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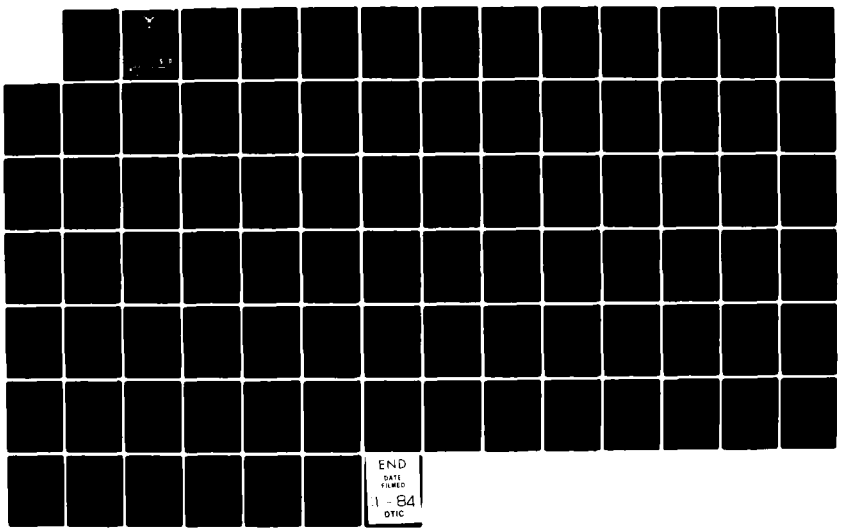

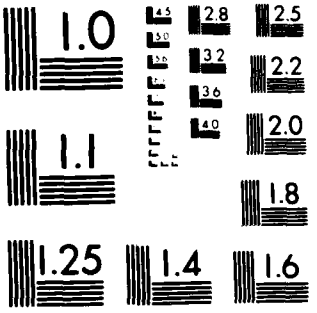

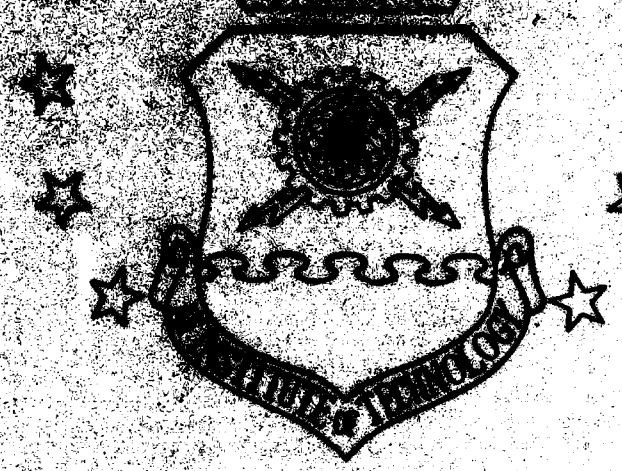

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A MODEL OF UNITED STATES AIR FORCE TURNOVER

John T. Dunn, Captain, USAF
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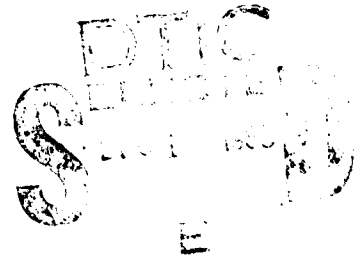
LSSR 98-83



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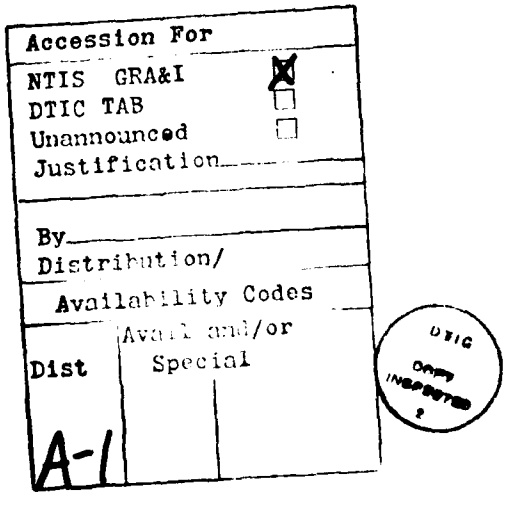

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Although military retention in 1983 is not a problem, there is cause for concern in the near future. A turnover model based upon the work of Michaels and Spector (1982) was tested using a sample of 582 United States Air Force members. A number of variables have been shown to be related to the turnover phenomenon. Intent to quit, a surrogate measure of actual turnover, was used as the criterion measure. Personal factors and task characteristics were used as predictors of turnover. Job satisfaction, organizational commitment, and job involvement, the affective variables, were hypothesized as mediating between the predictors and intent to quit. A series of regression analyses was performed to determine which measures were most predictive of intent to quit. In concert with previous research, organizational commitment, job satisfaction, and organizational level were the best predictors of intent to quit. Task characteristics were seen as predictive of job satisfaction, organizational commitment, and job involvement. The personal factors, with the exception of organizational level, were poor predictors of either the affective variables or intent to quit.

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A MODEL OF UNITED STATES AIR FORCE TURNOVER

A Thesis

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Logistics Management

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has been accepted by the undersigned on behalf of the faculty of the School of Systems and Logistics in partial fulfillment of the requirements for the degree of

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CHAPTER I

INTRODUCTION

Overview

> There is much concern about the size and quality of the manpower pool from which the U.S. military forces must be drawn in the next two decades. The reduced size of the future pool is not a subject of controversy, since the men and women who will be 17 to 21 years old in 1995 have already been born and are now in school or approaching school age. Recent Census Bureau data indicate that the size of the primary military manpower supply pool (males 17-21) will decline significantly through 1993, and the supply of 18-year-old males will remain 20 to 25 percent below 1975 levels up to 1998. The implications of this shortfall are quite serious. According to various estimates, by the early 1990's the Department of Defense, which currently enlists about 26 percent of the qualified members of the available pool of 18-year-old males, will have to enlist almost 33 percent of qualified males unless present requirements are lowered [33:22].

The dwindling manpower pool from which the military must compete for human resources is but the tip of the iceberg. Of those people who enlist, there is a problem of retaining them through their initial enlistment. There is the added problem of reenlisting enough of those remaining to maintain a solid, well-trained career force. A Rand Corporation study (31:42) states that the

> . . . percentage of Air Force members not completing their enlistments ranged from 10.2 percent for radio communications analysis/security to 44.9 percent for audio-visual specialists.

Reenlistment rates for fiscal year 1982 were up over any previous year, but the rate for 1983, while still high, is leveling off. According to Technical Sergeant Scott of the Air Force Military Personnel Center Retention Studies office (36), the important thing is that although the reenlistment rate is up, the actual numbers are down: "There are smaller pools of assessions coming through reenlistment windows--if rates go down we are in trouble!"

Miss Jean Broden at the personnel center at the Pentagon feels that the 1985-86 time frame will see a downturn in reenlistments. "When the economy improves, we tend to lose people . . . our problem is the trained people who will get out if the economy improves [7]."

In order to maintain the required level of manning, the services must either increase enlistments, reduce the turnover rate, or both. Because of the dwindling supply of available enlistees, the military would do well to increase its attention on the retention issue. In order to insure that a sufficient number of personnel reenlist, the Air Force should identify those factors which lead to reduced turnover.

Bluedorn (6:648-649) states that there are four different types of turnover. These types are illustrated in Figure 1. In Bluedorn's definition, there are two types of movement, into or out of an organization, and two initiators of movement. These initiators are the individual

Initiator of Movement	Direction of Movement	
	Into Org.	Out of Org.
The Individual	Type II Voluntary accessions (join church, take a job)	Type I Voluntary separations (quit, non-statutory retirement)
Other Than Individual	Type III Involuntary accessions (inmates in prison, draft, slavery)	Type IV Involuntary separations (fired, death court-martialed)

Fig. 1. Bluedorn's Model of Turnover

himself, or another individual or group. A Type I movement is one where the individual decides to quit a position on his own. A Type II move is one where the individual decides to join an organization. A Type III move is initiated by someone other than the individual, and is a move into an organization. An example of this would be a person sentenced to serve a prison term. An example of a Type IV move is a person who is fired from a job. In this case, the initiator of the move was someone other than the individual, and the move was out of the organization. For the purposes of this paper, Bluedorn's Type I turnover will be used; that is, those people who of their own choice separate from an organization.

Problem Statement

The problem, then, is what are the major factors that affect retention within the Air Force? If this question can be addressed for the Air Force, results should be generalizable to the other military services which suffer from similar problems of retention. By gaining additional knowledge about the turnover process, a degree of clarity may be added to an area of research which has many uncertainties. The eventual benefit of cumulative research in this area lies in our ability to someday control those factors which cause high turnover rates, because turnover is a problem for both the individual and the organization.

Literature Review

As a result of a study of certain facets of the Mobley, Griffeth, Hand, and Meglino (20) model, Michaels and Spector (18:58), in their conclusions, suggested that there may be a "causal chain from the individual and organizational factors, through job satisfaction and commitment, through intention, and finally, to turnover." Based on this statement and the review of literature, the proposed model was developed (see Figure 2). The model includes those factors recommended by Michaels and Spector, but also includes the concept of job involvement due to its unique predictive value as described by Lodahl and Kejner (15) and others.

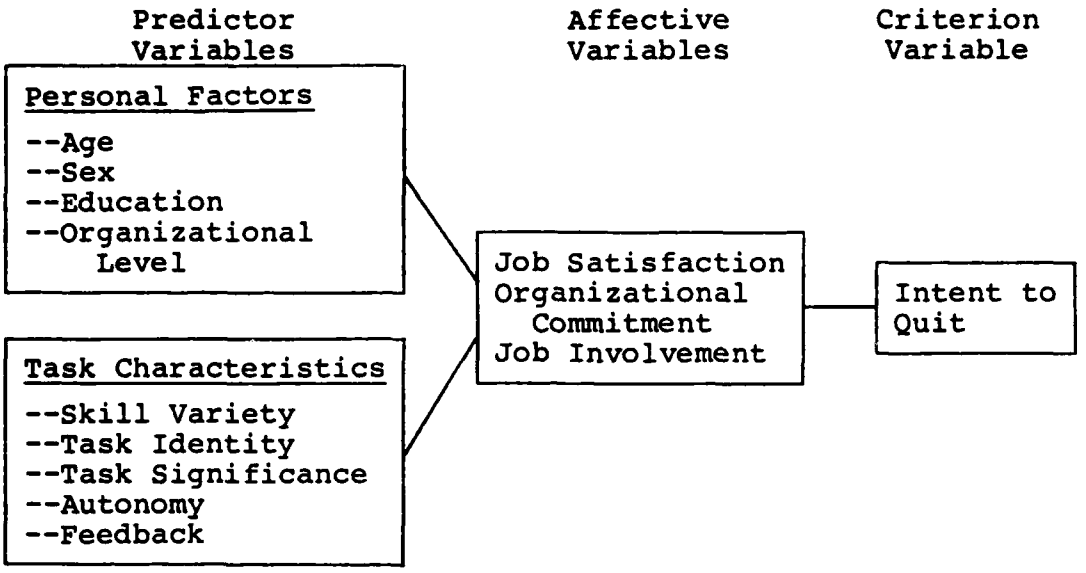

Fig. 2. Proposed Model

In reviewing the literature, several thematic constructs involving individual and organizational factors were found to be similar from one study to another. Several key personal factors were age, sex, education, and organizational level. Important constructs relating to organizational factors included the examination of task significance and identity, job autonomy and feedback, and skill variety. The affective variables examined included job satisfaction, job involvement, and organizational commitment. Finally, intent to quit was looked at as the criterion since it has been found to be a good predictor of overt action (i.e., turnover).

Personal Factors

Age. Muchinsky and Tuttle (23:50), in a review of literature, found that the preponderance of studies report a negative relationship between age and turnover; that is, older workers are less likely to separate from an organization. In a multivariate study, Arnold and Feldman (4:359) found that, for professional accountants, intention to search for alternative work (which is highly correlated with turnover) was predictable through a combination of age, job satisfaction, and organizational commitment ($r = 44$, $p < .01$). In a study of Army aviation warrant officers, Sundy (42:24) administered a questionnaire to 757 individuals and found that the mean age of those personnel who separated was 28, while the mean age of those who remained was 34. A Rand report (31:42) found that

> Army recruits who enlist before age 18 have five to seven percent higher post-training attrition rates than do older recruits in most occupation groups.

In a study of 152 female clerical workers, Waters, Roach and Waters (43:59) found that older, longer-tenured personnel were more likely to remain with the company than were younger personnel (intent to quit correlated with age, $r = .27$, $p < .05$).

In an investigation involving factory workers in England, it was noted that everyone over the age of 38 (with one exception)

> . . . had apparently ceased to look for other jobs in an area and at a time when there was a marked shortage of labour. Moreover, these alternative job opportunities often offered better pay and conditions than those available at this time in this firm [25:117].

Not all studies have shown a negative correlation between age and tenure. Spencer and Steers (38:Table 1), in a study of hospital clerical and service workers, found that age was not a significant predictor of turnover. Additionally, in a study of university faculty members, Zey-Ferrell (45:357-358) found that as age increases, the likelihood of exit from the university was greater.

Still, the trend of results suggests that age is significantly and negatively related to turnover. To explain this relationship, Pettman (25:11,114) proposed that it is not age per se that leads to tenure, but that long-term employees become "institutionalized in their jobs and, as such, refuse to change or leave. . ." and that "employees may stay in firms not because they are satisfied with their jobs, but simply because they are institutionalized." Since age has often been a good predictor of turnover, it was included in the present study.

Sex. The use of sex as a predictor of turnover has resulted in mixed conclusions, but it frequently emerges as an important personal factor in predicting turnover. Muchinsky and Tuttle (23:67), in a review of literature, noted that separate analyses on the basis of sex

show that turnover was more predictable for males, and that turnover rates were greater for males. Similarly, Spencer and Steers (38:569-570), in a study of hospital clerical and service workers, found that men had significantly higher turnover rates than women ($r = -.14$, $p < .05$).

On the other hand, the turnover rates for women in the Air Force were consistently higher at the 4, 11, and 20 year points in FY 1977 through FY 1979. Except for 1979, when females at the 20 year point had a 2 percent higher retention rate than men, female turnover ranged from 2 to 16 percent higher than men (32:35). In a study of Japanese employees, Marsh and Mannari (16:68) found that women showed a greater propensity to leave an organization than men ($r = -.31$, $p < .01$).

Martin (17:Table 4) found that sex was not a strong predictor of turnover for groups of clerical and professional personnel. His results indicated a weak correlation ($r = .11$, $p < .05$), yet it was one of the seven statistically significant variables which emerged in a multiple regression analysis (17:319).

The results of studies using sex as a predictor of turnover have been inconclusive. However, since the Air Force retention rates were at odds with other reports, sex was included in the present study to further clarify the relationship.

Education. The amount of formal education a person receives has been shown to have varied relationships with turnover. In a group of Marine recruit training graduates and dropouts, it was found, among other things, that the "graduates had significantly higher education and mental scores ($r = .26$, $p < .01$) [21:Table 3]." A Rand study (31:42) found that the

> . . . post-training attrition rates for high school dropouts are at least 10 percent higher than for high school graduates across all occupational areas in both the Army and Air Force.

In a study of 200 hospital clerical and service workers, Spencer and Steers (38:Table 1) found that education was not significantly correlated with turnover. In a study of 250 employees of a medium-size service-oriented business organization, Martin (17:321) found that "as education increases, intent to leave increases ($r = .27$, $p < .05$)." Additionally, Stevens, Beyer and Trice (41:391) reported that "educational level negatively influences managerial commitment to the federal service."

Muchinsky and Tuttle (23:49), in a review of literature, stated that the relationship between intelligence (a variable related to education), and turnover were "diverse with positive, negative, zero, and curvilinear relationships being reported."

Due to the diverse relationships reported from the various studies and the fact that there have been studies

for the military that show a negative relationship of education with intent to quit, this construct was included in the present study in order to further explore its effect on turnover.

Organizational Level. Marsh and Mannari (16:58) stated that "among the most frequent causes of turnover in the American and British studies are aspects of the employee's status in the organization." In their own study of 1033 Japanese factory workers, they found that their similar construct of organizational status correlated positively with commitment ($r = .11$, $p < .01$) and negatively with turnover ($r = -.08$, $p < .05$) (16:66-69). Waters et al. (43:59) reported that higher job grade personnel were more likely to remain with the organization than lower job grade personnel in their study of 152 non-supervisory female clerical employees.

Porter and Lawler (28:47) found a significant relationship between organizational level and job satisfaction. As will be shown later, job satisfaction has been fairly consistently related to turnover, so this finding provides a basis for relating organizational level to the proposed model, which includes job satisfaction as a major affective variable leading to intent to quit.

Stevens et al. (41:393) found that managerial level and organizational commitment had a significant

positive correlation ($r = .61$, $p < .05$). As with job satisfaction, organizational commitment has been a good predictor of turnover, so again there is a basis for including organizational level in the proposed model.

Task Characteristics

The Job Diagnostic Survey (JDS), developed by Hackman and Oldham (12), identifies several core job dimensions which have been postulated to be key determinants of the motivating potential of a job and related to job satisfaction and reduced turnover. These job dimensions include skill variety, task identity, task significance, autonomy and feedback. The following sections discuss each of these facets.

Job Autonomy. Job autonomy, or the amount of personal discretion allowed on the job, has been found to impact on turnover. In five studies reviewed by Muchinsky and Tuttle (23:59) where the amount of autonomy was examined for the prediction of turnover, all reported that "lower amounts of autonomy and responsibility are associated with turnover." Porter and Steers (29:164) reported

> . . . a strong positive relation has been found consistently between both forms of withdrawal [absenteeism and turnover] and a perceived lack of sufficient job autonomy or responsibility.

On the other hand, Martin's concept of centralization, which reflects, in part, the absence of task autonomy as

conceptualized by Hackman and Oldham (12:162), had a non-significant correlation with intent to leave (12:Table 3).

Job Feedback. Martin (17:320) states that instrumental communication, which corresponds to the concept of feedback, demonstrates a significant correlation with both satisfaction ($r = .36$, $p < .001$) and intent to leave ($r = -.10$, $p < .05$). Hackman and Oldham (12:160) report that the use of feedback enhances the total effect of the other dimensions involved in the task characteristics as discussed in this section. They state that the feedback can come from the job itself, from supervisors, and from coworkers. Muchinsky and Tuttle (23:58), in the two studies reviewed, found that those employees who terminated perceived themselves as *receiving* less feedback than those who remained. Rabinowitz and Hall (30:284), in describing a job-involved person, say that, among other things, he is one who has a stimulating job with a high level of feedback.

Task Significance. Task significance, or the amount of impact one's job has on others, has been shown to have a significant impact on the prediction of turnover. Mobley, Hand, Baker and Meglino (21:Table 2), in a study of 1,521 Marine recruits, found that the expected significance of the job was highly significant in predicting graduates and dropouts in a univariate analysis of variance.

Rabinowitz and Hall (30:268) report that "the feeling that one is making an important contribution to the company success" leads to strengthening of job involvement, which, as will be shown, leads to less turnover. Finally, Hackman and Oldham (12:161) stated that task significance is one of the core job dimensions mediated by experienced meaningfulness of work which leads to desirable personal and work outcomes including job satisfaction and low turnover.

Task Identity. Hackman and Lawler (11:265) define task identity as "the extent to which employees do an entire or whole piece of work and can clearly identify the result of their efforts." Rabinowitz and Hall (30:284) claim that it has been repeatedly shown that a person who is high in job involvement (which has been related to reduced turnover) has also been found to have a high level of task identity and the other task characteristics (R^2 values average about .30 over seven studies reviewed). Saal (34:Table 2) reported a significant correlation between job involvement and task identity alone ($r = .20$, $p < .05$). Hackman and Lawler (11:273) demonstrated relationships between task identity and the work outcomes of job satisfaction, job involvement, and decreased absenteeism ($r = .20$, .12, and -.22 respectively, $p < .05$ in each case) in a study of 208 telephone company employees.

In the theoretical model used in the development of the Job Diagnostic Survey (12:161), those persons with high task identity were also hypothesized to have the desirable work outcome of reduced turnover. It is for these reasons that this construct was included in this study.

Skill Variety. Skill variety is the amount of variety (versus routinization or repetitiveness) required by the job. Muchinsky and Tuttle found that in four of the five studies reviewed, there was a positive relationship between task repetitiveness and turnover (23:Table 5). Porter and Steers (29:162), in a study of retail store workers, also found that "variety of work was significantly and negatively related to turnover." They explain this relationship as follows:

> Repetitiveness of task may contribute, along with other factors, to increased job stress. While efficiency or reduced operating costs may be the goal of such actions as the routinization of job technology, such a goal may at times have the unintended consequence of increasing costs through increases in absenteeism and turnover [26:162].

Affective Variables

Job Satisfaction. In general, job satisfaction has been shown to be significantly and negatively related to turnover (4:353; 5:53,54; 14:284-285; 19:512; 20:502; 23:58; 29:151). Muchinsky and Tuttle (23:Table 4) found that fourteen of fifteen studies reviewed showed a negative

relationship between measures of job satisfaction and turnover.

In a serial study, Porter and Steers (29:153) reported that a company instituted new policies in the areas of salary, administration, and promotional opportunities. Before and after these policies were implemented, employee job satisfaction levels were measured. In the post-policy measurement, it was noted that not only did the job satisfaction level go up, but the turnover rate went from 30 percent to 12 percent. They concluded that "Overall job satisfaction was found to be consistently and inversely related to turnover [29:151]."

For the military, Chisholm, Gauntner, and Munzenrider (8:31) stated that their findings indicate that there are "strong relationships between congruency and overall satisfaction . . . and re-enlistment plans." They further state that their results show a signficant relationship between general satisfaction with Army life and intentions to reenlist (8:36,37).

Job Involvement. Job involvement has been defined as "the degree to which a person is psychologically identified with his work [15:24]." This construct has been shown to be a significant predictor of intent to quit. Lodahl and Kejner state that "job involvement appears to be factorially independent of other job attitudes, relatively stable over time, relatively unaffected by changes

in the work organization, and related to the social nearness of the other workers [15:26]."

Rabinowitz and Hall, in a review of literature (30:283) reported that their "results indicated that job involvement correlated negatively with turnover ($r = -.17$, $p < .01$)." They found that among the various work outcomes, those "most strongly associated with involvement are satisfaction . . . and turnover (correlations of .40 and -.25 over 3 and 4 studies respectively, $p < .01$ [30:284]."

Finally, Donnelly and Hartford (9:59), in a study of hospital employees, found that job involvement was significantly correlated with intent to quit ($r = -.24$, $p < .001$).

Organizational Commitment. Hom and Hulin (13:25) define organizational commitment as "employee identification with and involvement in a particular organization." All of the literature reviewed showed the same relationship between organizational commitment and turnover criteria; i.e., higher levels of commitment result in lower levels of turnover (4:353; 13:26; 14:285; 22:413; 26:606; 40:54). Additionally, organizational commitment was able to better discriminate between "stayers and leavers" than were the various components of job satisfaction (14:282; 26:603).

Hom, Katerberg, and Hulin (14:282), in a study of 534 National Guardsmen, report that organizational commitment seems to be related more to termination from the organization than with the career choice, since the individual may assume similar job responsibilities elsewhere. They reported a correlation between actual reenlistment and organizational commitment ($r = .58$, $p < .05$), and a correlation between intent to reenlist and organizational commitment ($r = .68$, $p < .05$) (14:Table 1). Porter, Crampon, and Smith (27:96), in a longitudinal study, found that for those who left an organization, there was a definite decline in commitment prior to actually leaving.

Weiner and Vardi (44:84-85) state that

> . . . in non-business organizations, such as church or military, commitment may become very important in affecting organizational behavior, since member's involvement is often value based.

For the military, this is especially true because, as Hom and Hulin (13:29) report in a study of National Guardsmen, "Commitment accurately predicted the reenlistment decisions of 71 percent of the Guardsmen."

Intent as a Predictor of Overt Action

As Ajzen and Fishbein state (2:913), "To predict behavior from an attitude, there must be high correspondence between at least the target and action elements of the measure used." The use of intent as a predictor of

overt action, specifically turnover or retention, has been widely used in the field of study involving turnover. All of the literature reviewed which related the two ideas (i.e., intent leads to overt action) have found that the two have degrees of correlation (1:Table 1; 5:56; 19:515; 22:408; 29:153; 43:58,59).

Specifically for the military, Hom and Hulin (13:23), in a study of twenty-nine National Guard units, found that "reenlistment intention was highly related to reenlistment."

Development of Research Model

The proposed model introduced in Figure 2 (page 5) synthesizes the recommendations of Michaels and Spector (18:58) with Lodahl and Kejner's concept of job involvement (15). The personal factors of age, sex, education and organizational level are similar to those individual factors recommended by Michaels and Spector. Task characteristics, which include measures of autonomy, feedback, significance, identity, and variety, are used as measures of organizational factors. The affective variables include measure of job satisfaction, job involvement, and organizational commitment. Finally, the criterion variable is a measure of intent to quit as indicated by the respondents. Due to the lack of a longitudinal study, the measure of

actual turnover used by Michaels and Spector (18:55-56), cannot be included.

The affective variables were postulated as intervening between personal factors, task characteristics, and intent to quit. The basis for this was a path analysis conducted with Michaels and Spector (18:57) which

> . . . was consistent with the conception that organizational and individual factors . . . lead to job satisfaction and organizational commitment . . . which in turn lead to intentions of quitting, which lead to turnover.

They also noted that although job level was not found to be related to job satisfaction, organizational commitment or intent to quit, Porter and Lawler found it to be related to turnover (28).

The relationships between personal variables and task characteristics, the intervening variables, and intent to quit are not entirely clear. Therefore, the relationships between personal factors, task characteristics and intent to quit were explored in an effort to clarify their roles as antecedents of turnover.

For the purposes of this paper, the personal factors and task characteristics will be jointly referred to as "Predictor Variables." The intervening variables of job satisfaction, organizational commitment, and job involvement will be collectively referred to as "Affective Variables." Finally, intent to quit will be referred to as the "Criterion Variable."

Research Questions

Based on the proposed model, several research questions are posed:

1. Are the predictor variables (e.g., the personal factors and task characteristics) significantly related to the affective variables?

2. Are the affective variables significantly related to intent to quit?

3. Do the affective variables intervene in the relationship between the predictor variables (personal factors and task characteristics) and intent to quit?

CHAPTER II

METHOD

Introduction

As demonstrated in the literature review, the personal factors of age, sex, education, and organizational level have been shown to be predictors of intent to quit. Additionally, the task characteristics of skill variety, task identity and significance, autonomy, and feedback have also been shown to have a high degree of correlation with measures of intent to quit. Finally, the affective variables of job satisfaction, organizational commitment, and job involvement have demonstrated significant relationships with intent to quit and with many of the personal factors and task characteristics.

The proposed model combines the above variables as was shown in Figure 2 (see page 5). Based on the literature review and the recommendations of Michaels and Spector (18:58), the model proposes that the affective variables intervene in the relationship between the predictor variables and the criterion variable of intent to quit. Therefore, the purpose of the present study was to explore the relationships between personal factors, task characteristics, job satisfaction, organizational commitment, job involvement, and intent to quit.

The composition of the measures, a review of the administration of the questionnaire, and the analysis techniques used to evaluate the data are presented in this chapter.

Discussion

Measures

The instrument used to obtain the research data was the Air Force Institute of Technology (AFIT) Survey of Work Attitudes which was developed by Dr. Robert P. Steel, Major Nestor K. Ovalle, 2d, DBA, and others. The questionnaire included 137 items. From this total, 63 items were used in this study. The data set was collected by the AFIT Organizational Sciences department. A copy of the questions used in this study is included in Appendix A.

Personal Factors. Personal factors of age, sex, education, and organizational level were measured. Age, education, and organizational level data were based on ordinal scales with unequal intervals. Age was measured on a scale of one to seven as follows: 1 = less than 20; 2 = 20 to 25; 3 = 26 to 30; 4 = 31 to 40; 5 = 41 to 50; 6 = 51 to 60; 7 = more than 60. The respondent's sex was determined by the standard male/female question. This dichotomous variable produces categorical data. Education was measured as: 1 = non high school graduate; 2 = high school graduate or GED; 3 = some college work;

4 = associate degree or LPN; 5 = bachelor's degree or RN; 6 = some graduate work; 7 = master's degree; 8 = doctoral degree.

Organizational level was determined by combining two items--one identifying the individual as either officer or enlisted, and the second idenfifying the individual's grade level within the officer/enlisted ranks. For the purpose of this study, the organizational levels were defined on a range of one to six as follows: 1 = Airman Basic through Sergeant; 2 = Staff Sergeant and Technical Sergeant; 3 = Master Sergeant through Chief Master Sergeant; 4 = Second and First Lieutenants; 5 = Captains and Majors; 6 = Lieutenant Colonel through General (see Appendix B for Demographics).

Job Characteristics. Job characteristics were measured through the use of the Job Diagnostic Survey (JDS) with the exception of the feedback measure, which was taken from the Job Characteristics Inventory. The specific areas of the JDS were defined by Hackman and Oldham as follows:

> Skill variety. The degree to which job requires a variety of different activities in carrying out the work, which involve the use of a number of different skills and talents of the employee.
>
> . . . . . .
>
> Task Identity. The degree to which the job requires completion of a "whole" and identifiable piece of work--that is, doing a job from beginning to end with a visible outcome.
>
> . . . . . .

Task Significance. The degree to which the job has a substantial impact on the lives or work of other people--whether in the immediate organization or in the external environment.

. . . . . .

Autonomy. The degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out [12:159-170].

Feedback. The degree to which employees receive information as they are working which reveals how well they are performing the job [37:197].

Because the feedback measure was not the one used in the JDS, the individual job dimensions were explored singly and not combined as a Motivating Potential Score (12:160). The first four scales were each measured by three items rated on seven-point Likert scales, while the feedback measure used five items rated on a five-point Likert scale. Reliability and validity data on both the JDS and JCI may be found in sources such as Griffin (10) and Hackman and Oldham (12).

Job Satisfaction. Job satisfaction was measured by five items rated on a seven-point Likert scale ranging from (1) = delighted, to (7) = terrible. The job satisfaction scale was derived from Andrews and Withey (3).

Job Involvement. Job involvement was measured using a fifteen-item scale designed by Steel, Kohntopp, and Horst (39). It was based on three job involvement factors suggested by Saleh and Hosek (35). The three factors

are included in Saleh and Hosek's definition of job involvement (35:223) as, ". . . the degree to which the person identifies with his job, actively participates in it, and considers his performance important to his self worth." They include:

1. Job involvement as active participation in the job.

2. Job involvement as the central life interest.

3. Job involvement as perceiving performance as central to self esteem.

Although each factor appears to share the common element of self or self concept, each factor was found to be factorially different (35:222) and was analyzed individually in the present study. Each item in these factors was rated on a seven-point Likert scale ranging from 1 = Strongly disagree with the statement, to 7 = Strongly agree with the statement. The first two measures of job involvement were composed of five questions each, while the third measure used three questions.

Organizational Commitment. According to Hom et al. (14:281), "organizational commitment is an employee's identification with and involvement in his or her organization." Organizational commitment is measured by the fifteen-item Organizational Commitment Questionnaire (27). Responses for each item came

from a seven-point Likert scale response continuum ranging from 1 = Means you strongly disagree with the statement, to 7 = Means you strongly agree with the statement.

Intent to Quit. The criterion variable was intent to quit. This question was measured by a single response on a five-point Likert response continuum:

Within the coming year, if I have my own way:

1 = I definitely intend to remain with the Air Force.
2 = I probably will remain with the Air Force.
3 = I have not decided whether I will remain with the Air Force.
4 = I probably will not remain with the Air Force.
5 = I definitely intend to separate from the Air Force.

Internal Consistency

Internal consistency reliabilities (coefficient alpha) for the measures of task characteristics, job satisfaction, job involvement, and organizational commitment are summarized in Table 1. All measures were found to have reasonably good reliabilities with alpha values ranging from .67 to .92.

Hypothesized Relationships Among Variables

With the exception of the sex measure, all personal factors and task characteristics were hypothesized to have positive relationships with the affective variables, and negative relationships with intent to quit. The sex

TABLE 1

INTERNAL CONSISTENCY RELIABILITIES

Variable	n	Alpha
Skill Variety	581	.67
Task Identity	582	.72
Task Significance	582	.67
Autonomy	580	.75
Feedback	578	.92
Job Satisfaction	578	.80
Job Involvement		
Active participation	582	.85
Central life interest	580	.91
Performance, Central to Self esteem	579	.75
Organizational Commitment	579	.89

measure was used in order to determine if there was any relationship with the affective or criterion variables. Finally, it was hypothesized that all of the affective variables would have negative relationships with intent to quit.

Respondents

The measurement instrument was administered at a United States Air Force base. The respondents included both military and civilian employees. The total number of questionnaires administered was 691. However, the present study deals only with active duty military personnel which reduced the sample size to 582 usable responses. An attempt

was made to measure the entire population of 751 individuals within the organization, and, therefore, no random sampling techniques were employed.

Procedure

The instrument was administered in November of 1982. It was given four times a day on three consecutive days. At each administration, between 25 and 100 individuals were sampled. Respondents were informed that participation was voluntary, and that their responses would be anonymous.

Analysis

Analyses were performed on the AFIT Harris 500 computer system using the Statistical Package for the Social Sciences (SPSS) (24).

In answering the research questions, the initial step was to explore the relationships among the variables by calculating the Pearson Product Moment coefficient of correlation for each possible pairing of interval level responses. Additionally, Spearman rank correlations were obtained from the ordinal level items dealing with age, education, and organizational level. The SPSS NonPar Corr procedure was used to determine the correlation between these variables and intent to quit.

A comparison was made between the parametric and nonparametric correlations for the demographic correlates of intent to quit. In comparing these two types of

correlations, it was found that the results were similar with each of the pairs of variables maintaining approximately the same degree of correlation and level of significance (see Table 2). Due to the close comparisons, for simplicity, only the Pearson Correlations will be used for bivariate correlations.

TABLE 2

COMPARISON OF PEARSON AND SPEARMAN CORRELATIONS WITH INTENT TO QUIT

Variable	Pearson Correlation	Spearman Correlation
Age	-.21*	-.28*
Education	-.18*	-.16*
Organizational Level	-.22*	-.26*

*p < .001.

Multiple linear regression was then used to explore the hypothesized relationships developed in Chapter I. First, the Predictor Variables were regressed against the Affective Variables to determine the nature of the relationships as posed in Research Question 1; i.e., the Predictor Variables lead to the Affective Variables.

Second, the Affective Variables were regressed against the Criterion Variable to assess the ability of the Affective Variables to predict intent to quit.

Finally, in the first of a two-step hierarchical procedure, the Affective Variables were regressed against the Criterion Variable. In the second step, the Predictor Variables were added to the regression. This was done in order to determine if the Predictor Variables explained additional variance in the Criterion Variable over and above that explained by the Affective Variables.

Since the sex measure is a nominal level variable, neither a Pearson's correlation coefficient nor a Spearman's rank correlation coefficient was appropriate. Instead, a chi-square contingency table test for independence was run between the two sex classification responses and the five categories of intent to quit (24). The chi-square statistic was compared with the critical value for the chi-square distribution. If the chi-square value does not exceed the critical value at the desired level of significance, there is insufficient evidence to indicate intent to quit or remain is dependent on the measure of sex.

CHAPTER III

RESULTS

Introduction

This chapter presents the results of the analyses of the proposed model and research questions. The number of responses, means, and standard deviations for all variables are identified in Table 3. Following a discussion of the correlation matrix and the chi-square results, statistics relative to each of the research questions are evaluated in a separate section of this chapter.

Bivariate Correlation

An intercorrelation matrix is presented in Table 4. In agreement with the literature review, all of the ordinal and interval level measures produced highly significant relationships with the criterion variable. Organizational level correlated highly with both age and education. This indicates that military members at higher organizational levels tend to be older and better educated. The emphasis placed on the furtherance of the member's education by the Air Force is shown by the correlation of .85 between organizational level and education.

The high level of correlation between organizational commitment and job satisfaction (.64) indicates that the

TABLE 3

CASES, MEANS, AND STANDARD DEVIATIONS

Name	Cases	Mean	Std Dev
Age	582	2.825	1.000
Sex	582	1.0915	.2886
Education	582	3.356	1.628
Organizational Level	572	2.222	1.3985
Task Variety	581	13.969	4.259
Task Identity	582	14.940	4.177
Task Significance	582	16.663	3.858
Autonomy	580	13.959	4.302
Feedback	560	15.898	5.181
Job Satisfaction	578	23.877	4.796
Organizational Commitment	579	61.572	17.603
Job Involvement as a measure of active participation on the job	582	23.143	7.503
Job Involvement as a measure of central life interest	580	14.905	7.572
Job Involvement as a measure of job as important to self worth	579	17.282	3.407
Intent to Quit	581	1.895	1.22

TABLE 4

INTERCORRELATION MATRIX

	1	2	3	4	5	6	7	8
1. Age	1.00							
2. Education	.36***	1.00						
3. Organizational Level	.54***	.85***	1.00					
4. Skill Variety	.16***	.18***	.20***	1.00				
5. Task Identity	.04	.02	.01	.32***	1.00			
6. Task Significance	.13**	.09*	.13**	.43***	.30***	1.00		
7. Job Autonomy	.24***	.18***	.20***	.39***	.41***	.28***	1.00	
8. Job Feedback	.13**	-.07	-.02	.25***	.30***	.24***	.38***	1.00
9. Job Satisfaction	.15***	-.02	.04	.37***	.32***	.33***	.47***	.49***
10. Organizational Commitment	.16***	.07	.12**	.37***	.27***	.27***	.43***	.38***
11. Job Involvement (participation)	.21***	.21***	.25***	.44***	.30***	.27***	.58***	.38***
12. Job Involvement (life interest)	.11**	.07*	.12**	.26***	.15***	.22***	.31***	.27***
13. Job Involvement (self worth)	.30***	.23***	.26***	.26***	.15***	.25***	.24***	.15***
14. Intent to Quit	-.21***	-.18***	-.22***	-.21***	-.13***	-.16***	-.16***	-.12**

TABLE 4--Continued

	9	10	11	12	13	14
9. Job Satisfaction	1.00					
10. Organizational Commitment	.64***	1.00				
11. Job Involvement (participation)	.51***	.54***	1.00			
12. Job Involvement (life interest)	.38***	.52***	.48***	1.00		
13. Job Involvement (self worth)	.27***	.32***	.33***	.33***	1.00	
14. Intent to Quit	-.28***	-.29***	-.21***	-.18***	-.18***	1.00

* = p < .05

** = p < .01

*** = p < .001

two measures may be examining some of the same dimensions of attitude toward the workplace.

Finally, the job involvement (participation) measure was highly correlated with variety, autonomy, job satisfaction, and organizational commitment. This, also, may indicate that these measures are tapping a generalized affective assessment of work.

Chi-Square Analysis

A chi-square procedure was utilized to evaluate the relationship between sex and intent to quit. A value of $\chi^2 = 2.5392$ was computed from the contingency table for the two variables (see Appendix C). The test statistic did not exceed the critical value of chi-square at an alpha level of .05. Therefore, the evidence was insufficient to suggest that intent to quit or remain was dependent on the measure of sex.

Research Question Answers

Research Question 1

Are the Predictor Variables significantly related to the Affective Variables?

This question was answered through a series of five regression analyses which examined the relationship between the Predictor Variables (personal factors and task characteristics) and each of the Affective Variables

(job satisfaction, organizational commitment and job involvement factors of participation, life interest, and self worth).

When the Predictor Variables were regressed against job satisfaction, the task characteristics of feedback, autonomy, variety, and job significance were found to be significant predictors. The total amount of variance in job satisfaction explained by these variables was 38 percent (see Table 5).

TABLE 5

REGRESSION OF PREDICTOR VARIABLES ON JOB SATISFACTION AFFECTIVE VARIABLES

Variables	Beta	R^2	Change in R^2
Dependent = Job Satisfaction			
Job Feedback	.29964	.23754	.23754*
Job Autonomy	.28597	.33382	.09628*
Skill Variety	.16743	.36530	.03148*
Task Significance	.16132	.37852	.01322*

*$p < .0001$.

With organizational commitment as the dependent variable, three task characteristics emerged as significant predictors: autonomy, feedback, and variety. These variables explained 29 percent of the total variance in organizational commitment (see Table 6).

TABLE 6

REGRESSION OF PREDICTOR VARIABLES ON ORGANIZATIONAL COMMITMENT

Variables	Beta	R^2	Change in R^2
Dependent = Organizational Commitment			
Job Autonomy	1.06274	.18806	.18806*
Job Feedback	.82663	.24817	.06011*
Task Variety	.88747	.28635	.03818*

*$p < .001$.

(For the following job involvement factors, see Table 7 for the results of all analyses.)

The significant determinants for the job involvement (participation) measure included three task characteristics (autonomy, variety, and feedback) and one personal factor (organizational level). These four measures explained almost 44 percent of the variance in this measure.

The determinants for the job involvement (life interest) measure included variety, feedback, and autonomy. They explained over 20 percent of the variance in this measure.

The significant determinants for job involvement (self worth) measure included the personal factors of age and education and the task characteristics of skill variety and task significance. These four measures explained 17 percent of the variance in this measure.

TABLE 7

REGRESSION OF PREDICTOR VARIABLES ON
JOB INVOLVEMENT FACTORS

Variables	Beta	R^2	Change in R^2
Dependent = Job Involvement (participation)			
Job Autonomy	.70769	.33457	.33457*
Task Variety	.36339	.39006	.05549*
Job Feedback	.26348	.41328	.02322*
Organizational Level	.84874	.43723	.02395*
Dependent = Job Involvement (life interest)			
Task Variety	.53686	.15365	.15365*
Job Feedback	.23193	.18977	.03612*
Job Autonomy	.21231	.20095	.01118*
Dependent = Job Involvement (self worth)			
Age	.77690	.09264	.09264*
Skill Variety	.11618	.14158	.04894*
Task Significance	.13471	.16059	.01901*
Education	.19314	.16804	.00745*

*$p < .0001$.

As can be seen from these analyses, the job involvement (participation) measure had more than 40 percent of its total variance explained by the predictor variables, followed by job satisfaction with almost 39 percent of its variance explained. The variance explained in the other affective variables ranged from 17 percent to 29 percent.

As a post hoc analysis, the personal factors and task characteristics were regressed separately on the Affective Variables. This was done in order to determine if intercorrelation between the personal factors and task characteristics might have prevented more of the personal factors from entering the equation in the prediction of the Affective Variables.

When the personal factors were regressed against the Affective Variables, age was found to be predictive for job satisfaction and organizational commitment; however, the total amount of variance explained in each case was just over 3 percent. The job involvement (participation) measure had 7.8 percent of the variance explained by age and organizational level. The sole determinant for job involvement (life interest) was organizational level, which explained 1.5 percent of the variance. The determinants for job involvement (self worth) were age and education with an R^2 value of .109.

When the task characteristics were regressed as a group against the Affective Variables, only the job

involvement (self worth) measure had an additional determinant vis-a-vis the joint Predictor Variables regression. The additional determinant in this regression was autonomy.

Thus, from these additional regressions, it was shown that, with the exception of the job involvement (self worth) measure, the personal factors did not play a major role in predicting the Affective Variables. Additionally, there appeared to be very little intercorrelation between the personal factors and the task characteristics.

Research Question 2

Are the Affective Variables significantly related to intent to quit?

To address this question, the Affective Variables were regressed against intent to quit. As shown in Table 8, the significant predictors of intent to quit were organizational commitment and job satisfaction with an R^2 of .103. Although both variables were significant in the prediction of intent to quit, the organizational commitment determinant was the best predictor by itself, explaining 9 percent of the variance.

Research Question 3

Do the Affective Variables intervene in the relationship between the predictor variables and intent to quit?

TABLE 8

REGRESSION OF AFFECTIVE VARIABLES ON INTENT TO QUIT

Variable	Beta	R^2	Change in R^2
Organizational Commitment	-.01317	.08784	.08784*
Job Satisfaction	-.04045	.10269	.01485*

*p < .001.

When the Predictor Variables were regressed against the Criterion Variable, they explained less than 9 percent of the variance (see Table 9). Those variables entering the equation included organizational level, variety, and feedback. (As previously noted, the Affective Variables explained 10 percent of the variance in the Criterion Variable.)

TABLE 9

REGRESSION OF PREDICTOR VARIABLES ON INTENT TO QUIT

Variable	Beta	R^2	Change in R^2
Organizational Level	-.16387	.04762	.04762*
Task Variety	-.04106	.07601	.02839*
Job Feedback	-.02502	.08658	.01057*

*p < .001.

When the Affective Variables were regressed against the Criterion Variable and the Predictor Variables were then added, the R^2 value did show a significant increase due to the organizational level measure entering the equation. Thus, in terms of the proposed model, the measures of organizational commitment, job satisfaction, and organizational level predicted 14 percent of the variance in the Criterion Variable (see Table 10).

TABLE 10

REGRESSION OF AFFECTIVE PREDICTORS ON INTENT TO QUIT

Variable	Beta	R^2	Change in R^2
Organizational Commitment	-.01113	.03774	.08785*
Job Satisfaction	-.04290	.10269	.01485*
Organizational Level	-.16359	.13795	.03526*

*$p < .001$.

In order to further validate the previous results, a stepwise regression was run with all of the variables available for entry. Again, organizational commitment, job satisfaction, and organizational level were found to be the significant predictors of intent to quit (see Table 11).

TABLE 11

STEPWISE REGRESSION OF ALL VARIABLES ON INTENT TO QUIT

Variable	Beta	R^2	Change in R^2
Organizational Commitment	-.01113	.08784	.08784*
Organizational Level	-.16359	.12127	.03343*
Job Satisfaction	-.04290	.13795	.01668*

* $p < .001$.

Summary

In the various regressions, it was found that the task characteristics were better predictors of the Affective Variables than were the personal factors. Organizational commitment and job satisfaction were the significant predictors in the regression of the Affective Variables on the Criterion Variable. Additionally, however, the personal factor of organizational level appeared to have a direct effect on the Criterion Variable instead of operating, as proposed, through the Affective Variables. These results were confirmed when all of the variables were regressed against the Criterion Variable and the same measures emerged as significant predictors of intent to quit.

CHAPTER IV

CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

Introduction

In the proposed model, the Affective Variables were hypothesized to serve as intervening variables in the relationship between the Predictor Variables and intent to quit. This proposed relationship was explored through the use of bivariate correlation, chi-square analysis, and multiple regression analyses. The results of these analyses were presented in Chapter III. Conclusions based on these analyses are presented in this chapter, followed by a discussion of the limitations of the present study and recommendations for future research.

Conclusions

The choice of the independent variables in the proposed model was supported by the correlational results which demonstrated that all of the Predictor and Affective Variables, with the exception of the sex measure, were negatively related to intent to quit. The significant correlations (all with $p < .01$) ranged from -.12 to -.29. A chi-square analysis revealed that the sex of the respondent had no effect on his or her intent to either quit or remain. Although the levels of significance for

the other variables were high, the nature of the turnover phenomenon is too complex to explain solely by the use of bivariate analysis (20:520). Therefore, the next step in examining the proposed model was multiple regression analyses.

Multiple regression procedures were applied to evaluate the research questions. In answering Research Question 1, "Are the Predictor Variables significantly related to the Affective Variables?," it was found that task characteristics, with the exception of task identity, were the best predictors of the Affective Variables in this study. Additionally, the personal factors of age and education were found to be significant predictors of job involvement as a measure of self worth. Also, organizational level was found to be a predictor of the participation factor of job involvement.

In summary, the task characteristics were found to be the better predictors of the Affective Variables. The personal factors were shown to have limited predictive value, even when regressed separately against the Affective Variables. These results are in concert with the findings of previous researchers, as noted in the literature review, that task characteristics would act on the Criterion Variable through the Affective Variables.

In answering Research Question 2, "Are the Affective Variables significantly related to intent to quit?,"

it was found that organizational commitment and job satisfaction were the significant predictors of intent to quit. Correlations between job involvement and intent to quit paralleled the literature review findings of Rabinowitz and Hall; however, the job involvement measures did not enter into the equation as predictors of intent to quit.

In answering the final research question, "Do the Affective Variables intervene in the relationship between the Predictor Variables and intent to quit?," a two-step regression procedure was accomplished. In this procedure, the organizational level measure emerged as a significant predictor of intent to quit above and beyond the effects of the Affective Variables. This seems to indicate that organizational level has a direct effect on intent to quit.

Therefore, it was determined that the Affective Variables did intervene in the relationship between the Predictor Variables and intent to quit. Specifically, an intervening effect was found for the Affective Variables of job satisfaction and organizational commitment between task characteristics (job autonomy, skill variety, job feedback, and task significance) and the Criterion Variable of intent to quit. The Predictor Variable of organizational level did not appear to act through the Affective Variables, but more directly on the Criterion Variable. The results of these analyses in terms of a revised model are presented in Figure 3.

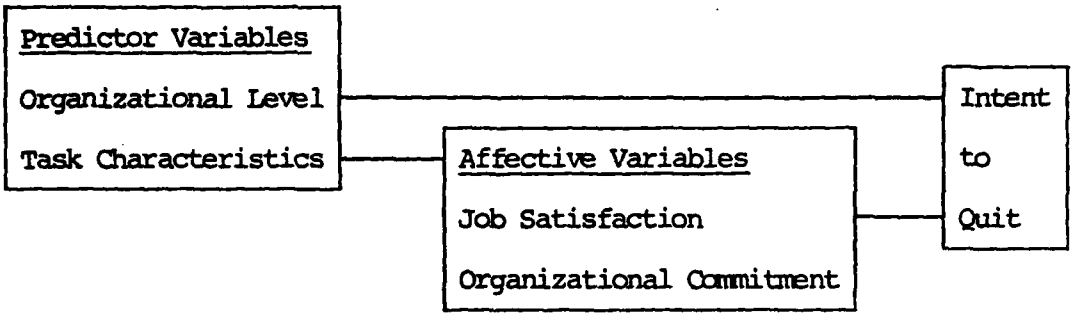

Fig. 3. Revised Model

One of the practical benefits of studies such as this one is the identification of factors that may lead to the reduction of turnover. Based on the results of this study, it should be possible to affect intent to quit by attempting to alter the person's levels of job satisfaction and organizational commitment. In order to effect changes in these measures, the organization should take affirmative actions to change the task characteristics of the job. If the person receives more autonomy, variety, task significance, and feedback, his level of satisfaction with the job and his organizational commitment should increase. These increases should, in turn, lead to reduced intent to quit. The organization is somewhat constrained in its ability to influence organizational level. However, the organization could take steps to change the rates of advancement within the organization.

Limitations

It must be noted that there are several limitations in the present study. The high unemployment levels of 1982 may have had a restricting effect on the variance in the intent to quit question. It may have been that, although the individual's levels of job satisfaction and organizational commitment were low, he may have decided to remain in the organization due to austere economic conditions, thereby restricting the amount of variance in the Criterion Variable.

Another possible limitation is the population measured for this study. Although an attempt was made to measure the entire population of a particular squadron, the respondents were all associated with one Air Force career area. This is not to say they held the same jobs, rather that they shared a common mission due to the type of equipment with which they dealt. It may be that these personnel were not representative of the larger population of the Air Force in general.

There was no attempt in the questionnaire to determine if the respondent was at or near the normal career termination time. The individual may have known that within the next year he would be retiring from the military, even if he were highly satisfied with his job and highly committed to the Air Force. Similarly, there was no attempt to determine if the individual came into the service with

the intention of separating after the initial commitment. Such a person may have high levels of satisfaction and commitment, yet he may have known from his initial enlistment that his life's goals did not include a career in the military. In either case, the individual's intent to quit could have been unrelated to the independent variables.

There may also have been a problem due to common method variance and response consistency tendencies. One of the first questions presented in the questionnaire was the intent to quit measure. Subsequent answers may have reflected an effort on the part of the individual to substantiate his response to the intent to quit measure. If this were the case, it would seem that the reported correlations with the intent to quit measure would be higher. It appears more likely that the low correlations observed might have been due to other unmeasured factors such as the poor job market.

Finally, there appeared to be somewhat of a problem with multicollinearity. The measures of job satisfaction and organizational commitment were correlated at the .64 level. This indicates the possibility that the two measures were explaining some of the same variance in the Criterion Variable. Although both measures entered the equation as significant predictors of intent to quit, it may be that more variance could be explained if the two measures looked at different aspects of job satisfaction

and organizational commitment in order to avoid a multi-collinearity problem.

Recommendations

In spite of the fact that the proposed model was based upon the results of previous research, only three variables emerged in the final regression analysis. These results support the validity of the three variables as predictors of intent to quit. On the other hand, the low amount of explained variance in intent to quit reinforces the need for expanding the pool of predictor variables included in turnover research. In addition, Mobley's recommendation (20:520) for the use of multiple regression analysis was substantiated because, although all variables (with the exception of sex) were related to intent to quit, only three emerged as significant predictors in multiple regressions.

The results of this study pose additional questions. In addressing the limitations, it is recommended that similar questionnaires in the future include questions of the individual's perceptions of the labor market conditions. An attempt should be made to further validate the present study by administering the questionnaire to other Air Force installations and career fields. An attempt should be made to identify those individuals who have reached career decision points; e.g., identify the length of total active

federal military service. In addressing problems of common method variance, the same type of questions should be asked at different points in the questionnaire in order to increase the reliability of the responses. Finally, in addressing the multicollinearity problem, the various measures should be tested for intercorrelations before being included in the questionnaire.

Another recommendation is to compare an Enlisted vs. Officer model of turnover. This recommendation is made due to the fact that enlisted personnel are contractually obligated for a period of time and may have different motivations to remain than officers who have a different set of contractual obligations. Perceived pay inequity is another area for exploration. As Porter and Steers noted (26:155), "Failure on the part of factory workers to attain their 'expected wage' was a better predictor of propensity to resign than was the amount of the wage itself." Finally, it is recommended that a longitudinal study be made as suggested by previous authors (20:520; 18:55-56).

APPENDICES

APPENDIX A

QUESTIONS EXCERPTED FROM AFIT SURVEY OF WORK ATTITUDES QUESTIONNAIRE

BACKGROUND INFORMATION

This section of the survey contains several items dealing with personal characteristics. This information will be used to obtain a picture of the background of the "typical employee."

Your age is:

- Less than 20
- 20 to 25
- 26 to 30
- 31 to 40
- 41 to 50
- 51 to 60
- More than 60

Your highest educational level obtained was:

- Non high school graduate
- High school graduate or GED
- Some college work
- Associate degree or LPN
- Bachelor's degree or RN
- Some graduate work
- Master's degree
- Doctoral degree

Your sex is:

- Male
- Female

You are a (an):

- Officer
- Enlisted
- Civilian (GS)
- Civilian (WG)
- Non-appropriated Fund (NAF employee)
- Other

Your grade level is:

1-2
3-4
5-6
7-8
9-10
11-12
13-15
Senior Executive Service

JOB SATISFACTION

Below are 5 items which relate to the degree to which you are satisfied with various aspects of your job. Read each item carefully and choose the statement below which best represents your opinion.

1 = Delighted
2 = Pleased
3 = Mostly satisfied
4 = Mixed (about equally satisfied and dissatisfied)
5 = Mostly dissatisfied
6 = Unhappy
7 = Terrible

How do you feel about your job?

How do you feel about the people you work with--your co-workers?

How do you feel about the work you do on your job--the work itself?

What is it like where you work--the physical surroundings, the hours, the amount of work you are asked to do?

How do you feel about what you have available for doing your job--I mean equipment, information, good supervision, and so on?

FUTURE WORK PLANS

Use the rating scale given below to indicate your future work plans with respect to the Air Force or whatever equivalent service/company to which you belong.

Within the coming year, if I have my own way:

1 = I definitely intend to remain with the Air Force.
2 = I probably will remain with the Air Force.
3 = I have not decided whether I will remain with the Air Force.

4 = I probably will not remain with the Air Force.
5 = I definitely intend to separate from the Air Force.

ORGANIZATIONAL COMMITMENT

Listed below are a series of statements that represent possible feelings that individuals might have about the company or organization for which they work. Use the following rating scale to indicate your own feelings about the particular organization for which you are now working.

1 = Means you strongly disagree with the statement.
2 = Means you moderately disagree with the statement.
3 = Means you slightly disagree with the statement.
4 = Means you neither agree nor disagree with the statement.
5 = Means you slightly agree with the statement.
6 = Means you moderately agree with the statement.
7 = Means you strongly agree with the statement.

I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.

I talk up this organization to my friends as a great organization to work for.

I feel very little loyalty to this organization.

I would accept almost any type job assignment in order to keep working for this organization.

I find that my values and the organization's values are very similar.

I am proud to tell others that I am part of this organization.

I could just as well be working for a different organization as long as the type of work was similar.

This organization really inspires the very best in me in the way of job performance.

It would take very little change in my present circumstances to cause me to leave this organization.

I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.

There's not too much to be gained by sticking with this organization indefinitely.

Often, I find it difficult to agree with this organization's policies on important matters relating to its employees.

I really care about the fate of this organization.

For me this is the best of all possible organizations for which to work.

Deciding to work for this organization was a definite mistake on my part.

JOB INVOLVEMENT

Use the following rating scale for the 15 statements to express your own feelings about your present job or work.

1 = Means you strongly disagree with the statement.
2 = Means you moderately agree with the statement.
3 = Means you slightly disagree with the statement.
4 = Means you neither disagree nor agree with the statement.
5 = Means you slightly agree with the statement.
6 = Means you moderately agree with the statement.
7 = Means you strongly agree with the statement.

I often have to use the skills I have learned for my job.

I often have a chance to try out my own ideas.

I often have a chance to do things on my own.

I often have a chance to do the kinds of things that I am best at.

I often feel at the end of the day that I've accomplished something.

The most important things that happen to me involve my work.

The most important things I do involve my work.

The major satisfaction in my life comes from my job.

The activities which give me the greatest pleasure and personal satisfaction involve my job.

I live, eat, and breathe my job.

I would rather get a job promotion than be a more important member of my club, church, or lodge.

How well I perform on my job is extremely important to me.

I feel badly if I don't perform well on my job.

I am personally involved in my work.

I avoid taking on extra duties and responsibilities.

JOB CHARACTERISTICS

How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

1---------2---------3---------4---------5---------6--------7

Very little; the job gives me almost no personal "say" about how and when the work is done.	Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives almost complete responsibility for deciding how and when the work is done.

To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

1---------2---------3---------4---------5---------6--------7

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.	My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.	My job involves doing the whole piece of work; from start to finish; the results of my activities are easily seen in the final product or service.

How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1---------2---------3---------4---------5---------6--------7

Very little; the job requires me to do the same routine things over and over again.	Moderate variety.	Very much; the job requires me to do many different things, using a number of different skills and talents.

In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1---------2---------3---------4---------5---------6--------7

Not very significant; the outcomes of my work are not likely to have important effects on other people.	Moderately significant.	Highly significant; the outcomes of my work can affect other people in very important ways.

Listed below are a number of statements which could be used to describe a job. You are to indicate whether each statement is an accurate or an inaccurate description of your job. Once again, please try to be as objective as you can in deciding how accurately each statement describes your job--regardless of whether you like or dislike your job.

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

The job requires me to use a number of complex or high-level skills.

The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.

The job is quite simple and repetitive.

This job is one where a lot of other people can be affected by how well the work gets done.

The job denies me any chance to use my personal initiative or judgment in carrying out the work.

The job provides me the chance to completely finish the pieces of work I begin.

The job gives me considerable opportunity for independence and freedom in how I do the work.

The job itself is not very significant or important in the broader scheme of things.

JOB FEEDBACK

Use the rating scale below to indicate how you feel about the following two questions.

1 = Very little
2 = Little
3 = A moderate amount
4 = Much
5 = Very much

To what extent do you find out how well you are doing on the job as you are working.

To what extent do you receive information from your superior on your job performance.

Use the same rating scale to indicate how much job feedback is present in your job.

The feedback from my supervisor on how well I am doing.

The opportunity to find out how well I am doing in my job.

The feeling that I know whether I am performing my job well or poorly.

APPENDIX B

DEMOGRAPHICS

RESPONDENTS' AGE

Category	Absolute Frequency	Percentage	
		Adjusted	Cumulative
Under 20	38	6.5	6.5
20-25	196	33.7	40.2
26-30	188	32.3	72.5
31-40	137	23.5	96.0
41-50	21	3.6	99.7
51-60	1	0.2	99.8
Above 60	1	0.2	100.0
TOTAL	582		

RESPONDENTS' SEX

Category	Absolute Frequency	Percentage	
		Adjusted	Cumulative
Male	526	90.8	90.8
Female	53	9.2	100.0
Missing	3	-	-
TOTAL	582		

RESPONDENTS' EDUCATION

Category	Absolute Frequency	Percentage	
		Adjusted	Cumulative
Non high school graduate	6	1.0	1.0
High school graduate or GED	204	35.1	36.1
Some college work	220	37.8	73.9
Associate degree or LPN	34	5.8	79.7
Bachelor's degree or RN	22	3.8	83.5
Some graduate work	39	6.7	90.2
Master's degree	57	9.8	100.0
Doctoral degree	-	-	-
TOTAL	582		

RESPONDENTS' ORGANIZATIONAL LEVEL

Category	Absolute Frequency	Percentage	
		Adjusted	Cumulative
Airman Basic-Sergeant	215	37.6	37.6
Staff Sergeant-Technical Sergeant	211	36.9	74.5
Master Sergeant-Chief Master Sergeant	43	7.5	82.0
Second and First Lieutenants	15	2.6	84.6
Captains and Majors	83	14.5	99.1
Lieutenant Colonel and above	5	0.9	100.0
Missing	10	-	-
TOTAL	582		

APPENDIX C

PEARSON CHI-SQUARE VALUES

ABSOLUTE FREQUENCIES

Category	Males	Females	TOTALS
Definitely intend to remain	294	28	322
Probably will remain	94	7	101
Have not decided	71	9	80
Probably will not remain	38	4	42
Definitely intend to separate	28	5	33
TOTALS	525	53	578

$$\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{c} \frac{(O_{ij}-E_{ij})^2}{E_{ij}}$$

Pearson Chi-Square

Test Statistic = 2.5392

Critical Value = $\chi^2_{(r-1)(c-1);.05} = \chi^2_{4;.05} = 9.4877$

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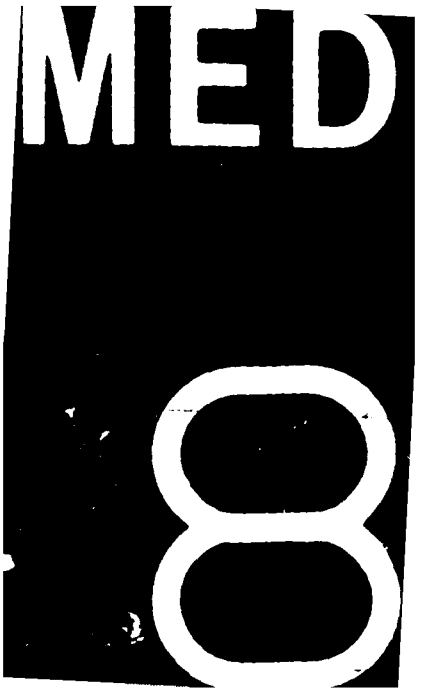
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