and Active-Duty personnel. In recent years, the Reserve/Guard component has made an increasingly important contribution to the armed forces, and this trend is likely to continue with ongoing military reform and changes in U.S. military strategy. Members of the Reserve/Guard face different issues than personnel on Active Duty, including exposure to different types or sources of stress as well as a greater individual responsibility for maintaining their health and fitness. For example, whereas Active-Duty personnel face the possibility of acute stressors (such as deployment or combat) as part of their daily jobs, the duty when Reservists are called to action is likely to be unexpected, disruptive, and hazardous, which categorizes it as a "catastrophic" stressor (McCubbin & Figley, 1983). These types of distinctions may play a role in differential job satisfaction between Active Duty and Reserve/Guard personnel. We examined whether differences at the component level (i.e., Active Duty compared with Reserve/Guard) are significant and if so, whether different predictors of job satisfaction emerge for the two components.

METHOD

Sample and Study Design

The data used in these analyses were taken from a comprehensive data set of the entire military, which we created by combining the data from two related studies: the Total Force Health Assessment (TFHA; Vincus et al., 1999) and Perceptions of Wellness and Readiness (POWR; Hourani et al., 1996). The comprehensive data set consists of 24,881 records (15,025 from TFHA and 9,856 from POWR).

Both studies focused on health issues among military personnel. The POWR study was conducted first, and it included members of the Active-Duty Navy and Marine Corps. The TFHA was designed primarily to complement POWR, and it included personnel in the Active-Duty Army, Army National Guard, Army Reserve, Naval Reserve, Active-Duty Air Force, Air National Guard, Air Force Reserve, and Marine Corps Reserve. Thus, members of all Active Duty and Reserve/Guard components are represented in the combined data set of the two studies. Participants for each study were selected using sex, service, pay grade group, race/ethnicity, and location as the sampling strata.

The POWR questionnaire was designed by the Naval Health Research Center (NHRC) to assess the health status of Active-Duty Navy and Active-Duty Marine Corps personnel. In developing the POWR questionnaire, NHRC gave priority to using well-established instruments that (a) had published and reliable psychometric properties, (b) were appropriate to an Active Duty military population, and (c) were brief (due to the comprehensive nature and length of the questionnaire). The emphasis was on using questions from standardized, large national health surveys and other military surveys for comparability. The questionnaire was administered in group sessions at selected locations and by mail elsewhere. The sample size for POWR was 9,856 women and men, which represented a response rate (i.e., the rate at which contacted eligible persons returned a usable questionnaire) of 42%. Further details concerning the methodology of the 1995 POWR study have been reported by Hourani et al. (1996).

The TFHA questionnaire was created by modifying the POWR questionnaire to make it applicable to the Reserve/Guard components included in the TFHA. Other modifications were made at the request of a military advisory panel that was asked to review and shape the content of the questionnaire. This review process resulted in a new instrument called the 1998 TFHA. It retained many of POWR's elements, enabling us to link the two data sets. Further methodological details of the TFHA study have been reported by Vincus et al. (1999).

The TFHA questionnaire was mailed to respondents and had a response rate of 38%. To help compensate for this low response rate, a nonresponse adjustment was made to these data. Differential response rate patterns among participants and oversampling of subgroups can produce biased population estimates if these differences are not taken into account. For example, the level of job satisfaction could be biased if those in higher pay grades responded at higher rates than those in lower pay grades. To help reduce possible biases, large-scale surveys such as the ones used in this study frequently compute weights to adjust for differential nonresponse. Such adjustments often are made by poststratifying the characteristics of respondents observed in the sample to those of the population of interest (in this case, the total military population). This process typically is done within specific weighting classes such as pay grade and gender groups. The purpose is to make the sample of respondents that participated in the survey more similar to the survey population and thereby reduce bias that would result from simply analyzing raw data from respondents. In this study, the weights were adjusted by poststratifying them to the DoD population totals within selected location, sex, race/ethnicity, service, and pay grade groups. These adjustments partially compensate for the differences attributable to varying cooperation rates among respondents in these groups.

Key Measures

Perceived job pressures were assessed with the 12-item Job Pressures scale constructed by House (1980) in his research with factory workers. On the basis of princi-

pal component factor analysis, these items were clustered into four indexes reflecting job versus nonjob conflict, role conflict, quality concern, and responsibility. Respondents were asked to indicate how often they were "bothered" by the pressures on a 5-point scale ranging from 0 (*not at all*) to 4 (*nearly all the time*). Overall subscale scores were obtained by summing and averaging the raw scores (House, McMichael, Wells, Kaplan, & Landerman, 1979). Internal consistency reliability for this measure was very good, as indicated by a Cronbach's alpha of .95.

Several established items and scales were used to assess mental health status. To identify the source of the biggest problem in the respondent's life, we used a measure from the Health Risk Appraisal (U.S. Army, n.d.), "What causes the biggest problem in your life?" Responses were aggregated into job-related problems (e.g., supervisor, military job, civilian job) and problems not related to the job (e.g., social life, health, family).

A measure of "life satisfaction" (Andrews & Withey, 1976) was included to provide insight into how personnel perceived their professional and family lives in tandem. We asked personnel, "How do you feel about your life as a whole?" The response options included "pleased/delighted," "mostly satisfied," "mixed," "mostly dissatisfied," and "terrible/unhappy."

A measure of positive life events and a measure of negative life events were included to help identify significant events that had occurred in the lives of military personnel during the past year. These measures were taken from the Health Risk Appraisal (U.S. Army, n.d.). The events, including those perceived as positive, could be considered stressors and therefore adversely affect ability to carry out military responsibilities. To assess positive life events, we asked personnel, "In the past 12 months, how often did you experience a major pleasant change (for example, promotion, marriage, birth, award, etc.)?" Response options ranged from "never" to "often." To assess negative life events, we asked personnel, "In the past 12 months, how many serious personal losses or difficult problems have you had to handle (e.g., promotion passover, divorce or separation, legal or disciplinary action, bankruptcy, death of someone close, serious illness or injury of a loved one, etc.)?" Response options ranged from "none" to "many."

Several items were used to assess physical health. An item from the Medical Outcomes Study 36-item Short Form Health Survey (Ware & Sherbourne, 1992) was used to assess self-perceived health status: "In general, would you say your health is . . .," with five response options ranging from "poor" to "excellent." Another measure of overall physical health was the number of self-reported lifetime medical conditions. Using items from the National Health Interview Survey (National Center for Health Statistics, 1994), participants were asked to report whether they had ever experienced any of 28 medical conditions (e.g., asthma, hypertension, ulcer, kidney stones). To measure self-perceived physical fitness, we asked respondents a question from the Health and Physical Readiness Survey (Conway, Trent, & Conway, 1989): "How would you rate your current physical fitness?" We provided five response options, ranging from "poor" to "excellent."

Sociodemographic items included sex, race/ethnicity (White non-Hispanic, Black non-Hispanic, Hispanic, and other), education (high school or less, some college, and college degree or beyond), age (20 or younger, 21 to 25, 26 to 34, and 35 or older), marital status, and pay grade group (enlisted or officer).

Finally, for our dependent variable job satisfaction, we used the Job Satisfaction Index adopted by House (1980). The scale is composed of four items from Quinn and Shepherd (1974) and an occupational self-esteem item. Respondents were asked the following questions:

1. "Overall, how satisfied would you say you are with your current military job?"
2. "Knowing what you know now, if you had to decide all over again whether to serve in your current military job, what would you decide?"
3. "In general, how well would you say that your current military job measures up to the sort of job you wanted when you took it?"
4. "If a good friend told you that he or she was interested in working in a job like your current military job, what would you tell him or her to do?"
5. "How happy or sad do you feel about your current military job?"

Responses on the items were averaged to create a measure of military job satisfaction. Scores ranged from 0 (*low satisfaction*) to 10 (*high satisfaction*). The Cronbach's alpha for the job satisfaction scale in our sample was .84, indicating good internal consistency.

Analytical Approach

Analyses were conducted using SUDAAN software (Shah, Barnwell, & Bieler, 1997) for the statistical analysis of correlated data to take into account the complex survey design. Both descriptive and multivariate regression analyses were conducted. Before proceeding with our regression models, we checked for multicollinearity among our predictor variables and did not uncover any problems. In presentation of the results, sample sizes are reported as unweighted counts, and statistics are based on weighted data.

Finally, before proceeding with the analyses, we confirmed that our job pressure predictor and job satisfaction outcome measures represented separate constructs. To determine the most appropriate number of factors, we first ran a principal components analysis. Based on Kaiser's (1960) eigenvalue rule, the use of two factors is most appropriate; the eigenvalues for the first two factors were 6.91 and 2.66. Next, we ran a factor analysis with promax rotation using squared multiple correlations as the communality estimates. The factor pattern clearly supported two separate constructs with items having loadings greater than .40 on their corresponding factor. The interfactor correlation was .40.

RESULTS

Military Population Characteristics

Table 1 provides information about the sociodemographic characteristics of the Active Duty and Reserve/Guard components. As shown, the main difference be-

TABLE 1
Sociodemographic Characteristics of Active Duty and Reserve/Guard Personnel

<i>Variable</i>	<i>Active Duty (%)^a</i>	<i>Reserve/Guard (%)^b</i>
Age		
20 years or younger	12.5	10.4
21-25 years	25.5	10.7
26-34 years	35.0	29.4
35 years or older	26.9	49.5
Sex		
Male	85.9	84.3
Female	14.1	15.7
Race/ethnicity		
White, non-Hispanic	66.4	71.9
Black, non-Hispanic	20.1	16.5
Hispanic	7.5	7.1
Other	6.0	4.6
Education		
High school or less	33.1	25.0
Some college	44.9	48.1
College degree	22.0	26.9
Marital status		
Married	59.5	56.8
Not married	40.5	43.3
Pay grade		
Enlisted	83.9	84.7
Officer	16.1	15.3
Service		
Active-Duty Air Force	26.4	—
Active-Duty Army	34.3	—
Active-Duty Marine Corps	12.6	—
Active-Duty Navy	26.7	—
Air Force Reserve	—	8.3
Air National Guard	—	12.5
Army National Guard	—	42.0
Army Reserve	—	22.4
Marine Corps Reserve	—	4.7
Naval Reserve	—	10.1

Note. Some totals do not sum to 100% due to rounding.

^aN = 11, 169. ^bN = 7, 110.

tween the components is that Active-Duty personnel are young relative to Reserve/Guard personnel. The majority of personnel in both components are likely to be male, White, married, and enlisted and to have some college education.

Predictors of Job Satisfaction Among Military Personnel

A series of multiple regression analyses was conducted to assess the relations among demographics, potential stressors, and job satisfaction. Listwise deletion of missing values was used resulting in the inclusion of 11,169 Active Duty and 7,110 Reserve/Guard personnel in the regression models. First, we conducted a multiple regression analysis to investigate possible predictors of job satisfaction and to examine whether Active Duty and Reserve/Guard components differed in their military job satisfaction. All of the predictor variables described earlier were entered into the model. The results indicated that respondents' military component was a significant predictor of job satisfaction, $F(1, 34) = 6.54, p = .01$, and that respondents on Active Duty experienced lower satisfaction than those in the Reserve/Guard.

Given this finding and the possibility that members of the Active Duty and Reserve/Guard components may have different work-related experiences, we expected that different factors might be predictive of job satisfaction for these two components. Consequently, we calculated separate regression models for the two components. The resulting models accounted for 40% of the variance in job satisfaction for Active-Duty personnel and 27% of the variance among Reserve/Guard personnel.

For both Active Duty and Reserve/Guard components, age, race/ethnicity, marital status, pay grade, pleasant life changes, source of biggest problem in life, feelings about life as a whole, and job pressure were significant predictors of job satisfaction (see Table 2). Self-perceived health status was a significant predictor for Active-Duty personnel, and the number of self-reported lifetime medical conditions was a significant predictor among Reserve/Guard personnel.

Standardized regression coefficients for variables that emerged as significant predictors are presented in Table 3. For each categorical variable, the regression coefficient represents a comparison of each level of the variable with a reference level. (Reference levels are indicated with dashes in the table.) For example, each age group is compared with the reference age group of those aged 35 or older.

Job pressure was the most important predictor for both Active Duty and Reserve/Guard components and was significantly negatively associated with job satisfaction. Personnel with higher levels of job pressure generally experienced lower levels of job satisfaction.

The source of an individual's biggest problem also was predictive of job satisfaction for both the Active Duty and Reserve/Guard components. In both components, respondents who indicated that the biggest problem in their lives was job-related had lower job satisfaction than those who indicated that a nonjob-related issue was the biggest problem. This association, however, was much stronger for

Active-Duty personnel, $F(1, 32) = 195.88, p = .001$, than for Reserve/Guard personnel $F(1, 32) = 12.96, p = .001$.

For both Active-Duty and Reserve/Guard personnel, younger persons and enlisted persons indicated lower job satisfaction than their counterparts. Also, in both groups personnel who were not married were less satisfied than those who were married.

Life satisfaction also was a significant predictor of job satisfaction for both components. Among Active-Duty personnel, those who felt pleased or delighted with their lives had higher levels of job satisfaction than those who felt lower life satisfaction. Among Reserve/Guard personnel, those who were pleased with their lives had significantly higher job satisfaction than those who were mostly dissatisfied. Surprisingly, feeling terrible or unhappy about their lives did not have an effect on perceived job satisfaction.

Active-Duty respondents who experienced positive life events "sometimes" or "often" reported lower job satisfaction than those who experienced no positive life events during the past year. Similarly, among Reserve/Guard members, those who experienced pleasant life changes "often," "sometimes," or "rarely" had lower levels of job satisfaction than those who had not had this type of change during the past year. This finding supports the idea that even positive life events may be a source of stress for personnel and that satisfaction with the military job may be compromised.

TABLE 2
Results of Multiple Regressions of Job Satisfaction for Active Duty and Reserve/Guard Personnel

Predictor variable	Active Duty <i>F</i> Statistic ^a	Reserve/Guard <i>F</i> Statistic ^b
Age	29.05***	9.49***
Sex	1.79	0.05
Race/ethnicity	5.73***	6.43***
Education	1.20	0.56
Marital status	5.00*	10.67**
Pay grade	26.47***	12.75***
Health status	3.17*	0.49
Number of medical conditions	0.24	4.38*
Physical fitness	1.26	1.45
Difficult problems	1.08	0.68
Pleasant life changes	11.11***	7.10***
Feelings about life as a whole	14.40***	6.61***
Source of biggest problem	195.88***	12.96***
Job pressure	360.88***	278.49***

^a $N = 16, 169$. ^b $N = 7, 110$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 3
Standardized Regression Coefficients for Significant Predictor Variables
for Active Duty and Reserve/Guard Personnel

Predictor Variable	Active Duty ^a		Reserve/Guard ^b	
	β	<i>t</i>	β	<i>t</i>
Age				
20 years or younger	-0.14	-5.68***	-0.12	-3.36***
21-25 years	-0.20	-9.08***	-0.12	-4.50***
26-34 years	-0.10	-5.18***	-0.07	-2.89**
35 years or older	—	—	—	—
Race/ethnicity				
White, non-Hispanic	—	—	—	—
Black, non-Hispanic	-0.07	-4.06***	-0.09	-4.21***
Hispanic	-0.02	-1.38	-0.03	-2.69**
Other	-0.01	-0.55	-0.01	-1.71
Marital status				
Married	—	—	—	—
Not married	-0.04	-2.24*	-0.08	-3.27**
Pay grade				
Enlisted	-0.11	-5.14***	-0.08	-3.57***
Officer	—	—	—	—
Health status				
Excellent	0.21	2.71**	0.11	0.81
Very good	0.21	2.46*	0.12	0.74
Good	0.15	1.90	0.13	0.91
Fair	0.07	1.78	0.03	0.53
Poor	—	—	—	—
Number of medical conditions	0.01	0.49	-0.05	-2.09*
Pleasant life changes				
Often	-0.09	-3.57***	-0.18	-4.60***
Sometimes	-0.08	-2.44*	-0.17	-3.48***
Rarely/seldom	0.00	0.03	-0.16	-3.40***
Never	—	—	—	—
Feelings about life as a whole				
Pleased/delighted	—	—	—	—
Mostly satisfied	-0.13	-6.32***	-0.04	-0.24
Mixed	-0.15	-6.28***	-0.07	-2.04*
Mostly dissatisfied	-0.11	-5.33***	-0.10	-5.04***
Terrible/unhappy	-0.03	-2.95**	-0.04	-0.93
Biggest problem				
Job	-0.25	-14.00***	-0.09	-3.60***
Nonjob	—	—	—	—
Job pressure	-0.36	-18.98***	-0.41	-16.69***

Note. Reference groups are indicated with a —.

^aN = 11, 169. ^bN = 7, 110.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Among Active-Duty personnel, those who were Black reported lower job satisfaction than White personnel. Among Reserve/Guard personnel, Black or Hispanic individuals had significantly lower job satisfaction scores than White personnel.

Two findings related to physical health differed for Active Duty and Reserve/Guard personnel. Self-perceived health status contributed significantly to the prediction of job satisfaction among Active-Duty personnel. As shown in Table 3, Active-Duty respondents who reported being in excellent or very good health had significantly higher job satisfaction than those who believed they were in poor health, whereas there was no relation for the Reserve/Guard component. Among Reserve/Guard respondents, the number of self-reported lifetime medical conditions was significantly and negatively associated with job satisfaction; respondents with more medical conditions reported lower job satisfaction. For Active-Duty personnel, the number of medical conditions was not a significant predictor of job satisfaction.

DISCUSSION

Predictors of Job Satisfaction Among Military Personnel

For both Active Duty and Reserve/Guard personnel, the two strongest predictors of job satisfaction were the perceived amount of job pressure and the belief that the biggest problem in their life was the result of job-related issues (such as a supervisor) rather than nonjob issues (such as health or family). Those with higher levels of job pressure reported lower levels of satisfaction.

These findings are of particular interest in that they suggest areas in which the military can intervene to increase the satisfaction of personnel and therefore their likelihood of remaining in the military. Although pressure is inherent in many military jobs, it would be beneficial to find ways of reducing the associated stress where possible and teaching effective coping mechanisms when stress reduction is not an option.

Three demographic variables (age, pay grade, and race) also were found to predict job satisfaction among military personnel. The most likely explanation for higher job satisfaction among older personnel is self-selection. Older respondents are likely to have been sufficiently satisfied to continue their service. Those for whom the military proves to be a less satisfying job probably will not remain and therefore are less likely to be a member of the military at an older age. The finding that officers expressed higher levels of job satisfaction than enlisted personnel may be due in part to the different duties, assignments, and privileges associated with higher rank. Our findings concur with a recent report (GAO, 2001) that satisfaction with military life and intention to remain in the military are greater among midcareer enlisted personnel and midcareer officers than among first-term enlisted personnel.

The finding that lower job satisfaction was reported by those who were Black compared with White personnel replicates some previous findings (Jones et al., 1977; Weaver, 1980). In this study, we also found that respondents in the Reserve/Guard who were Hispanic reported lower job satisfaction than those who were White. These findings suggest that military leaders may benefit from giving additional attention to differences in the experiences and/or perceptions of minority groups because these groups are strongly represented in the military population and are likely to be an important source of future personnel.

In addition to the variables mentioned earlier, several mental health variables predicted job satisfaction. The number of pleasant life changes respondents had experienced in the past year was negatively associated with their level of job satisfaction. Although this finding may seem counterintuitive, even positive life changes are accompanied by a certain amount of stress, and many life changes that may be pleasant overall make a person's lifestyle less compatible with a military career (e.g., marriage, the birth of a child). One implication of this finding is the need for commanders to be aware of any life changes experienced by personnel in their units and for the military to consider actions that may make life transitions easier and more compatible with military jobs.

Strengths and Limitations of the Data

A major strength of this study is the comprehensive data on health and job behaviors (and their correlates) obtained from a large sample of military personnel that spanned both Active Duty and Reserve/Guard components. The methodology included the use of sophisticated probability sampling techniques and questions from well-researched, validated health scales. The sampling techniques allow for precise estimates of behaviors in specific populations, and the well-researched health scales provide valid measures in assessing attitudes and behaviors.

Despite these strengths, we have noted a few limitations of this study. We tapped only some of the dimensions of job satisfaction (e.g., we did not examine organizational or structural variables). The job satisfaction situation may have changed since we completed our study. Although we are not aware of any DoD policy changes or new programs directly addressing job satisfaction in the military, such a change could affect the current state of job satisfaction. In addition, situations that change the demands of military work such as the increased demands required following the events of September 11, 2001 or subsequent conflicts are likely to change reports of job satisfaction. Some personnel may view these demands as a negative development, whereas others may welcome the opportunity to be involved in this type of military activity. The effects of increased activity and demands on job satisfaction would make an interesting follow-up study.

In addition to this limitation, this study relied on survey data, which are subject to the potential bias of self-reports and to the ambiguities caused by questions with varying interpretations. Self-reports in which respondents provide data about their

behaviors, attitudes, and beliefs rely on the respondents' ability and willingness to provide accurate information. Other potential problems affecting the validity of the data include population coverage, response rates, and nonresponse error. If the population is not properly represented among respondents or if response rates are low, biases may be introduced that can compromise the study results.

The relatively low response rate in our study leaves open the possibility of response bias in the estimates (Groves & Couper, 1998). Low response rates do not necessarily mean that findings are biased, however, and several factors may have worked to reduce bias in this study. First, bias is most likely when respondents systematically refuse to respond to certain questionnaire items (e.g., if questions about sensitive behaviors might implicate respondents). The vast majority of items in the TFHA and POWR questionnaires did not ask about sensitive behaviors, which may have resulted in less bias. In addition, the frequency of missing data for the items used in this analysis indicated that most of the items had less than 1% missing data, with the range of missing data from 0% to 3.7%, suggesting that our analyses were not biased because of that factor. Another such indication is that comparisons of these data with those of another study that had a much higher response rate showed similar results on similar measures. We compared the TFHA's smoking rates for the Army and Air Force with those of the same services from the 1998 DoD Survey of Health Related Behaviors Among Military Personnel (Bray et al., 1999) and found highly similar results (within approximately 1 percentage point) between the two studies. This similarity, although not conclusive, is encouraging and suggests that the comprehensive data set contains information that has not been strongly biased by nonresponse.

Despite these limitations, this study is, to our knowledge, the first to provide important information and insights about job satisfaction among military personnel in all segments of the military. The findings suggest a general similarity in the predictors of job satisfaction among Active Duty and Reserve/Guard personnel and contribute to our understanding of military job satisfaction in two important ways. First, the findings point to areas (such as job pressure) in which the military can take steps to improve job satisfaction. Second, they identify various subgroups among which job satisfaction is relatively low. Members of these subgroups can be the focus of efforts to increase job satisfaction and, likely, retention among military personnel.

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