JOB SATISFACTION OF AGRICULTURAL EDUCATION FACULTY: A CONSTANT PHENOMENA

Blannie E. Bowen, Rumberger Professor of Agriculture
Rama B. Radhakrishna, Former Graduate Student
The Pennsylvania State University

Numerous researchers have investigated the concept of job satisfaction and factors that explain how satisfied workers are with their positions. Much of the job satisfaction research has focused on employees in the private sector (Niehouse, 1986; Lacy, Bokemeier & Shepard, 1983; Lawler & Porter, 1968; Herzberg et al. 1957). These researchers have found that a variety of factors influence the job satisfaction of employees. Other researchers have examined the job satisfaction of professionals such as extension agents and secondary agricultural education teachers (Mallilo, 1990; Cochran, Lawrence, Odell & Gartin, 1989; Van Tilburg, 1987, 1988; Kotrlik & Malek, 1986; Grady & Burnett, 1985; Keffer, 1976; Warner, 1973). The consensus reached in most of the above studies was that the agents and teachers are satisfied with their positions.

Other researchers have examined the job satisfaction of university faculty. Blackburn, Horowitz, Edington, and Klos (1986) have found that job related stress is positively related to job related strain which then negatively impacts the health, life satisfaction, and job satisfaction of university faculty and administrators. Personal factors, social support systems, and health fitness of faculty and administrators moderate the negative relationships between job strain, health, life satisfaction, and job satisfaction (Blackburn, Horowitz, Edington, and Klos, 1986). In addition, Sorcinelli and Near (1989) found that the job satisfaction of university faculty is independent of gender and positively correlated with academic rank. Sorcinelli and Near (1989) also found that job satisfaction is positively related to faculty's life satisfaction and their non-work satisfaction.

Four studies were identified that focused on the job satisfaction of university faculty in agriculture and home economics. Schultz (1977) found that home economics faculty in institutions with 500 or more home economics undergraduates were neither satisfied nor dissatisfied with their salary and somewhat satisfied with their administration and job pressures. Bowen (1980) found that agricultural education faculty were very satisfied with their positions. In the Bowen study, demographic and situational variables such as age, type of institution, academic rank, years of high school and college teaching experience, size of the faculty, and tenure status were not related to the job satisfaction of agricultural education faculty. Bowen (1980) concluded that the Herzberg et al. (1957) theory did not hold true for agricultural education faculty because both the motivator and the hygiene factors tended to explain the job satisfaction of agricultural education faculty. Blezek (1987) also tested the Herzberg motivator-hygiene theory using College of Agriculture faculty at the University of Nebraska. Blezek's findings confirmed the validity of the theory because the Nebraska faculty were more satisfied with the motivator factors than they were with any of the hygiene factors. Finally, Cowie, Gartin, Odell, and Lawrence (1989) found that agriculture and forestry faculty at West Virginia University were very satisfied with their positions.

During the 1980s. few additional studies were conducted to assess the job satisfaction of agricultural education faculty. In addition, no study has been conducted to determine if the job satisfaction of this group of faculty tends to be a constant phenomenon.

Theoretical Model and Hypotheses

The primary purpose of this study was to determine if the job satisfaction of agricultural education faculty tends to be a constant phenomenon. A secondary purpose was to assess the applicability of the Herzberg et al. (1957) motivator-hygiene theory to agricultural education faculty. The Herzberg theory suggests that job satisfaction and job dissatisfaction are two independent constructs, each influenced by a different set of factors. Figure 1 depicts the Herzberg et al. (1957) dual factor model and the variables that theoretically should explain each construct.

Based on the Herzberg et al. (1957) theory and the findings of the Bowen (1980) study, the following hypotheses were developed for testing at the .05 alpha level:

1. Job satisfaction is a constant phenomenon as indicated by no significant difference between the 1980 and 1990 levels of job satisfaction for agricultural education faculty.

Journal of Agricultural Education
Volume 32, Number 2, pp. 16-22
DOI: 10.5032/jae.1991.02016

2. The job satisfaction of agricultural education faculty will not be related to the faculty's age, tenure status, type of institution, and years of high school or college teaching experience.

3. The Herzberg motivator-hygiene theory will not apply to agricultural education faculty because both the motivator and the hygiene factors will explain significant amounts of variance in the job satisfaction of agricultural education faculty.

Hygiene Factors		**Motivator Factors**
Interpersonal Relations	|	Achievement
Policy and Administration	|	Advancement
Salary	|	Recognition
Supervision-technical	|	Responsibility
Working Conditions	|	The Work
Job Dissatisfaction	|	**Job Satisfaction**

Figure 1. Herzberg et al. (1957) Motivator-Hygiene Theory of Job Satisfaction.

Methods and Procedures

The population for the study included all faculty listed in the Directory of Teacher Educators in Agriculture, 1989-1990 (Whaley, 1989). The study was limited to 307 faculty who held assistant professor or higher academic rank with responsibilities in teacher education, extension education, agricultural mechanics, and/or agricultural communications. Faculty with 100% administrative appointments outside of agricultural education (director of resident instruction, deans, etc.) were excluded from the population. The population was stratified by type of institution (1862 land grant, 1890 land grant, and non-land grant) before a random sample of 154 faculty was chosen for the study. This sample size reflects a 5% margin of error with a 5% risk of drawing a bad sample (Krejcie & Morgan, 1970).

A questionnaire that Bowen (1980) developed was used to collect data for the study. Section one of the questionnaire consisted of the Faculty Job Satisfaction/Dissatisfaction scale (Wood, 1973) which assessed the 10 dimensions of the Herzberg motivator-hygiene theory: achievement, advancement, interpersonal relations, policy and administration, recognition, responsibility, salary, supervision, the work itself, and working conditions. Section two consisted of the Brayfield-Rothe Job Satisfaction Index (Brayfield & Rothe, 1951) as modified by Warner (1973). The final section of the questionnaire consisted of items that measured selected demographic characteristics and the nature of faculty appointments.

Five agricultural and extension education faculty at The Pennsylvania State University judged the questionnaire to have acceptable content and face validity. Using data collected from the sample, a Cronbach's alpha reliability coefficient of .97 was obtained for the Wood (1973) instrument. In addition, the 10 subscales on the Wood instrument had good reliability (Cronbach's alpha ranged from .72 - .97). The Brayfield-Rothe Job Satisfaction Index also had good reliability (Cronbach's alpha = .87).

The questionnaire was mailed to the sample on February 16, 1990. A follow-up letter and another copy of the questionnaire were mailed to subjects who did not respond after three weeks. When the data collection period ended two weeks later on March 23, 1990, usable data had been received from 128 of 154 faculty included in the sample (83%). As suggested by Miller and Smith (1983), subjects who responded the first two weeks of the data collection period (early) were compared with those who responded the last three weeks (late). The 94 early and 34 late respondents were not significantly different ($p>.05$) on Herzberg's 10 motivator-hygiene factors, their level of job satisfaction, major responsibility, highest degree, age, academic rank, whether or not they were on a tenure track appointment, whether or not they were tenured, type of institution, and total years as a faculty member.

Findings

Almost 45% of the respondents were professors, 31% associate professors, and 24% assistant professors. Respondents had been in their present positions a mean of 13.6 years. Almost 88% had taught high school agriculture (mean of 5.4 years). Twenty respondents had been employed as county extension professionals (mean of 4.8 years). All but seven respondents held resident instruction appointments (mean time of appointment = 76.5%). Fifty respondents held experiment station appointments (mean time of appointment = 21.4%) and 24 respondents held extension appointments (mean time of appointment = 37.4%). Two-thirds of the respondents indicated that teacher education was their primary responsibility while administration was the primary responsibility for 13%. Other primary responsibilities include agricultural mechanics (6%), extension education (5%), and "other" (10%). The "other" category includes areas such as 4-H youth development, communications, graduate education, and international education. All but five respondents held tenure track appointments, and almost 73% were tenured. All but six respondents had earned doctoral degrees.

Means and standard deviations for the job motivator and hygiene factors are presented in Table 1. Findings consistent with those achieved in the Bowen (1980) study were identified. Except for achievement and responsibility, the 10 factors were ranked in the same order. Among the five motivator factors, respondents in 1980 and 1990 were most satisfied with the type of work involved in being a faculty member (the work itself) and least satisfied with their opportunities for advancement. Among the five hygiene factors, faculty in 1980 and 1990 were most satisfied with interpersonal relationships inherent in being a faculty member and least satisfied with the level and method used to determine their salary.

Test of Hypothesis 1: Also presented in Table 1 are mean job satisfaction scores for agricultural education faculty included in the Bowen (1980) study and faculty included in this investigation. Although scores on the Brayfield-Rothe Job Satisfaction Index (1951) could range from 14 to 70, agricultural education faculty in 1980 had a mean score of 62.9 versus 61.8 in 1990. Thus, faculty included in both studies were very satisfied. From a statistical standpoint, the job satisfaction of agricultural education faculty is a constant phenomenon as indicated by no significant difference between the 1980 and 1990 job satisfaction scores ($t = 1.22$, $df = 226$, $p > .05$).

Table 1
Means and Standard Deviations for Job Motivator Factors, Job Hygiene Factors, and Job Satisfaction for 1980 and 1990 Samples of Agricultural Education Faculty

Factor	1980 Sample* (n=100) Mean	SD	Rank	1990 Sample (n=128) Mean	SD	Rank
Motivator Factors						
The Work Itself	5.11	.70	1	5.44	.56	1
Responsibility	4.89	.92	2	4.69	.87	3
Achievement	4.79	.71	3	4.89	.51	2
Recognition	4.53	.99	4	4.38	.83	4
Advancement	4.30	1.03	5	4.20	.97	5
Hygiene Factors						
Interpersonal Relations	5.14	.78	1	5.02	.71	1
Policy & Administration	4.44	.37	2	4.24	1.00	2
Salary	3.70	1.29	5	3.76	1.27	5
Supervision-Technical	4.30	1.21	3	4.20	1.09	3
Working Conditions	4.26	.84	4	4.06	.74	4
Job Satisfaction Scores**	62.90	6.31	-	61.80	5.97	-

*-From Bowen (1980) study; **-$t = 1.22$, $df = 226$, $p > .05$

Test of Hypothesis 2 : Hypothesis 2 focused on the extent to which selected variables are related to the job satisfaction of agricultural education faculty. The results of the data analysis indicated that the job satisfaction of agricultural education faculty is independent ($p > .05$) of the respondents' age ($r = .05$), The respondents' being tenured ($r_{pbi} = .02$), type of institution (no differences between 1862, 1890, and non-land grant faculty), and years of high school ($r = .03$) or college teaching experience ($r = .06$).

Test of Hypothesis 3: Two stepwise multiple regression models were constructed to test hypothesis 3 concerning how well the Herzberg motivator-hygiene theory applies to agricultural education faculty. Table 2 presents intercorrelations among the motivator factors, the hygiene factors, and job satisfaction. According to Davis, 1971, most of the relationships are positive and moderate to substantial in strength. As shown in Table 3, when job satisfaction was regressed on the motivator factors (achievement, advancement, recognition, responsibility, and the work itself), two factors explained 35% of the variance in the dependent variable (the work itself: $R^2 = .29$; and responsibility: $R^2 = .06$). In 1980, Bowen found that advancement was the only satisfier factor that explained a significant amount of variance in the job satisfaction of agricultural education faculty ($R^2 = .23$).

(Table 2: Following Page)

Table 3
Stepwise Regression of Job Satisfaction on the Job Motivation Factors

Variable	Multiple R	Adj. R^2	Beta	F value
The Work Itself	.545	.297	.80	36.1*
Responsibility	.606	.357	.52	13.8*

*$p < .05$ for individual factors with 1, 126 df; for the model: $F(2,125) = 36.2$; $p < .05$.

In the second stepwise regression model, job satisfaction was regressed on the hygiene factors (interpersonal relations, policy and administration, salary, supervision-technical, and working conditions). As shown in Table 4, two factors explained 24% of the variance in the dependent variable (interpersonal relations: $R^2 = .23$ and salary: $R^2 = .01$). Bowen (1980) found that policy and administration was the only factor that explained a significant amount of variance in the job satisfaction of agricultural education faculty ($R^2 = .35$).

Table 4
Stepwise Regression of Job Satisfaction on the Job Hygiene Factors

Variable	Multiple R	Adj. R^2	Beta	F value
Interpersonal Relations	.482	.232	.55	42.50*
Salary	.506	.244	-.17	3.92*

*$p < .05$ for individual factors with 1, 126 df; for the model: $F(2,125) = 21.5$; $p < .05$.

Table 2
Intercorrelations Among the Job Motivator and Hygiene Factors and the Job Satisfaction of Agricultural Education Faculty

	Intercorrelations Among Variables										
	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11
Achievement (X1)	–	.63*	.59*	.52*	.53*	.57*	.24*	.39*	.47*	.46*	.44*
Advancement (X2)		–	.52*	.62*	.65*	.60*	.46*	.58*	.20*	.65*	.28*
Interpersonal Relations (X3)			–	.64*	.62*	.59*	.40*	.59*	.38*	.54*	.48*
Policy & Administration (X4)				–	.70*	.63*	.60*	.82*	.33*	.67*	.24*
Recognition (X5)					–	.64*	.56*	.71*	.34*	.67*	.20*
Responsibility (X6)						–	.53*	.62*	.34*	.64*	.39*
Salary (X7)							–	.52*	.05*	.63*	.04*
Supervision-technical (X8)								–	.30*	.63*	.24*
The Work Itself (X9)									–	.27*	.57*
Working Conditions (X10)										–	.25*
Job Satisfaction (X11)											–

* - Pearson correlation coefficients, $p < .05$.

Conclusions

After failing to reject the three hypotheses tested in the study, three conclusions were formulated:

1. The job satisfaction of agricultural education faculty is a constant phenomenon as indicated by limited variation in the level of satisfaction over a 10 year period. In addition, agricultural education faculty are very satisfied with their positions.

2. Demographic and situational variables examined in this study are not good indicators of the level of job satisfaction for agricultural education faculty.

3. Because the motivator factors were better indicators of agricultural education faculty members' job satisfaction than the hygiene factors, the Herzberg motivator-hygiene theory tends to be more applicable to agricultural education faculty in 1990 than it was in 1980.

Recommendations

Agricultural education faculty should use instruments included in this study to make self-evaluations to determine which aspects of their position are satisfying or dissatisfying. In addition, the findings should be considered as a norm for faculty to use in requesting sabbaticals, professional leaves, and enrichment activities which foster professional growth and development.

Faculty who teach and advise graduate students who aspire to become faculty members should use the findings to provide an overview of the academic environment in which agricultural education faculty function. Senior level agricultural education faculty should review and incorporate the findings when planning and implementing mentoring activities for junior level faculty. Department chairs and faculty who hold administrative appointments should use the findings relative to interpersonal relations and salary when they seek to minimize the hygiene factors.

Longitudinal research is needed to determine how the level of job satisfaction for agricultural education faculty compares with that of other university faculty over time.

References

Blackburn, R.T.; Horowitz, S.M.; Edington, D.W.; & Klos, D.M. (1986). University faculty and administrator responses to job strains. Research in Higher Education, 25(1), 31-41.

Blezek, A.G. (1987). Job satisfaction priorities of faculty in the college of agriculture, University of Nebraska. NACTA Journal, 31(2), 46-48.

Bowen, B.E. (1980). Job satisfaction of teacher educators in agriculture. Unpublished doctoral dissertation, The Ohio State University, Columbus.

Brayfield, A.H. & Rothe, H.F. (1951). An index of job satisfaction. Journal of Applied Psychology, 35, 307-311.

Cochran, J.E.; Lawrence, L.D.; Odell, K.S. & Gartin, S.A. (1989). Relationships between job and marital satisfaction of secondary agriculture teachers and their spouses. Proceedings of the 43rd Eastern Region Agricultural Education Research Conference, 43, 38-44.

Cowie, M.L.; Gartin, S.A.; Odell, K.S.; & Lawrence, L.D. (1989). Job satisfaction of college of agriculture and forestry teaching faculty at West Virginia University. Proceedings of the 43rd Eastern Region Agricultural Education Research Conference, 43, 46-50.

Davis, J. A. (1971). Elementary survey analysis. Englewood Cliffs, NJ: Prentice-Hall.

Grady, T.L. & Burnett, M.F. (1985). The relationship between job satisfaction and teacher performance of vocational agriculture teachers. Proceedings of the 12th Annual National Agricultural Education Research Meeting, 12, 1-13.

Herzberg, F. et al. (1957). Job attitudes: Review of research and opinion. Pittsburgh: Psychological Service of Pittsburgh.

Keffer, W.M. (1976). Job satisfaction of field staff of the Virginia Polytechnic Institute and State University Extension Division. Unpublished doctoral dissertation, The Ohio State University, Columbus.

Kotrlik, J.W. & Malek, A.P. (1986, Spring). Job satisfaction of vocational agriculture teachers in the southeastern United States. Journal of the American Association of Teacher Educators in Agriculture, 27(1), 33-38.

Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.

Lacy, W.B.; Bokemeier, J.L.; & Shepard, J.M. (1983, Summer). Job attribute preferences and work commitment of men and women in the United States. Personnel Psychology, 36(2), 315-329.

Lawler, E.E. & Porter, L.W. (1968). The effect of performance on job satisfaction. Industrial Relations, 1, 20-28.

Mallilo, A. (1990, Summer). Extension staff satisfaction. Journal of Extension, 28, 37.

Miller, L. E. & Smith, K. (1983). Handling nonresponse issues. Journal of Extension, 24, 11-13.

Niehouse, O.L. (1986, February). Job satisfaction: How to motivate today's workers. Supervisory Management, 8-11.

Schultz, J.B. (1977). Job satisfaction of home economics college faculty. Journal of Vocational Education Research, 2(2), 59-72.

Sorcinelli, M.D. & Near, J.B. (1989). Relations between work and life away from work among university faculty. Journal of Higher Education, 60(1), 59-81.

Van Tilburg, E. (1987, Fall). Turnover intentions of Ohio cooperative extension county agents. Journal of the American Association of Teacher Educators in Agriculture, 28(3), 7-15.

Van Tilburg, E. (1988, Summer). Performance - reward contingencies: The role and relationships of perceived equity in the job performance - job satisfaction question. Journal of the American Association of Teacher Educators in Agriculture, 29(2), 25-31.

Warner, P.D. (1973). A comparative study of three patterns of staffing within the cooperative extension organization and their association with organization structure, organizational effectiveness, job satisfaction, and role conflict. Unpublished doctoral dissertation, The Ohio State University, Columbus.

Whaley, D.C. (1989). Directory of teacher educators in agriculture, 1989-1990. Pomona, CA: California State Polytechnic University in Cooperation with the American Association of Teacher Educators in Agriculture.

Wood, O.R. (1973). An analysis of faculty motivation to work in the North Carolina Community College System. Unpublished doctoral dissertation, North Carolina State University, Raleigh.