

Predictors of Job Satisfaction Among Selected Agriculture Faculty

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The construct of job satisfaction is rooted in Maslow's Hierarchy of Needs and Herzberg's Motivator-Hygiene Theory. The current study was conducted to ascertain the level of job satisfaction of faculty members specializing in agricultural communication, agricultural leadership, agricultural teacher education, and extension education and to determine which job factors are the greatest predictors of an individual's overall job satisfaction. Survey research methods were utilized to collect data from members of the American Association for Agricultural Education with specializations in the aforementioned disciplines. The Three Factor Job Satisfaction Scale was used to measure faculty members' level of satisfaction with the policy and administration, personal growth and satisfaction, and fiscal resources job factors as well as the level of overall job satisfaction. A 74% response rate was achieved. Descriptive and relational statistics were used to analyze the data. Overall, faculty members were moderately satisfied with their jobs, with the personal growth and satisfaction job factor explaining the greatest proportion of variance in overall job satisfaction scores. Department chairs and administrators should focus faculty professional development around the factors related to individuals' personal growth and satisfaction.

Keywords: job satisfaction, agriculture faculty, professional development

Introduction

Cranny, Smith, and Stone (1992) wrote that job satisfaction played a central role in the study of people's behavior at work. To that end, job satisfaction is one of the most frequently studied concepts in the organizational sciences (Cranny, Smith, & Stone, 1992; Locke, 1976). Furthermore, Spector (1997) wrote that job satisfaction was the "most frequently studied variable in organizational behavioral research" (p. 1). Job satisfaction is an area of particular interest to organizational managers and those who work for them (Cranny, Smith, & Stone, 1992). In academia, individuals such as department chairs, directors, deans, and others involved in the administration and supervision of faculty and staff members should be concerned with the job satisfaction of employees. Employees possessing a greater sense of job satisfaction are likely to have a better quality of life, greater physical and mental

health, more job stability, and exhibit greater cooperativeness with supervisors (Cranny, Smith, & Stone, 1992).

Job satisfaction, including the level of overall job satisfaction, has been studied among agricultural teacher educators at the national level in the United States over the past three decades (Bowen, 1980; Bowen & Radhakrishna, 1991; Castillo, 1999). Similarly, the level of job satisfaction has been examined among extension faculty members (Long & Swortzel, 2007; Schmiesing, 2002).

Since the Castillo (1999) study, traditional academic departments of agricultural education at post-secondary colleges and universities have expanded to include additional disciplines, the majority of which are classified as agricultural communication, agricultural leadership, and extension education (American Association for Agricultural Education [AAAE], 2007). To this end, few studies on job satisfaction have been conducted at the department level for the

mentioned specializations. Moreover, a current study of job satisfaction among agricultural teacher educators was warranted. With the increase in faculty specializations represented in AAAE membership, an examination of the differences in the level of job satisfaction among the specializations will provide a valuable snapshot of how faculty members with different emphases feel about their work. For example, agricultural communicators may have a different view of their work than extension educators and the former may be less satisfied with certain aspects of their job than the latter. Agricultural leadership is a relatively new field within colleges of agriculture. New coursework, different backgrounds of faculty, and the opportunity for a different student base may yield a different level of job satisfaction for those specializing in agricultural leadership, as well as other areas within the profession.

Theoretical Foundation

Robertson and Smith (1985) wrote that Herzberg's motivator-hygiene, or two-factor theory of job satisfaction was one of the most widely known attempts to link job characteristics with human motivation. According to Herzberg's (1966) two-factor theory, humans have two basic sets of needs related to job experiences. A core principle of the theory is that the two sets of needs are two different concepts. At the time of Herzberg's work, it was widely accepted that job satisfaction and dissatisfaction were opposite one another, or at two extreme ends of one spectrum (Herzberg, Mausner, & Snyderman, 1959). The first set of needs was considered maintenance needs, whereas the second set was identified as growth needs. Adler (1991) wrote that the needs in each set, or factor, were similar to those posited by Maslow (1954) in the Hierarchy of Needs.

As a result, Herzberg et al. (1959) called the first set, or those related to maintenance needs, *hygiene* factors. The moniker hygiene was likened to the use of the phrase mental hygiene in psychiatry (Pinder, 1984). Adler (1991) classified the hygiene factors with Maslow's lower order needs, physiological and safety. The hygiene factors, according to Pinder (1984) were necessary to prevent job dissatisfaction, but

had little relationship, if any, to job satisfaction, and were not capable of generating job satisfaction within an individual. Furthermore, the hygiene factors were related to shorter-lasting job experiences.

Aspects of the job related to the context (Pinder, 1984) or extrinsic factors (Robertson & Smith, 1985) such as pay and supervision are hygiene factors. Cherrington (1991) identified organizational factors related to Maslow's physiological need level: pay, pleasant working conditions, cafeteria; and safety need level: safe working conditions, company benefits, job security. When the organizational factors related to physiology and safety are satisfied, job dissatisfaction can be reduced, or eliminated, but job satisfaction will not increase (Herzberg et al., 1959).

The second set of needs, called growth needs, was termed by Herzberg et al. (1959) as *motivator* factors. Motivator factors, in contrast to hygiene factors, are related to the content of the job such as the personal relationship between an individual and her/his job (Pinder, 1984). With relation to Maslow's Hierarchy of Needs, the motivators were likened to higher order needs such as the social, esteem, and self-actualization need levels (Adler, 1991). The motivator factors, according to Pinder (1984) are related to the content of the job and cause feelings of growth and personal development.

Organizational factors aligned with the higher needs levels include, social: cohesive work group, friendly supervision, and professional associations; esteem: social recognition, job title, high status job, and feedback from the job itself; self-actualization: challenging job, opportunities for creativity, achievement in work, and advancement in the organization (Cherrington, 1991). Motivator factors tend to derive from the intrinsic content of a job (Robertson & Smith, 1985), and are attributed to long-lasting job experiences, resulting in positive feelings about the job (Pinder, 1984).

Stated earlier, the motivator factors and hygiene factors are discrete. Motivator factors are fundamental to job satisfaction, whereas the hygiene factors are predictors of job dissatisfaction (Ford, 1992). To that end, Herzberg et al. (1959) claimed that fulfilled hygiene needs would not achieve satisfaction. Satisfaction and motivation, according to the

theory, is affected only by the motivators; individuals can be happy about some aspects of their job, while simultaneously being unhappy about other aspects.

According to Steers and Porter (1991), the implications of the Herzberg Motivator-Hygiene Theory were evident in the ability to increase motivation in the context of job satisfaction: basic changes in the nature of an employee's job will increase job satisfaction. Moreover, Steers and Porter (1991) posited that job elements should be redesigned based on the organizational factors aligned with motivators, namely indicators of personal growth and recognition.

While the Motivator-Hygiene Theory received wide recognition, the theory has garnered much criticism (Steers & Porter, 1991). King (1970) wrote there were five different theoretical interpretations of the Herzberg Motivator-Hygiene Theory and the research conducted was not consistent with the interpretations. According to Steers and Porter (1991), another criticism was that the theory did not provide for individual differences, assuming that an increase in personal growth and satisfaction, or job enrichment, benefited all employees. A third criticism identified by Steers and Porter (1991) was that research grounded in the Herzberg-Motivator Hygiene Theory often failed to support the existence of the two discrete factors (motivator and hygiene).

Despite the criticisms noted, the Herzberg Motivator-Hygiene Theory has increased researchers' and supervisors' understanding of the role of motivation in the work environment (Steers & Porter, 1991). Researchers should consider the theory to be one theory from which to base research on job satisfaction. To that end, Steers and Porter (1991) suggested the theory be continually modified to "develop comprehensive and accurate predictors of human behavior on the job" (p. 414).

Terpstra and Honoree (2004) wrote that "there is very little data available regarding the satisfaction levels of faculty in higher education institutions" (p. 535). Bowen (1980) studied the level of job satisfaction among agricultural teacher educators. Bowen used two instruments to measure job satisfaction. The first was Wood's (1973) "Faculty Satisfaction/Dissatisfaction Scale" modified by Bowen so that the items were applicable to agricultural

teacher educators. The modified Wood instrument measured the motivator and hygiene factors related to Herzberg's Motivator-Hygiene Theory. The second instrument utilized by Bowen was the Brayfield-Rothe "Job Satisfaction Index" as modified by Warner (1973). The modified Brayfield-Rothe Index measured job satisfaction when all facets of the job were considered (Bowen, 1980). Data from the Brayfield-Rothe Index provided a measure of an overall level of job satisfaction among agricultural teacher educators. In addition to the two job satisfaction instruments, Bowen (1980) collected demographic data on agricultural teacher educators.

The study conducted by Bowen (1980) found results in contrast to the Herzberg Motivator-Hygiene Theory. Three factors classified as dissatisfiers, or hygiene factors (policy and administration, supervision-technical, and interpersonal relations) had the highest correlations with job satisfaction compared to the other factors. Bowen (1980) reported that policy and administration, which was classified as a dissatisfier, was the best predictor of job satisfaction among agricultural teacher educators. When satisfiers were correlated with dissatisfiers, moderate to very high intercorrelations were reported among the ten satisfiers and dissatisfiers examined. To that end, Bowen (1980) concluded that Herzberg's Motivator-Hygiene Theory was not applicable to faculty members in agricultural teacher education.

A similar study conducted by Bowen and Radhakrishna (1991) sought to determine the level of job satisfaction among agricultural teacher educators and to determine the suitability of the Herzberg Motivator-Hygiene Theory to faculty members in agricultural teacher education. The instruments used by Bowen (1980) were again used by Bowen and Radhakrishna (1991) and included the Wood (1973) instrument modified by Bowen (1980), as well as the Brayfield-Rothe Index modified by Warner (1973). While most of the intercorrelations between the motivator factors, hygiene factors, and job satisfaction were moderate to substantial in strength, Bowen and Radhakrishna (1991) determined that the motivator factors were better indicators of job satisfaction than the hygiene factors and concluded that "the Herzberg motivator-hygiene

theory tends to be more applicable to agricultural education faculty in 1990 than it was in 1980" (p. 21).

Padilla-Velez (1993) examined the level of job satisfaction of vocational teachers in Puerto Rico using a modified Wood (1973) instrument as well as the Brayfield-Rothe index modified by Warner (1973). Three constructs were identified as the variables related to job satisfaction of vocational teachers in Puerto Rico and included administration and supervision; salary, benefits, and resources; and professional opportunities and responsibilities.

In a study of faculty members in the College of Food, Agricultural, and Environmental Sciences at The Ohio State University, Conklin (1999) found that all ten of the motivator and hygiene factors were significantly related to job satisfaction. The motivator and hygiene factors were measured using a modified Wood (1973) instrument while job satisfaction was measured with the Brayfield-Rothe Index modified by Warner (1973).

Cano and Miller (1992) investigated job satisfaction, job satisfier factors, and job dissatisfier factors in a gender analysis among Ohio agricultural education teachers. Similar to the previous studies cited, a modified Wood (1973) instrument and Warner (1973) modified Brayfield-Rothe Index were used to measure motivator-hygiene factors and job satisfaction, respectively. Castillo, Conklin, and Cano (1999) conducted a study of job satisfaction among Ohio agricultural education teachers and used the same instruments previously used in the Cano and Miller (1992) study. The data from the Castillo et al. (1999) study were used to develop the Three Factor Scale (Castillo, 1999). Castillo and Cano (1999) used principal component analysis to determine if the motivator factors and hygiene factors from the Wood (1973) instrument could be reduced to a "lesser number of meaningful and interpretable factors" (Castillo, 1999, p. 72).

Three components were interpreted and named by Castillo and Cano (1999) as policy and administration, personal growth and satisfaction, and fiscal resources (Castillo, 1999). Common factor analysis was used to "identify instrument items pertaining to certain factors" (Castillo, 1999, p. 77). More specifically, items were identified pertaining to the three factors policy and administration,

personal growth and satisfaction, and fiscal resources. Motivator-hygiene factors related to policy and administration included: supervision, policies, recognition, relationship, advancement, and responsibility. In terms of personal growth and satisfaction, related motivator-hygiene factors included: the work itself and achievement. Finally, the motivator-hygiene factors salary and working conditions were classified with the newly created factor fiscal resources.

Castillo (1999) used the newly created Three Factor Scale, which was ultimately a reorganization of factors related to the motivator and hygiene factors posited by Herzberg et al. (1959) to measure the level of job satisfaction among agricultural teacher education faculty members in the United States. The study yielded substantial and very strong positive correlations between each of the three selected factors and overall job satisfaction (Castillo, 1999).

Since the items in the Three Factor Scale were subjected to factor analysis, Castillo (1999) wrote that the variables in the Three Factor Scale could not be condensed to a more "meaningful and interpretable set of variables" (p. 151). Furthermore, Castillo (1999) implied that the Three Factor Scale was a "stable measure of the selected job factors: policy and administration, personal growth and satisfaction, and fiscal resources" (p. 152). In order to provide consistency in comparing job satisfaction studies longitudinally, the Castillo (1999) Three Factor Scale was chosen for the current study. Moreover, the Three Factor Scale provides a functional measurement of job satisfaction for agricultural faculty.

Purpose/Objectives

The purpose of the study was to determine which job factors were the greatest predictors of the overall level of job satisfaction among faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education. The following objectives guided the study:

1. Describe selected agriculture faculty members' overall level of job satisfaction and level of satisfaction with the policy and

administration, personal growth and satisfaction, and fiscal resources.

2. Explain the proportion of variance in selected agriculture faculty members' overall job satisfaction scores by the policy and administration, personal growth and satisfaction, and fiscal resources job factors.

Methods/Procedures

Faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education were identified from the 2007 edition of the *Directory of University Faculty in Agricultural Education* (AAAE, 2007) to establish the population for the current study. Department chairpersons or contact persons were contacted to verify information from the directory. As a result, 323 faculty members were identified in the population of faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education. The focus of the study was to report group data.

Data were collected using the Three Factor Job Satisfaction Scale, used by Castillo (1999) in a study of the level of job satisfaction among agricultural teacher education faculty members. Castillo (1999) established instrument reliability from a pilot study and calculated a Cronbach's alpha of .96 for the policy and administration factor, .89 for the personal growth and satisfaction factor, .88 for the fiscal resources factor, and .97 for the overall instrument. Content validity of the instrument was established by Castillo (1999) by a panel of experts of faculty members and graduate students. Additionally, construct validity was established by Castillo (1999) using factor analysis. For the current study, the researchers calculated a post-hoc reliability coefficient (Cronbach's alpha) of .98 for the policy and administration factor, .93 for the personal growth and satisfaction factor, .92 for the fiscal resources factor, and .98 for the overall instrument.

The instrument was composed of two parts. Part I gathered data regarding faculty members' level of job satisfaction with the job factors policy and administration, personal growth and satisfaction, and fiscal resources, as well as the

level of overall job satisfaction. Fifty seven Likert-type items were used to determine the level of satisfaction with the job factors policy and administration, personal growth and satisfaction, and fiscal resources. The indicators on the Likert-type scale ranged from 1 (very dissatisfied) to 6 (very satisfied). Additionally, a one item statement was used to determine the level of overall job satisfaction with the same six point scale. The items in Part I were assumed to be interval data. The items in Part II were designed to collect demographic data from participants.

The 323 individuals identified in the population were sent a mailed copy of the Three Factor Job Satisfaction Scale following Dillman's (2000) recommendations. An electronic mail message or mailed letter was sent as a follow up reminder to the first wave. A second mailing was sent to the remaining non-respondents, followed by a final reminder letter to non-respondents. The data collection process yielded a usable response rate of 74%, among which, 211 individuals responded to the initial mailing, while 28 individuals responded to the second mailing. To control for non-response error, the researchers followed the recommendation of Miller and Smith (1983) by comparing early respondents to late respondents. The researchers identified early respondents as those individuals who responded to the initial mailing, while late respondents were classified as those individuals who responded to the second wave. Early and late respondents were compared on the demographic characteristics age, years in current position, total years in higher education; and level of satisfaction with the job factors policy and administration, personal growth and satisfaction, and fiscal resources. No significant differences were found between the two groups; therefore the data were collapsed to a single set.

Descriptive statistics were used to analyze the data for objective one, while relational analysis was used for objective two. Specifically, stepwise multiple regression analysis was utilized. According to Hair, Black, Babin, Anderson, and Tatham (2006), four assumptions must be met to deem the dependent variable and independent variables suitable for multiple regression analysis. The dependent variable in the analysis was the level of overall

job satisfaction, while the independent variables were the three selected job factors.

The assumptions include linearity, homoscedasticity of residuals, independence of residuals, and normality of residuals. The linear relationships found between the individual job factors and overall job satisfaction were substantial to very strong (Davis, 1971). This finding led the researcher to conclude the data met the assumption of linearity. To determine if the data met the assumption of homoscedasticity, the residuals were plotted against the predicted dependent values for each independent variable (Hair, et al., 2006). The residual plots were compared to the null plot and determined the data were homoscedastic and met the assumption. With regard to the independence of residuals, the Durbin-Watson statistic was calculated. According to Gliem (2008), a Durbin-Watson statistic within the range of 1.8 – 2.2 indicates the data do not violate the assumption of independence. The data in the current study yielded a Durbin-Watson statistic of 1.98. Lastly, the data were examined for normality of residuals. The researcher examined the normal probability plot of residuals (Hair, et al., 2006) and determined the values represented a normal distribution, thus meeting the assumption.

Results/Findings

The mean age of faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education was 47.8 years (*SD* = 10.6). In terms of gender, the majority of the population (75%, *n* = 180) were male. Fifty nine percent (*n* = 141) were tenured faculty members, with 93% (*n* = 222) holding doctorate degrees. Thirty seven percent (*n* = 89) held the rank of Professor, while the remaining 63% (*n* = 150) held the rank of Associate Professor, Assistant Professor, or no faculty rank. The mean number of years in current faculty position was 11.6 (*SD* = 9.1), while the mean of the total years in higher education reported was 14.6 (*SD* = 10.4). The three activities faculty members’ devoted most of their time to were teaching, administrative duties, and research activities with average percentage of time reported as 44.5%, 12.8%, and 12.2%, respectively. In terms of area of specialization, respondents were able to indicate all specializations they associated with. Table 1 reports the areas of specialization indicated by respondents.

Table 1
Areas of Specialization of Selected Agriculture Faculty Members

Area of specialization	Percent	<i>n</i>
Agricultural communication	16.7	40
Agricultural leadership	25.9	62
Agricultural teacher education	69.9	167
Extension education	23.4	56
Other	20.9	50

Note. The sum of results is greater than 100% since respondents could indicate multiple specializations.

The first objective was to describe selected agriculture faculty members’ overall level of job satisfaction and level of satisfaction with the policy and administration, personal growth and satisfaction, and fiscal resources job factors. The mean overall job satisfaction score was 4.94 for selected agricultural faculty members (*SD* = 1.02). The majority of faculty members (77%, *n* = 184) were moderately to very satisfied with their job. The mean scores of the policy and administration, personal growth and satisfaction,

and fiscal resources job factors, as well as overall job satisfaction scores are reported in Table 2 by specialization. Faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education were most satisfied with the personal growth and satisfaction aspects of their job. Conversely, faculty members were least satisfied with the fiscal resources aspects of their jobs.

Table 2
Faculty Members' Level of Satisfaction with Job Factors

Faculty specialization	Policy & Administration			Personal Growth & Satisfaction			Fiscal Resources			Overall Job Satisfaction		
	\bar{X}	<i>SD</i>	<i>n</i>	\bar{X}	<i>SD</i>	<i>n</i>	\bar{X}	<i>SD</i>	<i>n</i>	\bar{X}	<i>SD</i>	<i>n</i>
Agricultural communications	4.7	.95	32	4.9	.58	32	4.2	1.06	34	5.1	.78	40
Agricultural leadership	4.4	1.15	57	4.8	.65	55	4.3	.92	57	4.9	1.07	62
Extension education	4.4	1.18	52	4.9	.54	52	4.4	.78	51	5.0	.84	56
Agricultural teacher education	4.4	1.13	157	4.8	.67	151	4.3	.99	154	4.9	1.08	166

Note. Respondents could select all specializations they associated with; therefore individual scores are factored into more than one mean score for the specializations.

The aim of the second objective was to explain the proportion of variance in selected agriculture faculty members' overall job satisfaction scores by the policy and administration, personal growth and satisfaction, and fiscal resources job factors.

The personal growth and satisfaction job factor accounted for 61% of the variance in the level of overall job satisfaction (R^2). Table 3 reports the amount of variance explained in faculty members' overall level of job satisfaction by the job factors.

Table 3
Stepwise Regression of Overall Job Satisfaction on Independent Variables

Variable	R^2	R^2 Change	<i>b</i>
Personal Growth and Satisfaction	0.61	0.61	0.78
Policy and Administration	0.66	0.05	0.26
Fiscal Resources	0.67	0.01	0.16
Constant			-0.67

Conclusions/Recommendations/Implications

Overall, faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, and extension education were moderately satisfied with their job. Faculty members specializing in agricultural communications reported the highest level of overall job satisfaction. Faculty members were only slightly satisfied with the factors policy and administration and fiscal resources. Castillo (1999) determined that agricultural teacher education faculty members were slightly satisfied with the policy and administration and fiscal resources aspects of their jobs.

Department chairs and administrators should examine the motivator and hygiene factors

which make up the job factors policy and administration and fiscal resources in the Three Factors Job Satisfaction Scale in order to improve the related aspects of faculty members' jobs. Additionally, administrators and department chairs should revisit the need levels that relate to the motivator and hygiene factors linked to the factors policy and administration and fiscal resources as a means to better understand faculty members' needs for improving satisfaction in these areas.

Overall, selected faculty members were moderately satisfied with the personal growth and satisfaction aspects of their jobs. Agricultural teacher education faculty members' level of job satisfaction was examined using the Three Factor Job Satisfaction Scale, where Castillo (1999) determined agricultural teacher

education faculty were also moderately satisfied with the factor personal growth and satisfaction. Administrators and department chairs should continue to recognize the importance of the items aligned with the personal growth and satisfaction job factor when seeking to increase this aspect of faculty members' job satisfaction.

A strong relationship existed between the job factors policy and administration, personal growth and satisfaction, and fiscal resources and selected faculty members' level of overall job satisfaction. Castillo (1999) reported a similar finding among agricultural teacher education faculty members. As the level of satisfaction with each of the selected job factors increases, overall job satisfaction increases. Furthermore, the personal growth and satisfaction job factor facilitates a greater increase in the level of overall job satisfaction than the fiscal resources and policy and administration job factors. Elements of faculty members' jobs related to personal growth and satisfaction should be the focus of increasing the level of overall job satisfaction. Particularly, department chairs and administrators should be concerned with the items that comprise the personal growth and satisfaction job factor (the work itself and achievement). Professional development activities should center on the personal growth and satisfaction job factor. Ultimately, personal growth and satisfaction is the best predictor of a faculty members' level of overall job satisfaction, while satisfaction with policy and administration and fiscal resources are minute predictors when all three factors are considered.

The level of job satisfaction among faculty members specializing in the areas of agricultural communication, agricultural leadership, agricultural teacher education, extension education, and emerging specializations related to the aforementioned specializations should continue to be examined once every ten years. As specializations like agricultural leadership continue to grow with the development of courses, programs, and faculty positions, the level of job satisfaction should be examined to ensure that the people involved in the profession are indeed satisfied with their jobs. If not, the areas of lower satisfaction should be examined for potential professional development topics at national meetings.

Future studies of job satisfaction that use the Three Factor Job Satisfaction Scale should determine alternative methods to collect data on faculty specializations in order to provide more meaningful descriptive results with relation to the areas of specialization faculty members identify with. Future investigations of faculty job satisfaction should seek to determine the relationship between levels of faculty job satisfaction and selected aspects of teaching and learning such as self-efficacy, teaching style, levels of cognition reached, and other variables of interest that are supported by the literature. Additionally, qualitative studies such as a phenomenological study may provide a richer, deeper understanding of faculty members' job satisfaction.

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