The purposes of this study were to compare first- and second-year career-ladder teachers on the basis of their levels of teacher commitment to schools, faculty morale, and job satisfaction and to analyze the variables that explain commitment, morale, and job satisfaction. Five hundred teachers, 250 first-year career-ladder teachers and 250 second-year career-ladder teachers, were selected at random from a midwestern state. The following conclusions were drawn: (1) differences exist between first-year and second-year career-ladder teachers concerning their level of commitment; (2) the variables of commitment, morale, and job satisfaction are predicted by educational level, gender, district size, and age; (3) first-year career-ladder teachers do not exhibit higher levels of morale, job satisfaction, and commitment than second-year career-ladder teachers; and (4) career-ladder programs are not an adequate means to develop teacher commitment, morale, and job satisfaction. Appended are six tables and 42 references. (SL)
Organizational Incentives, Teacher Commitment, Morale, and Job Satisfaction: Is the Program Achieving its Goals?

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Abstract

The purpose of this study was twofold: 1) to explore the levels of teacher commitment to schools, faculty morale, and job satisfaction, between first-year career ladder teachers and second-year career ladder teachers, and 2) to analyze the variables that explain commitment, morale, and job satisfaction. Five hundred teachers, 250 first-year career ladder teachers and 250 second-year career ladder teachers were selected at random from a midwestern state. Multivariate analysis (MANOVA) and multiple regression were used to analyze the data.
Administrators and policymakers are seriously concerned about the personal linkages between employees and their organization. For example, Yankelovich (1983) reported that 6 out of 10 Americans do not work as hard as they used to suggesting a serious lack of employee commitment to the organization. Organizations have developed motivational techniques such as merit pay to attack this lack of commitment. This lack of employee commitment, however, is not only present in private industry but also in educational organizations. As a result, educational organizations (K-12 schools in specific) have also developed reward systems to motivate teachers such as career ladders.

Yet, the potential effects of career ladders on teacher commitment, morale, and job satisfaction have not been empirically studied. For instance, Bacharach, Conley, and Shedd (1986) analyzed career ladders as a policy, Kottkamp, Provenzo, and Cohn (1986) examined teacher attitudes about career ladders, and Rosenholtz and Smylie (1984) analyzed the potential effects of programs proposed in the school reform movement including career ladders. Therefore, the purpose of this study is to analyze the levels of commitment to school, morale, and job satisfaction between first-year career ladder and second-year career ladder teachers.

Related Literature

Career ladders have been defined in numerous ways. Malen and Hart (1987) defined career ladders as "a series of stable and
promotional positions with expanded authority and influence over system-wide decision making." Lortie (1986) also defined career ladders as an ongoing opportunity for teachers to assume new roles and greater authority, including "compensation commensurate with the new roles" (p. 572). Bacharach et al. (1986) viewed career ladders as growth-oriented responsibilities with noticeable differentiation between stages. Finally, Murphy and Hart (1986) conceptualized career ladders as a framework for planning teaching careers within which work is redefined.

The development of career ladders arose "from the differentiated staffing experiments of the late 1960s and early 1970s (Freeburg, 1985). Differentiated staffing called for flexibility and change in the traditional educational setting. Teachers were ranked and assigned responsibilities according to their competence. School schedules, size and types of classroom, and administrative hierarchies are all redefined (Packard, 1986). Furthermore, teachers were rewarded with higher salaries and status for their years of experience and additional college/university studies.

Career ladder programs in their present form tend to be multi-tiered from entry level through several intermediate steps to master teacher. Most programs require experience at each level and all programs have a teaching performance criteria. Each tier on the ladder usually means additional salary, more stringent qualifiers and increased responsibility. Responsibilities may include extended contracts, mentorships,
research, professional development, school leadership, and student achievement (Cornett, 1985; Murphy & Hart, 1986).

Rosenholtz (1986) indicated that an increase of teacher responsibilities will increase the psychic rewards of teaching and likelihood of teachers remaining in the profession. She indicated that teachers want the opportunity to assume responsibilities commensurate with their talents and abilities; they wish to be recognized for a job well done.

In a comprehensive study of career ladders, Hart (1987) identified some of the effects of career ladders on teacher work attitudes. For example, she discovered that experience correlated negatively with attitudes about the tasks and influence of career ladder teachers. Moreover, she concluded that teachers participating in career ladders assessed the quality of their work more positively than teachers not involved in career ladders.

Overall, teachers felt that career ladders are a step towards better working conditions. Whether these incentive programs influence teachers to work harder than before is not yet known. Nonetheless, it has been argued that career ladders motivate teachers to work harder at being effective (Hawley, 1985). Presumably, motivation is increased because career ladder programs are designed to enlarge teachers' responsibilities and "introduce the opportunity for promotions into their otherwise unstaged careers" (Johnson, 1986).
Career ladder programs are seemingly simple answers to providing financial incentives, varied work and advancement for the veteran teacher (Johnson, 1986). Properly implemented, these programs may enhance teachers' commitment to schools, increase morale and reduce job dissatisfaction.

Theoretical and Research Background

The academic literature discusses two types of organizational commitment: behavioral and attitudinal. Behavioral commitment is the intent to behave in some way such as continuing to be an employee of an organization (O'Reilly & Caldwell, 1981). Attitudinal commitment, on the other hand, refers to the acceptance of the organization's values, willingness to exert effort on behalf of the organization, and the desire to remain an employee of the organization (Porter, Steers, Mowday, & Bovlian, 1974). The present study deals with attitudinal commitment.

Prior research on attitudinal commitment focused on antecedents and outcomes. For instance, studies conducted by Steers (1977) related highly committed employees to higher performance although another study (Angle & Perry, 1981) did not find a significant commitment-performance relationship. Likewise, previous research linked commitment and turnover; more committed employees are less likely to separate from the organization (Porter & Steers, 1973). That research also showed that commitment is associated with increases in employees' desire and intent to remain with an organization. Furthermore,
committed employees are absent less, and tardiness is more prevalent in less committed employees (Angle & Perry, 1981). Commitment may also be a useful criterion of organizational effectiveness. For example, research indicated that a positive relationship exists between organizational adaptability and organizational commitment (Morris and Sherman, 1981).

Researchers also identified factors associated with commitment. Hall, Schneider, and Nygren (1970) summarized the determinants of commitment and categorized the findings into three areas: personal characteristics, job characteristics, and work experiences. Personal characteristics are variables that describe the individual. Commitment has been related to age, opportunities for advancement, education, sense of competence (Morris & Sherman 1981), job involvement, and so forth (Sheldon, 1971). Job characteristics also influence commitment.

For example, commitment was associated with the characteristics of job challenge, amount of feedback provided on the job, opportunities for social interaction (Buchanan, 1974), and role conflict (Morris & Sherman, 1981). Similarly, commitment is also influenced by the nature and quality of work opportunities (Steers, 1977). For instance, commitment was associated with organizational dependability and trust, perceptions of personal investment, and rewards or realization of expectations (Buchanan, 1974). Other research has also indicated that commitment to teaching as a profession is associated with intrinsic rewards (Bredeson, Kasten, & Fruth, 1983). Finally,
commitment has been also found to be related to personal and job characteristics as well as the self identity invested in the teaching role (Snyder & Spreitzer, 1984). Consequently, the effect career ladders may have on teacher commitment needs investigation.

On the other hand, the concept of morale has been explained in different ways. For instance, Bentley and Remple (1970) conceptualized morale as "the extent to which an individual's needs are satisfied and the extent to which the individual perceives satisfaction as stemming from the total job situation" (p. 1). Baldridge, Curtis, Ecker, and Riley (1978) also conceptualized morale as the degree to which faculty members trust their administrators, exhibit job satisfaction, identify strongly with their institutions, and the degree to which faculty members refrain from taking militant positions on critical issues. However, these explanations of morale are broad and thus difficult to measure. This study made the assumption that morale is an employee attitude toward the work conditions and services, personnel policies and practices, and faculty-administrator relationships.

The research on morale is rather sparse. However, it is clear that teacher morale is a critical factor in any school district. For instance, Anderson (1953) established that when high morale exists, teacher productivity increased. He concluded that teachers in secondary schools whose pupils achieved relatively high scholastically have higher morale than do
teachers in schools with relatively low pupil achievement. Koura (1963) also found that student achievement increased under teachers with high morale and decreased under teachers with low morale. Therefore, it is plausible to assume that morale does make a difference in pupil scholastic achievement. Apparently teachers with relatively high morale may be expected to teach more effectively than teachers with low morale.

Moreover, morale has been associated with absenteeism. Shaw (1980) indicated that teacher morale differed significantly in schools with high, average, and low absenteeism. He also indicated that teacher perceptions of principal leadership in high and low morale schools differed as well. To sum up, morale is an important variable that influences student achievement, absenteeism, and teacher perceptions of leadership. Another variable closely related to morale is that of job satisfaction.

Several studies examined the job satisfaction of teachers. For example, the school hierarchy has been linked with job satisfaction (Ratsoy, 1973) suggesting that the degree of bureaucracy was related to job satisfaction. However, other research concluded that clear job responsibilities increase job satisfaction (Miskel, Fevurly, & Stewart, 1979). A classic study that dealt with teacher job satisfaction is that of Lortie (1975), where he focused on the teacher-student interaction as a source of satisfaction and suggested a relationship between satisfaction and motivation. Job satisfaction has been related to work motivation (Anderson & Iwanicki, 1984; Miskel, McDonald,
& Bloom, 1983) and to school climate (Miskel et al., 1983; Miskel et al., 1979) where open, participative climates fostered high levels of teacher job satisfaction. Furthermore, Holdaway (1979) showed that overall satisfaction was most highly related to satisfaction with achievement, career-orientation, recognition, and stimulation. Bridges (1980), on the other hand, indicated, that job satisfaction and absenteeism among elementary school teachers are related, albeit weakly. Other studies have examined job satisfaction. However, most of them (if not all) indicate that job satisfaction is an important factor associated with organizational performance and other outcomes.

In brief, the literature on commitment indicates that a committed employee tends to perform at higher levels than a non-committed employee. Moreover, the literature on morale suggests that high morale is positively associated with and tends to generate high levels of student achievement. It is also plausible to assume that a teacher satisfied with his/her job tends to be more productive than an unsatisfied teacher. The literature on career ladders implies that such programs may motivate teachers, increase morale, and derive some sort of job satisfaction. However, the research has not substantiated such a claim. Therefore, this study tested the following propositions.

1. Career ladder teachers experience higher levels of commitment to school, morale, and job satisfaction than non-career ladder teachers.
2. What are the personal (e.g., age, gender) and organizational variables (e.g., tenure) that explain teacher commitment, morale and job satisfaction?

Methodology

This study was carried out in a midwestern state using survey research methodology. Three standardized questionnaires were self-administered to 500 teachers from 20 school districts. The instruments were administered for two consecutive years: 1987 and 1988. All teachers were selected at random from 20 medium size districts. Therefore, the population of the study was defined as teachers from medium school districts in such a midwestern state. The unit of analysis was the aggregate score for first-year career-ladder teachers and second-year career ladder teachers.

The career-ladder teachers participated in a state-sponsored program which was completely voluntary and designed within the general guidelines set by the State Department of Education. Once a district decides to participate in the career ladder program, not all teachers participate in the program. However, the districts selected for this study had at least 30 teachers (within the district) engaged in the ladder program.

Measures

The constructs used in this study included: organizational commitment, faculty morale, and job satisfaction. Organizational commitment was defined as the relative strength of an individual's identification with and involvement in a particular
organization. The Organizational Commitment Questionnaire (OCQ) developed by Mowday, Steers, and Porter (1979) was used. Its reliability ranged from .82 to .93. This instrument has been tested with professional groups, including school teachers and administrators. The results have provided evidence that the OCQ is valid and reliable in measuring teacher and administrator commitment. It contains 15 items measured on a Likert-type scale. Examples of the items include:

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

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

Faculty morale is defined as teachers' attitudes toward personnel policies and practices, work conditions and services, and faculty-administrator relationships. That is, teacher attitudes are shaped according to the degree to which faculty-administrator relationships, personnel policies, and work conditions and services are perceived to be adequate. The Faculty Morale Scale (FMS) was used in this study. This instrument was tested for reliability purposes with professional groups such as teachers. Its internal consistency measure is $r = .89$. It was also correlated with a measure of employee commitment and its correlation is a moderate to strong correlation (.68) indicating that the FMS has construct validity.
The FMS contains 20 items measured on a Likert-type scale. Two examples of the items include:

1. The administration is concerned with faculty working conditions.
2. There is an adequate balance of work among the faculty of this school.

Job satisfaction was described as the degree to which employees have a positive affective orientation toward employment by the organization. The Minnesota Satisfaction Questionnaire (MSQ) was used in this study. This instrument is valid (Weiss, Dawis, England, & Lofquist, 1967) and reliable. It has been used with professional employees such as teachers and administrators along with other groups. Some studies have shown that the MSQ is a fairly consistent measure of job satisfaction and that it has construct validity. Finally, its reliability coefficient for the index of general job satisfaction is .90. The instrument includes 20 items measured on a Likert-type scale. Two examples of these items are:

This is how I feel about my present job:

1. The way my job provides for steady employment.
2. The chance to try my own methods of doing the job.

There are some limitations to this study. For example, the difference between job satisfaction and morale is a difficult one to project. That is, job satisfaction is one of the elements of faculty morale. However, the way morale was conceptualized in this study is broader than job satisfaction which relates to the
specific task the individual performs. Furthermore, in this study morale is viewed as a group phenomena rather than as an individual attitude as is the case with job satisfaction.

Finally, school districts which initiate career ladder programs are likely to be more lively, innovative, and staffed with better faculties than those which follow the status quo. Career ladders by definition are merit systems like university gradations. Is it the additional money and prestige or is it the opportunity to do more worthwhile things that contributes to improved morale, job satisfaction, and commitment? Therefore, these characteristics of career ladder schools may affect the outcome of this study.

Analytical Procedures

The purpose of this study was (1) to compare first-year career ladder and second-year career ladder teachers concerning their level of morale, commitment to school, and job satisfaction, and (2) to analyze the variables that explain morale, commitment, and job satisfaction. The recommended procedures for such tasks are multiple analysis of variance, and multiple regression analysis.

Results

To accomplish the first research objective, a manova test was conducted using group membership as the independent variable and commitment, morale, and job satisfaction as the dependent variables. Means and standard deviations relating to the dependent variables are presented in Table 1. First-year career
ladder teachers scored higher than second-year career ladder teachers on the variables of commitment and job satisfaction. However, no differences were observed as one examines the variable of morale.

Overall, the study findings suggest that differences in commitment levels exist between first- and second-year career ladder teachers. Furthermore, the variables of commitment, job satisfaction, and morale are explained by similar variables.

Using group membership (first- and second-year career ladder teachers) as the independent variable, multivariate analysis of variance (MANOVA) was used to test for differences in commitment, job satisfaction, and morale (hypothesis 1). Results of the first omnibus MANOVA test suggested that a statistically significant difference in commitment, job satisfaction, and morale existed between first- and second-year career ladder teachers (see Table 2).

Post-hoc analysis completed with univariate F-tests revealed statistically significant differences in organizational commitment ($F[1,850] = 17.704, p < .000$) between the two groups. Teachers from the first-year career ladder were significantly more committed to the goals of the school and more willing to work for it than were teachers from the second-year group. On the other hand, there were no differences between the two groups on their levels of morale and job satisfaction.
To understand which personal and organizational variables best explained teacher commitment, job satisfaction, and morale, each dependent variable was regressed on the following predictors: 1) district size, 2) total teaching experience, 3) gender, 4) age, and 5) educational level. Inspection of the correlation matrix reveals statistically significant intercorrelations among predictor variables due to the large sample size (n = 850). However, multicollinearity is not a problem because the magnitudes of correlations are weak (r = 18 or less) (see Table 3).

The results suggested that gender, educational level and district size are predictors of teacher commitment. It is clear that women have higher levels of commitment than males do. Moreover, the results suggest that educational level is negatively correlated with levels of commitment. Teachers who have a master's degree or plus will be predicted to have lower levels of organizational commitment. Finally, district size was also negatively correlated with levels of commitment. This study suggests that the smaller the district the higher the level of teacher commitment to school (see Table 4).
Concerning the variable of faculty morale, this study suggests that educational level and age are the more potent predictors of morale. The higher the educational level the higher the level of faculty morale. Similarly, the older the teacher the higher the level of morale (see Table 5).

Finally, the variable of job satisfaction is mostly explained by the variable age. It appears that the older the teacher the more he/she is satisfied with the job (see Table 6).

Conclusions

Based on the foregoing discussion, the following conclusions might be drawn. First, there is enough evidence to conclude that differences exist between first-year career ladder teachers and second-year career ladder teachers concerning their levels of commitment to the school as an organization. Teacher commitment decreased from one year to the next. Furthermore, the evidence suggests that no significant differences exist between the two groups regarding their levels of morale and job satisfaction. Therefore, these findings imply that
organizational incentives may not be as effective at least in educational organizations, in promoting commitment, morale, and job satisfaction as the management literature portrays them. This view has been supported elsewhere (Reyes, 1988a) suggesting that schools may increase the levels of teacher commitment and job satisfaction using intrinsic reward structures, like public recognition (e.g., the "teacher of the year award").

A second conclusion that may be drawn from this study is that the variables of commitment, morale, and job satisfaction are predicted by educational level, gender, district size, and age. These findings are consistent with the literature. For example, Morris and Sherman (1981) suggested that educational level is inversely related to commitment. They argued that the inverse relationship is present because the organization does not fulfill the employees' needs anymore. If the school does not fulfill the employees' needs anymore, then school authorities should be seriously concerned with the negative relationship between educational level and commitment, especially in light of certification requirements imposed on teachers. Teachers are required to take continuing education units (CEU) to maintain certification; CEUs are typically graduate courses. As a result, teachers increase continuously their educational level. Therefore, school authorities should think of innovative ways of getting teachers involved in the decision-making structure of the school system. For example, teachers along with administrators should recommend policy to school boards concerning curricular or
personnel matters. Moreover, school authorities must not maintain the top-down philosophy of administration. Teachers have to be viewed as equals and administrators first among equals engaged in facilitating and leading the education of children.

Concerning district size, teachers' level of commitment, increased as their district size increased. That is, the smaller the district size the higher the level of teacher commitment. More research is needed to ascertain this finding. However, school policy makers at large schools may consider the issue of school size in debating policy matter. Would it be better to have smaller districts than large highly bureaucratized districts? More research on this area should address such a question.

Finally, age is another variable linked to commitment, morale, and job satisfaction, which is consistent with the current literature (McPherson, Crowson, & Pitner, 1986). It appears that older faculty experience higher levels of commitment, morale, and jobs satisfaction than younger employees. This phenomenon has implications for administrators. For instance, older teachers are mostly tenured and not expected to leave the organization. Therefore, it is imperative that school administrators have staff development programs to maintain younger teachers interested and motivated in school matters.

Concerning the broader issue of career ladders, these findings have implications for school policy making. The question regarding the legitimacy of the career ladders as a
policy needs to be addressed. That is, is the investment in career ladders worthwhile? The data suggest that first-year career ladder teachers do not exhibit higher levels of morale, job satisfaction, and commitment than second-year career ladder teachers.

If one of the underlying purposes of career-ladder programs are to increase commitment, morale, and job satisfaction, it is apparent in this study that they do not accomplish such goals. Therefore, considering the findings of this study one may tentatively conclude that career ladder programs are not adequate means to develop teacher commitment, morale, and job satisfaction.

Given the large amounts of money needed to implement a career ladder policy and the lack of effect on teacher commitment, morale, and job satisfaction, school administrators, boards of education, and departments of education need to consider other ways to motivate teachers at work. For example, would it be a better policy to institute a day-care center within the school district to serve teachers who have small children? Would it be of benefit to the district to establish a wellness program for teachers? What about a counseling center for teachers? Would it be of any benefit to establish therapeutic sessions for those teachers who are burned out and do not contribute in any way to student development? Questions such as these need to be entertained by school administrators and policy
makers; they should consider programs which may contribute to teacher motivation at work.

04pr3
Table 1

Means and Standard Deviations of Career and Non-Career Ladder Teachers on Commitment, Morale, and Job Satisfaction

<table>
<thead>
<tr>
<th></th>
<th>Commitment</th>
<th>Morale</th>
<th>J. Satisf</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Year</td>
<td>63.02</td>
<td>55.92</td>
<td>74.09</td>
</tr>
<tr>
<td>Career Ladder Group</td>
<td>*(11.93)</td>
<td>*(8.00)</td>
<td>*(11.99)</td>
</tr>
<tr>
<td>Second-Year</td>
<td>59.32</td>
<td>55.35</td>
<td>73.73</td>
</tr>
<tr>
<td>Career Ladder Group</td>
<td>*(9.15)</td>
<td>*(8.19)</td>
<td>*(11.31)</td>
</tr>
</tbody>
</table>

Note: *Standard deviations.
Table 2

**Manova Omnibus Test for Hypothesis 1**

<table>
<thead>
<tr>
<th>Root No 1</th>
<th>Eigenvalue</th>
<th>Canon Cor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.048</td>
<td>.215</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
<th>Approx F</th>
<th>Error DF</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pillais</td>
<td>.04643</td>
<td>13.173</td>
<td>3.0</td>
<td>.000*</td>
</tr>
<tr>
<td>Hotellings</td>
<td>.04645</td>
<td>13.173</td>
<td>3.0</td>
<td>.000*</td>
</tr>
<tr>
<td>Wilks</td>
<td>.95857</td>
<td>13.173</td>
<td>3.0</td>
<td>.000*</td>
</tr>
<tr>
<td>Roys</td>
<td>.04643</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Statistically significant

Univariate F-tests with (1,850) D.F.

<table>
<thead>
<tr>
<th></th>
<th>Err. SS</th>
<th>Error MS</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
<td>86843.69</td>
<td>102.16</td>
<td>24.579</td>
<td>.000*</td>
</tr>
<tr>
<td>Morale</td>
<td>56330.86</td>
<td>66.27</td>
<td>.971</td>
<td>.325</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>113250.35</td>
<td>133.23</td>
<td>.203</td>
<td>.652</td>
</tr>
</tbody>
</table>

*Statistically significant
Table 3

**Correlation Matrix of Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Dst size</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Tot exp</td>
<td>.107*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#3 Gender</td>
<td>.012</td>
<td>-.009</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Age</td>
<td>.083</td>
<td>.7306*</td>
<td>.051</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#5 Ed levl</td>
<td>.157*</td>
<td>.122*</td>
<td>-.048</td>
<td>.029</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Morale</td>
<td>.016</td>
<td>.040*</td>
<td>.055</td>
<td>.083</td>
<td>-.098*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Commit</td>
<td>.095*</td>
<td>.059</td>
<td>.151*</td>
<td>.081</td>
<td>-.107*</td>
<td>.168*</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>8 S :isf</td>
<td>.009</td>
<td>.054</td>
<td>.065</td>
<td>.096*</td>
<td>-.057</td>
<td>.170*</td>
<td>.144*</td>
<td>1.00</td>
</tr>
</tbody>
</table>

N = 856

#These variables were coded as dummy variables. See Pedhzaur (1978) for specifics.

*Sig p < .05
<table>
<thead>
<tr>
<th>Indep. Variables</th>
<th>SE B</th>
<th>Beta</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>.831</td>
<td>.145</td>
<td>16.87</td>
<td>.0000</td>
</tr>
<tr>
<td>Ed levl</td>
<td>.725</td>
<td>-.121</td>
<td>11.39</td>
<td>.0008</td>
</tr>
<tr>
<td>Gender</td>
<td>.687</td>
<td>.115</td>
<td>10.41</td>
<td>.0013</td>
</tr>
<tr>
<td>Dst size</td>
<td>55.561</td>
<td>775.03</td>
<td></td>
<td>.0000</td>
</tr>
</tbody>
</table>

Multiple R = .216  
R Squared = .046

Incremental F-test

\[
R^2 [\text{Gender, Ed levl, Dist size, Tot exp, Age}] = .2162
\]
\[
R^2 [\text{Ed levl, Dist size, Tot exp, Age}] = .1838
\]
\[
R^2 [\text{Dist size, Tot exp, Age}] = .1526
\]
Unique variance added by gender and educational level = .0684

F for differences between R^2 values \([3,766]\) = 12.523*

*Sig at p < .05
Table 5

Regression of Selected Variables on M-rale

<table>
<thead>
<tr>
<th>Indep. Variables</th>
<th>SE B</th>
<th>Beta</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed lev1</td>
<td>.587</td>
<td>-.100</td>
<td>7.805</td>
<td>.0053*</td>
</tr>
<tr>
<td>Age</td>
<td>.034</td>
<td>.08</td>
<td>5.862</td>
<td>.0157*</td>
</tr>
<tr>
<td>(Constant)</td>
<td>11.688</td>
<td>54.688</td>
<td>1045.91</td>
<td>.000</td>
</tr>
</tbody>
</table>

Multiple R = .1305
R Squared = .0175

Incremental F-test

R² [Ed lev1, Dist size, Tot exp, Gender, Age] = .1306
R² [Dist size, Tot exp, Gender, Age] = .0976
Unique variance added by educational level = .033
F for differences between R² values F[2,765] = 6.634*

*p < .01
Table 6

**Regression of Selected Variables on Job Satisfaction**

<table>
<thead>
<tr>
<th>Indep. Variables</th>
<th>SE B</th>
<th>Beta</th>
<th>F</th>
<th>Sig of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (Constant)</td>
<td>0.484</td>
<td>0.0963</td>
<td>7.183</td>
<td>0.0075</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1114.282</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Multiple R = 0.0963  
R Squared = 0.0093
References


